

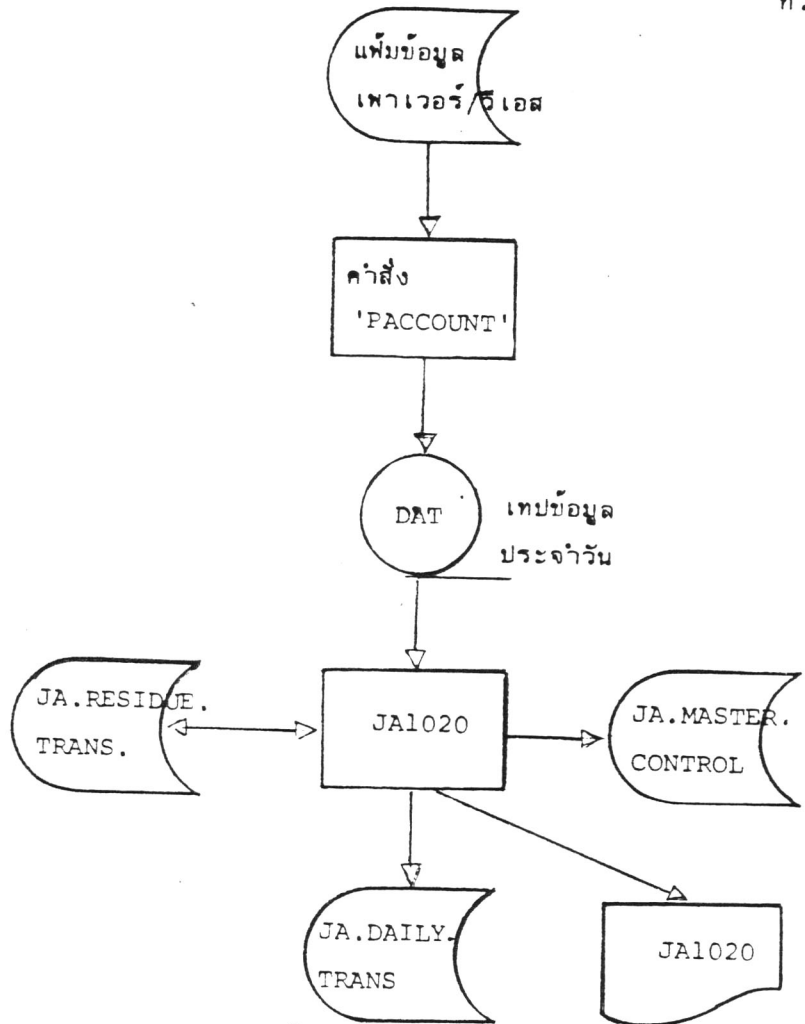
เอกสารอ้างอิง

1. IBM SYSTEM 370 "INTRODUCTION TO DOS/VS", FORM NO. GC33-5370-5,
1977.
2. IBM SYSTEM 370/4300 "VSE/ADVANCED FUNCTION : SYSTEM MANAGEMENT
GUIDE", FORM NO. SC33-6094-0, 1979.
3. IBM SYSTEM 370 "DOS/VS POWER/VS INSTRALLATION GUIDE AND REFERENCE,
FORM NO. GC33-6048-1, 1978.
4. HOWARD SCHAEFFER "DATA CENTER OPERATIONS", PRENTICE-HALL, INC.,
ENGLEWOOD CLIFFS, N.J. 07632, 1981.
5. AUERBACH "DATA CENTER OPERATIONS MANAGEMENT", AUERBACH PUBLISHERS
INC., USA, 1979.
6. UNIVAC SERIES 1100 "OPERATING SYSTEM INSTALLATION REFERENCE", UP.
NO. 8486.2, 1980.

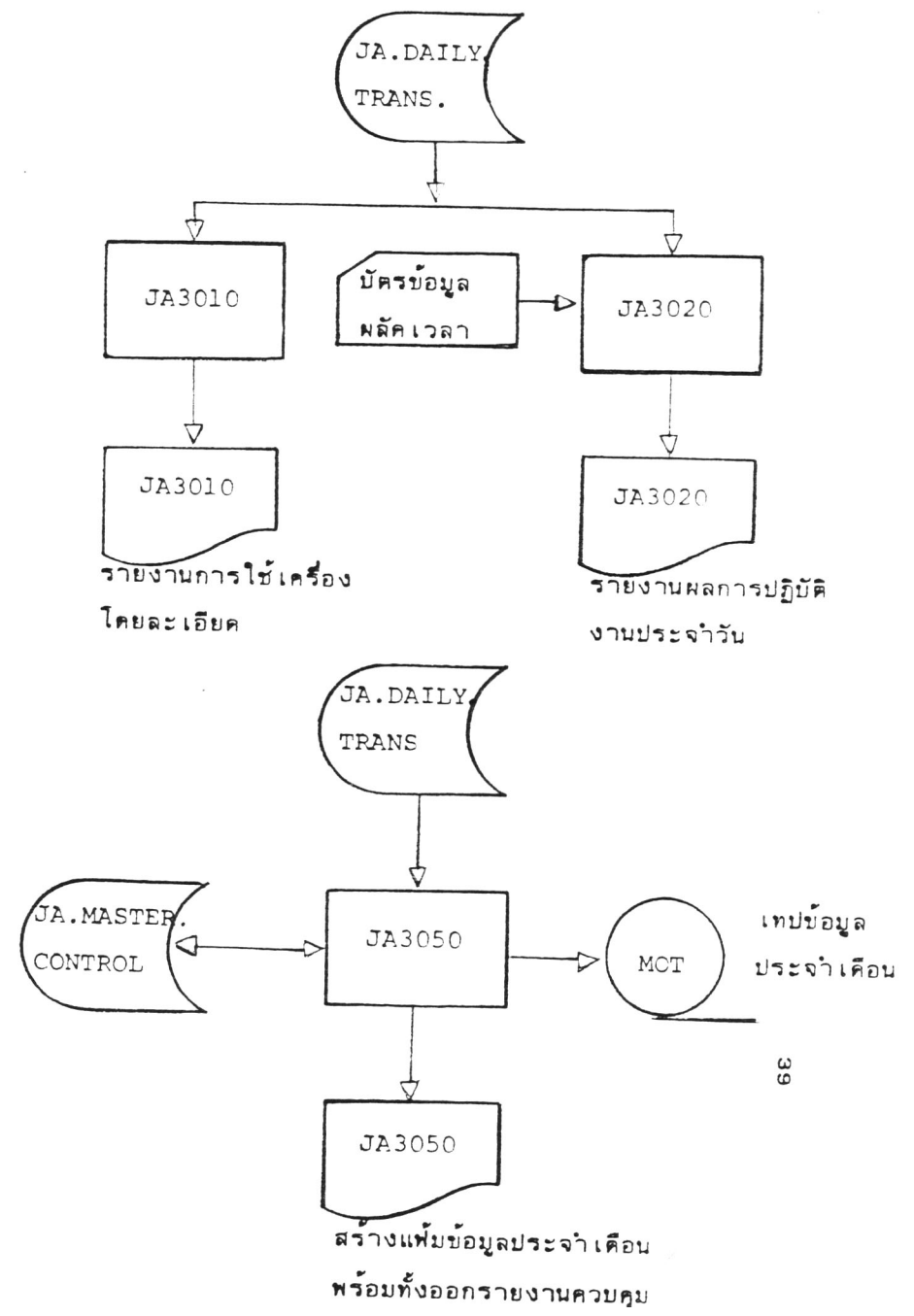
ภาคผนวก ก-

ผังภูมิของระบบโปรแกรมประจำวันและประจำเดือน

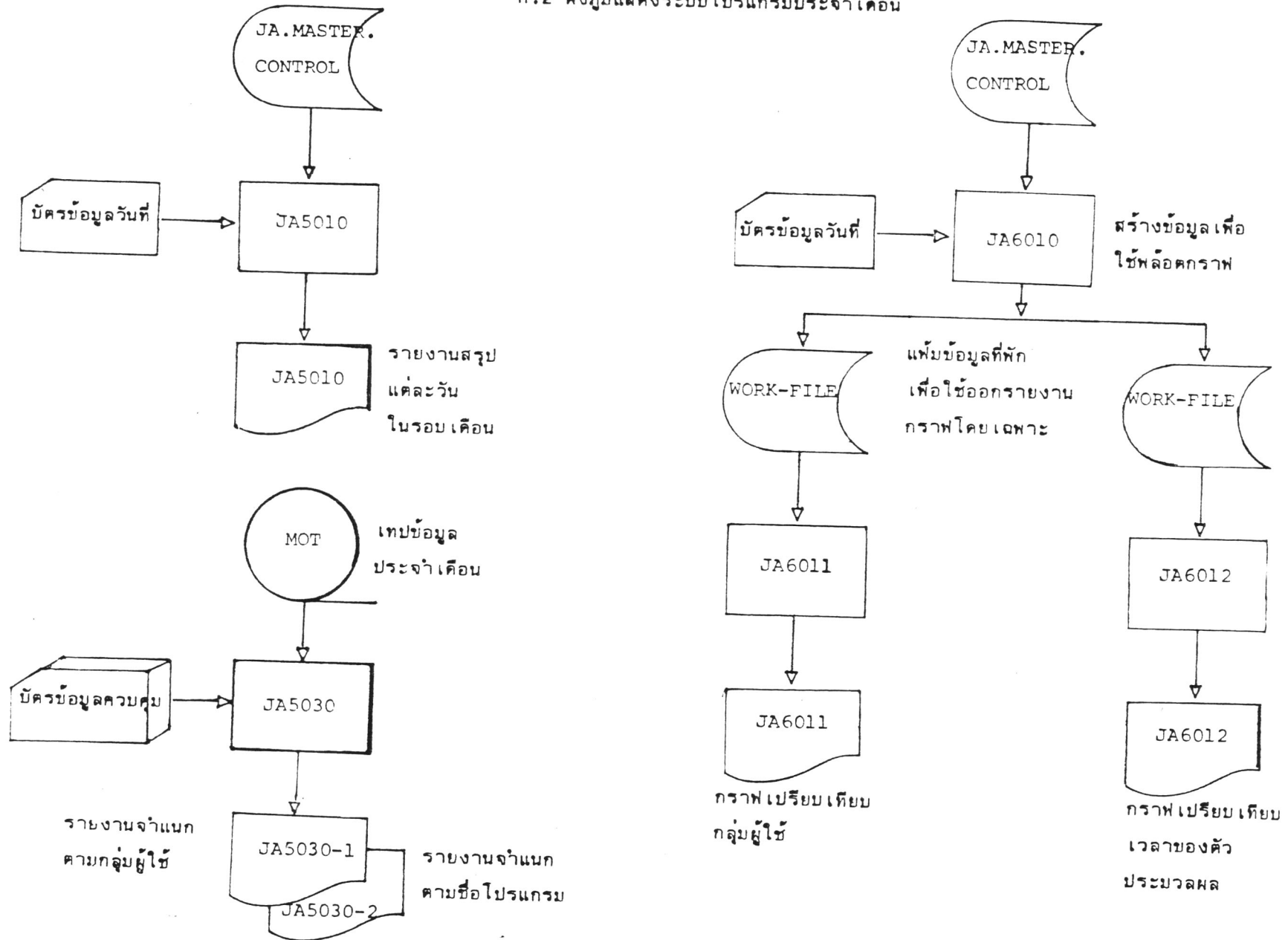
ก.1 ผังภูมิแสดงระบบโปรแกรมประจำวัน



- สร้างเพิ่มข้อมูลประจำวันทำงาน
- บันทึกสรุปการใช้เครื่องประจำวัน
- ออกรายงานสรุปประจำวัน



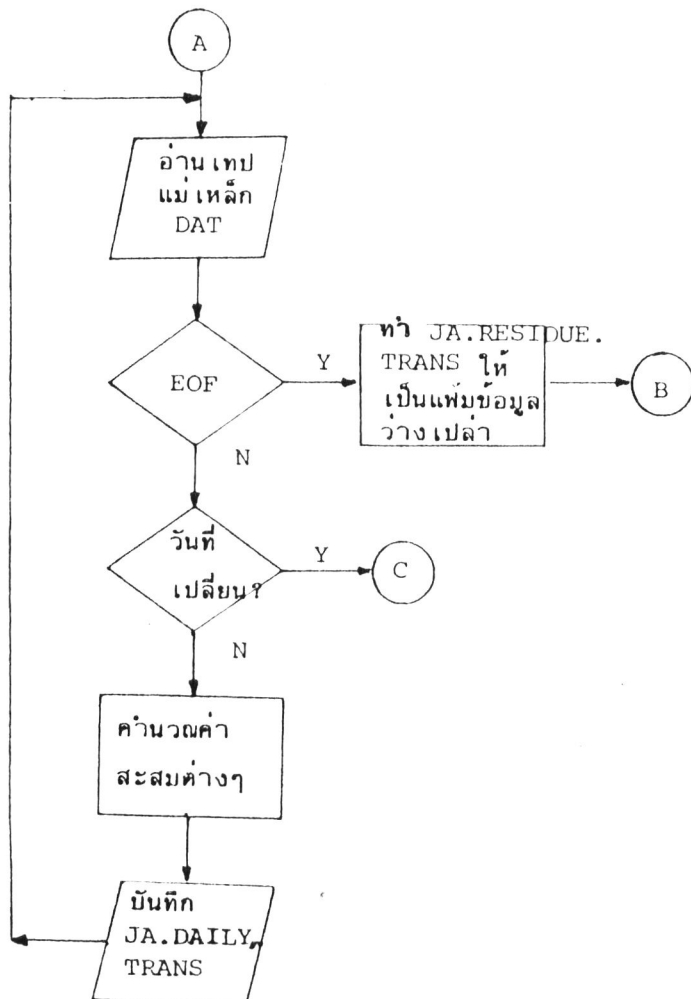
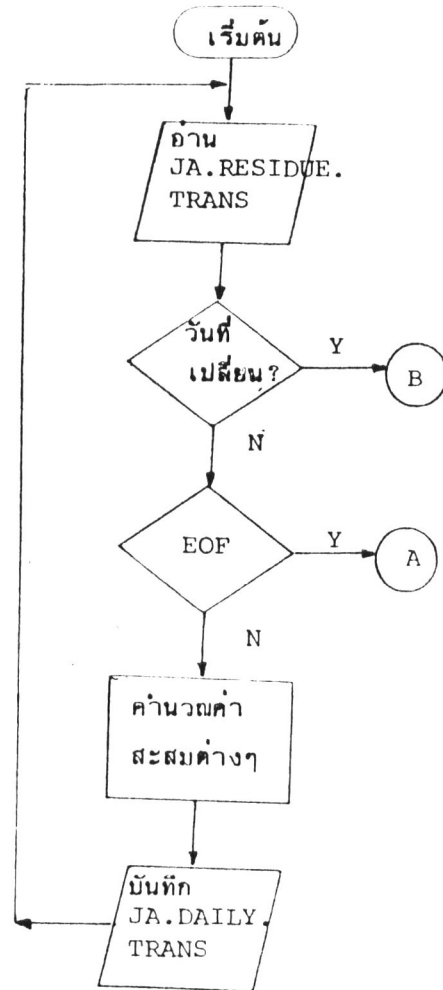
ก.2 ผังภูมิแสดงระบบโปรแกรมประจำเดือน



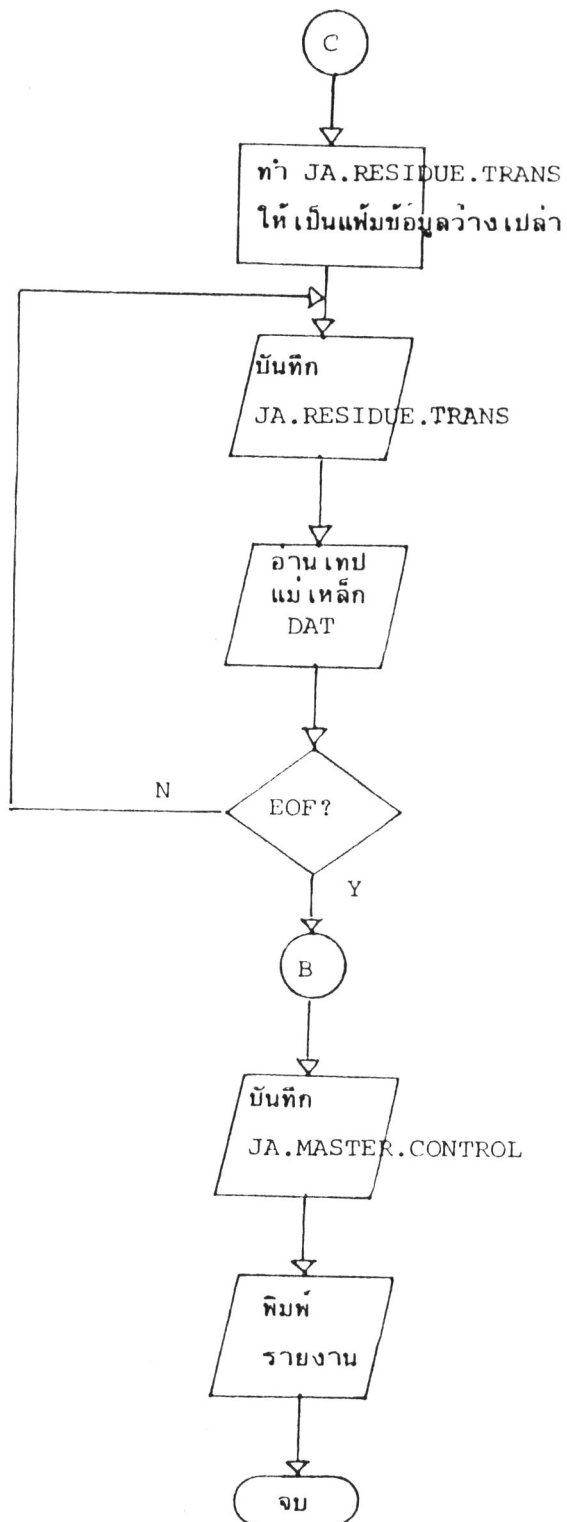
ภาคผนวก ข.

ผังภูมิสังเขปแสดงการทำงานของโปรแกรม

ผังภูมิทางขวามือแสดงขั้นตอน
 การอ่านข้อมูลจากแฟ้มข้อมูล
 JA.RESIDUE.TRANS ไปบันทึก
 ลงใน JA.DAILY.TRANS. พร้อมกับ
 ก็คำนวณค่าต่างๆที่ต้องการเก็บไว้ด้วย



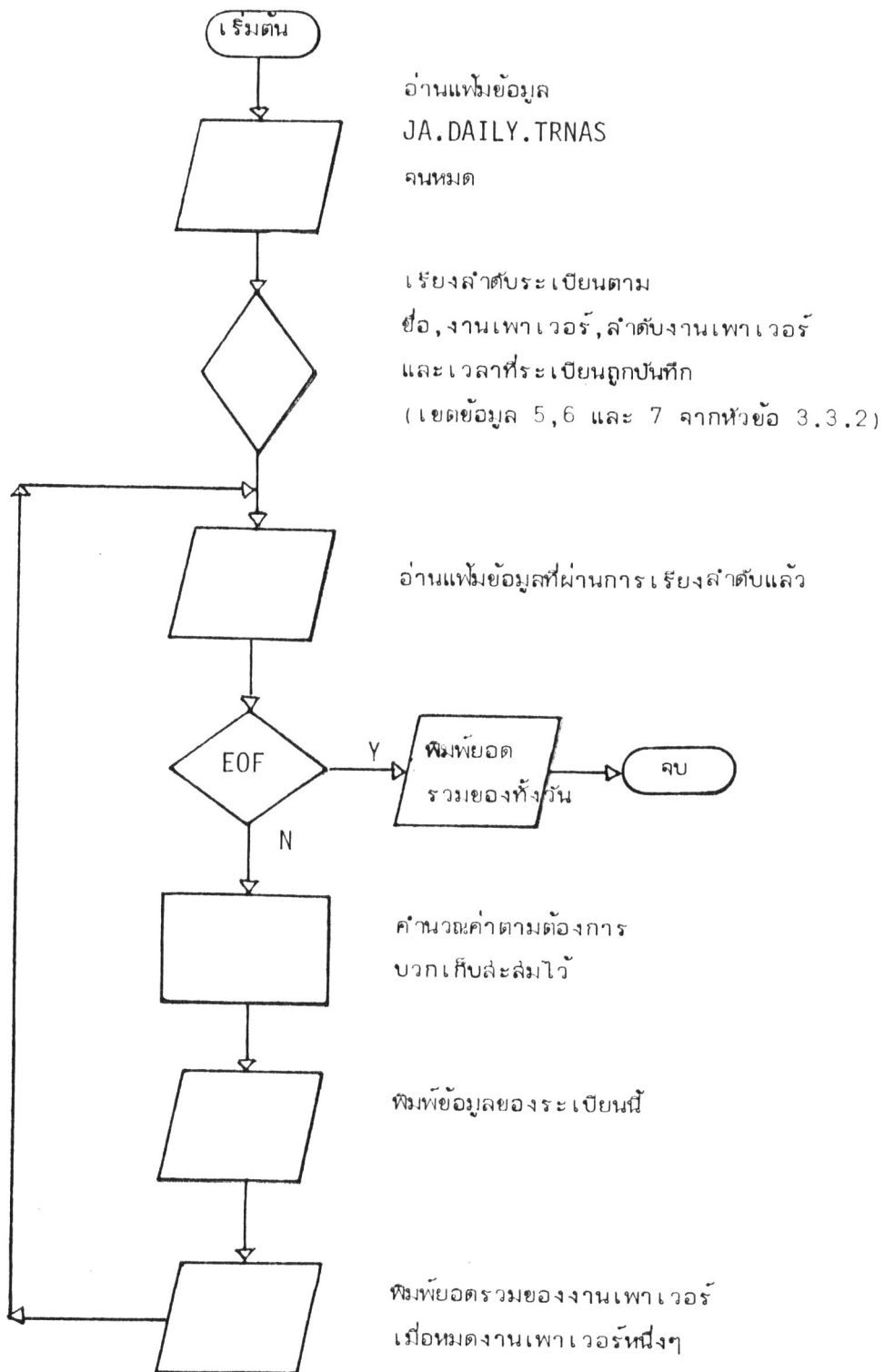
ผังภูมิทางซ้ายมือแสดงขั้นตอน
 การอ่านข้อมูลจากเทปแม่เหล็ก DAT
 ไปบันทึกใน JA.DAILY.TRANS พร้อม
 กับคำนวณค่าที่ต้องการเก็บไว้



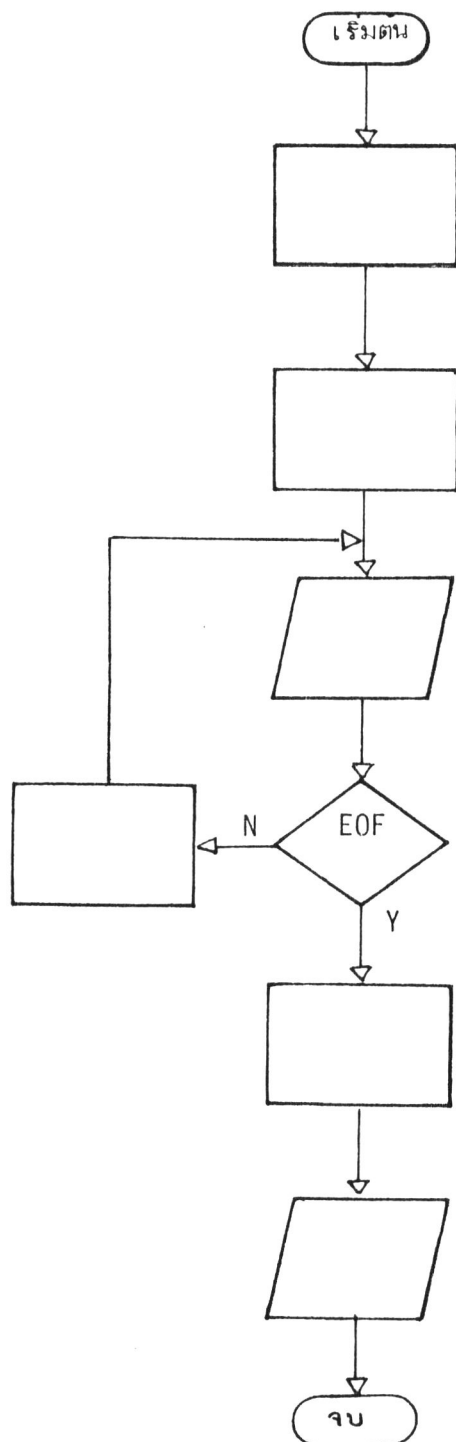
ผังภูมิ C แสดงขั้นตอนการบันทึกข้อมูล
ที่เหลือจากเทปประจำวัน DAT ไปยัง
แฟ้มข้อมูล JA.RESIDUE.TRANS

ผังภูมิ B เป็นขั้นตอนสุดท้ายของโปรแกรม
คือบันทึกระเบียบสรุปค่าประจำวันทำงาน
ลงแฟ้มข้อมูล JA.MASTER.CONTROL พร้อมทั้ง
พิมพ์รายงานสรุป

ข.2 โปรแกรม JA3010



ข.3 โปรแกรม JA3020



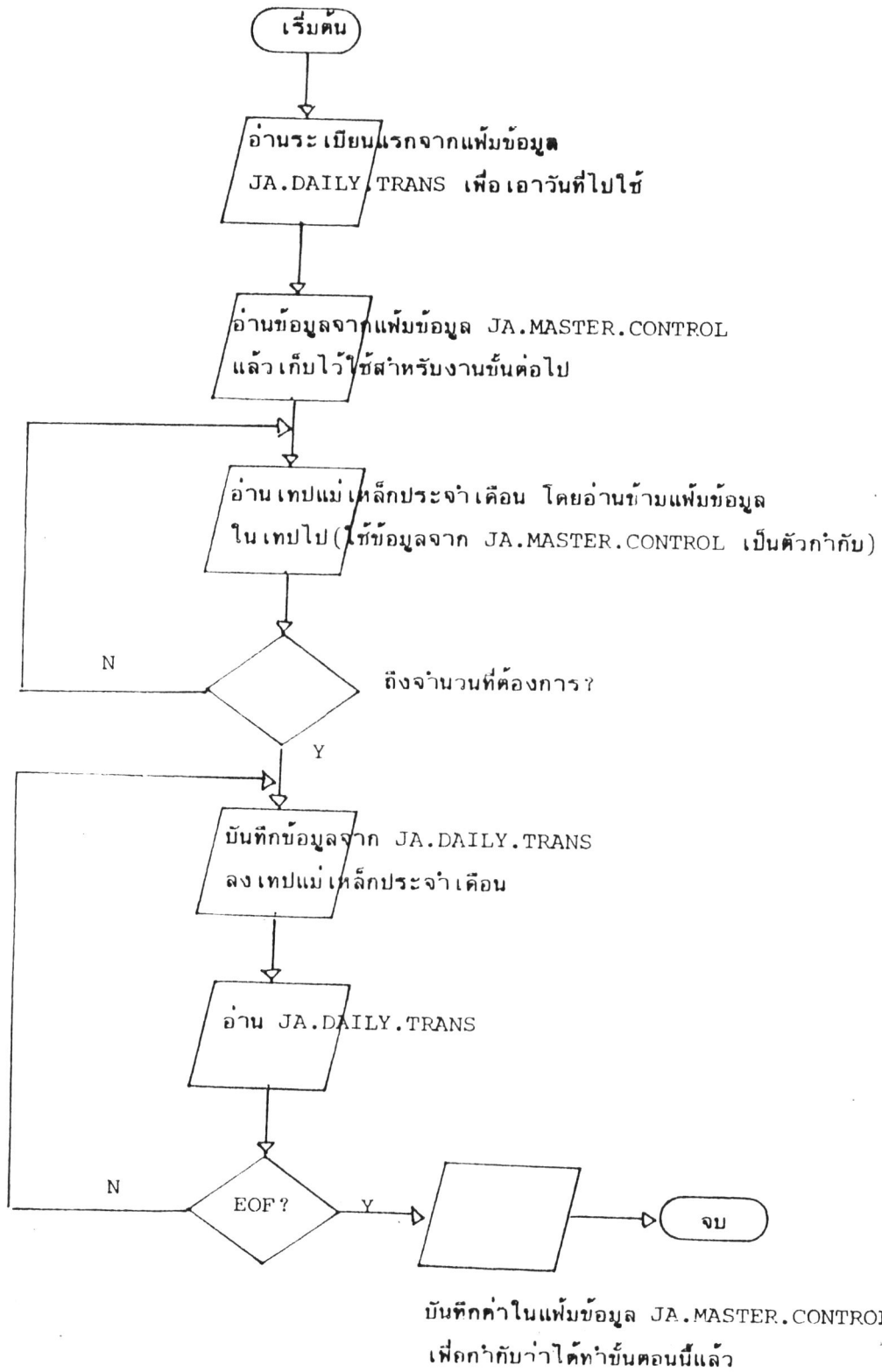
กำหนดตารางขนาด 65 X 4 สำหรับเก็บค่า
ที่จะทำการพิมพ์ และค่าที่มีส่วนร่วมใน
การคำนวณต่างๆ พร้อมกันนี้ กำหนดค่าเริ่ม
ต้นต่างๆในตารางเป็นศูนย์

เตรียมค่าต่างๆที่ต้องพิมพ์ในส่วนหัวรายงาน

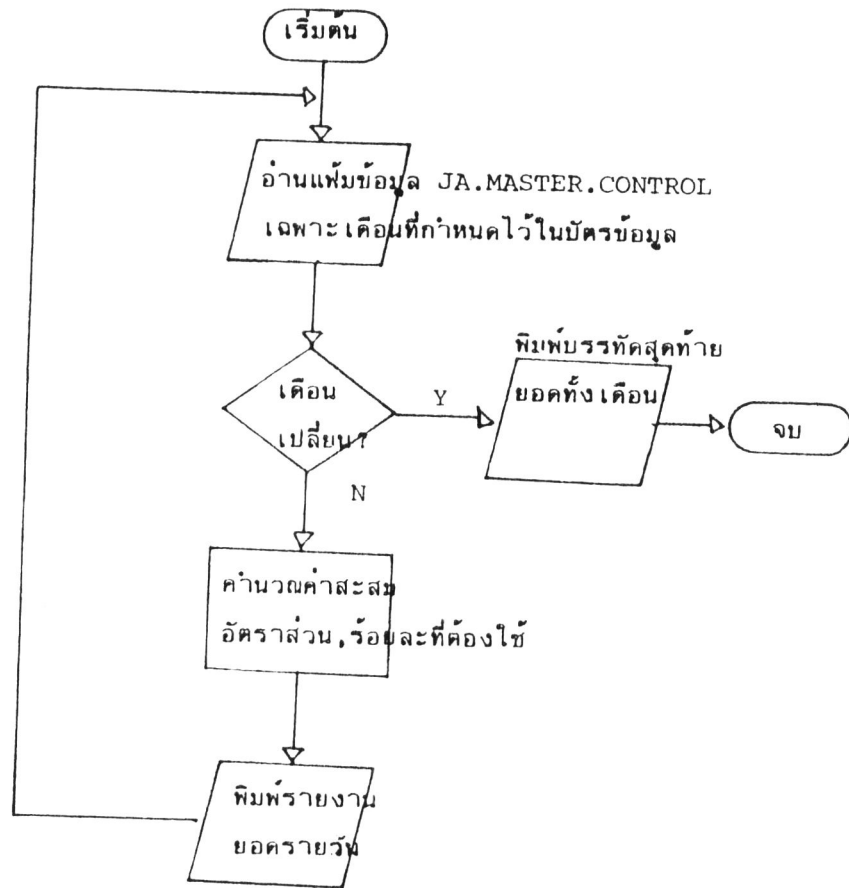
อ่านเพิ่มข้อมูล JA.DAILY.TRANS จนหมด
แต่ละระเบียนที่อ่านเข้ามา ทำการคำนวณค่าที่ต้องการ
พร้อมกับบวกสะสมไว้ในตารางตามประเภท
การพิจารณาผลัดงาน งานที่เวลาเริ่มต้นและสิ้นสุด
ตกอยู่ในผลัดเดียวกัน ให้บวกสะสมไว้ในผลัดของตน
งานที่เวลาเริ่มต้นและสิ้นสุดคร่อมผลัด ให้ทำการเฉลี่ย
ตามเวลาที่อยู่ในผลัด

ทำการคำนวณค่าเพิ่มเติม สำหรับค่าที่ต้อง
ใช้ผลลัพธ์จากการรวมกันของตัวอื่น เช่น อัตราร้อยละ

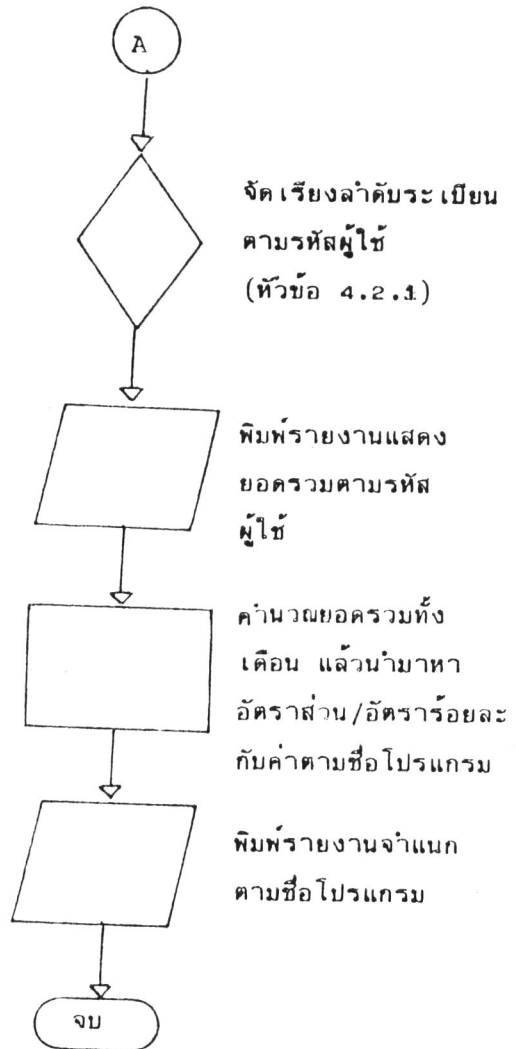
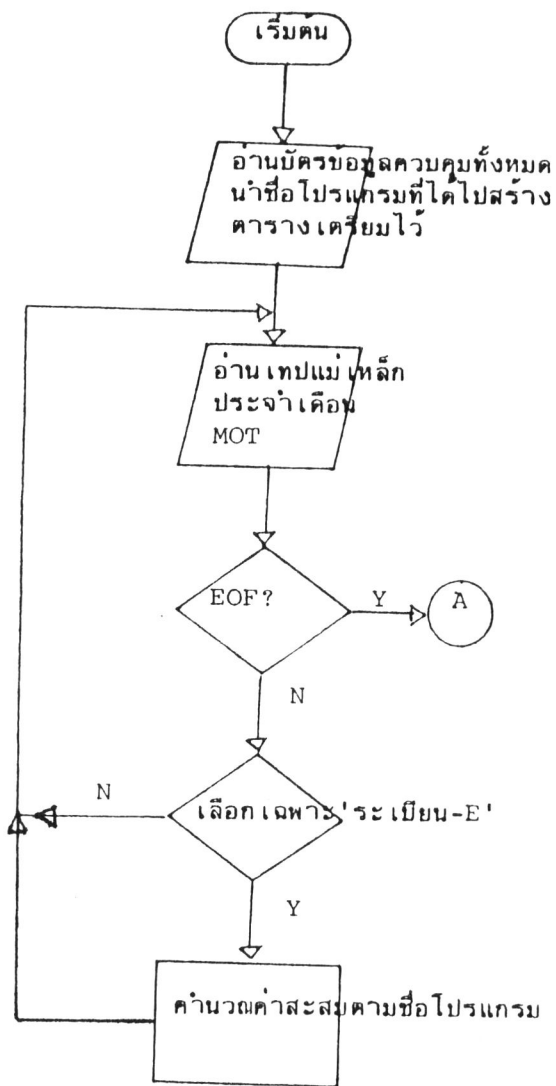
ทำการพิมพ์ตั้งแต่หัวรายงานจนหมด
โดยใช้ข้อมูลในตารางที่ทำไว้



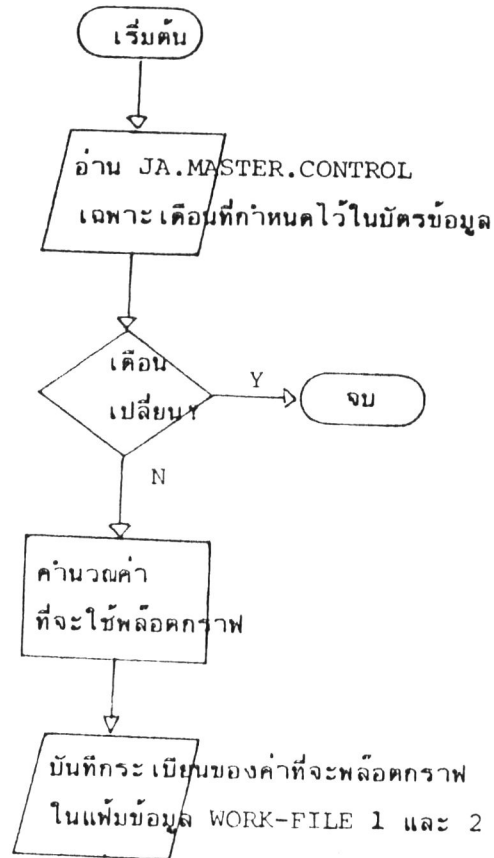
ข.5 โปรแกรม JA5010



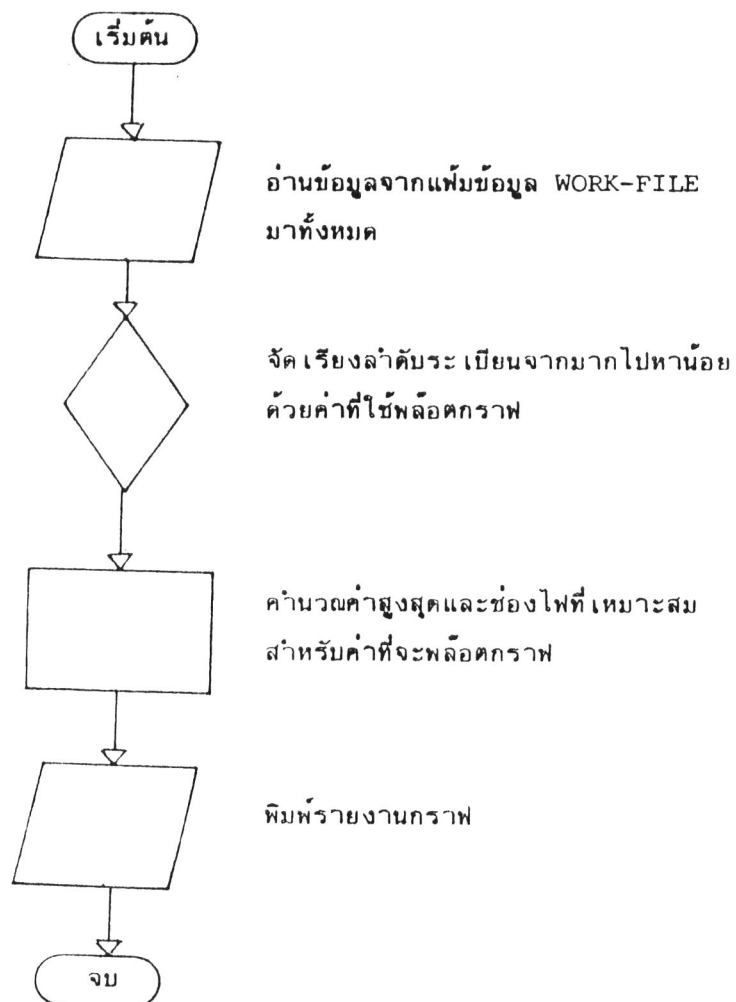
6 โปรแกรม JA5030



8.7 โปรแกรม JA6010



บ.8 โปรแกรม JA6011 และ JA6012



หมายเหตุ โปรแกรม JA6011 และ JA6012 ทำงานเกือบเหมือนกัน ทุกประการ

ภาคผนวก ค-

ตัวอย่างรายงาน

ค.1 รายงานการเลือกข้อมูลประจำวันทำงาน (JA1020)

JOB-ACCOUNTING REPORT
REPORT CODE JA1020

COMPUTER SERVICE CENTER
CHULALONGKORN.....UNIVERSITY

PAGE 1/1
RUN DATE 03-MAY-83

DAILY CONTROL REPORT OF SELECTING ACCOUNT TRANSACTION FILE
FOR 19-OCT-81

TODAY'S SUMMARY OF SYSTEM USAGE	NO. OF JCBS	NO. OF JCB STEPS	NO. OF ABEND JOBS	ELAPSED TIME (HH.MM.SS)	PROC TIME (HH.MM.SS)	OVH TIME (HH.MM.SS)	WAIT TIME (HH.MM.SS)	TAPE SIC COUNT	DISC SIC COUNT	#CARDS READ	#PAGES PRINTED	PRINTED TIME (HH.MM.SS)
CHULA-JCB	231	380	30	15.44.30	02.51.30	00.38.20	00.53.33	213,378	282,641	38,399	2,613	02.42.46
NON-CHULA-JCB	96	137	25	09.08.23	03.05.08	00.14.31	00.45.27	124,415	166,491	39,931	4,047	03.13.31
PAYMENT-JCB	52	103	6	15.52.15	01.24.45	00.13.43	00.27.38	41,172	89,965	19,363	3,087	06.14.59
TODAY'S TOTAL	379	620	61	40.45.08	07.21.23	01.06.34	02.06.38	378,965	539,097	97,693	9,747	12.11.16

AUDIT INFORMATION

	HH.MM.SS
TODAY MESURED-START TIME(A)	09.28.38
TODAY MESURED-STOP TIME(B)	02.11.04
TODAY MESURED TIME(B-A)	16.42.26

	READER(R)	EXECUTION(E)	LIST(L)	TOTAL
NO. OF RECORD READ FROM JA-INPUT-FILES	1,661	7,221	1,881	10,763
NO. OF RECORD WRITE TO JA.DAILY.TRANS	164	620	185	969
NO. OF RECORD WRITE TO JA.RESIDUE.TRANS	1,497	6,601	1,696	9,794

DETAIL JOB-TURNAROUND-TIME REPORT GROUP BY POWER-JOB-NAME
FOR 19-CT-81

POWER JOB NAME	POWER SER- NO.	DCS JOB NAME	PHASE NAME	PART/ CLASS/ PRI	START TIME (HH.MM.SS)	STCP TIME (HH.MM.SS)	ELAPSED TIME (HH.MM.SS)	CPU TIME (SECOND)	# T	TAPE SIL COUNT	# D	DISC SIC COUNT	#LINE PRINT/ SPCLL	#PAGE PRINT/ SPCLL	#CF READ/ CCPY	TERM CODE	
		ACABJKFN	FCOBCL	F3/T/3	14.19.25	14.20.39	00.01.14	23.69			3	227	207	8		16	
		ACABJKFN		F3/T/3	14.20.39	14.20.46	00.00.07	1.81			1	1	3	0		16	
		ACABJKDL	FCOBCL	F3/T/3	14.20.47	14.22.20	00.01.33	39.07			3	772	527	9		16	
		ACABJKEL	LNKEDT	F3/T/3	14.22.20	14.26.07	00.03.47	51.91			3	2,634	89	4		16	
		ACABJKDL		F3/T/3	14.26.07	14.26.39	00.00.32	10.46	1	17	2	3	2,359	36		16	
			PRINTER	F1/J/3	15.22.34	15.25.13							210	18	1	16	
			PRINTER	F1/J/3	15.25.13	15.27.57							782	15	1	16	
			PRINTER	F1/J/3	15.27.57	15.31.35							2,193	34	1	16	
			PRINTER	F1/A/3	18.07.43	18.08.30							121	6	1	16	
		TOTAL BY JOB						0.12.49	221.13	3	50	20	6,932	3,306/ 3,306	63/ 63		
ACABJKSD	32597		READER	F1/T/3	10.45.50	10.46.03									269	16	
		ACABJKS2	FCOBCL	F3/T/3	12.20.39	12.21.26	00.00.47	14.37			3	302	335	9		16	
		ACABJKS2	LNKEDT	F3/T/3	12.21.26	12.21.30	00.00.04	0.52			1	1	3	1		16	
			PRINTER	F1/A/3	12.21.30	12.21.52							338	10	1	16	
		TOTAL BY JOB						0.00.51	14.89			4	303	338/ 338	10/ 10		
AQAEJKSD	32703		READER	F1/T/3	21.47.02	21.47.28									529	16	
		ACABJKS2	FCOBCL	F3/T/3	22.14.56	22.15.48	00.00.52	15.54			3	439	329	8		16	
		ACABJKS2	LNKEDT	F3/T/3	22.15.48	22.17.45	00.01.57	12.77			2	1,781	65	3		16	
		ACABJKS2		F3/T/3	22.17.45	22.19.23	00.01.38	22.67	2	201	2	3	72	1		16	
		ACCDSAJK	FCOBCL	F3/T/3	22.19.23	22.20.06	00.00.43	16.77			3	276	220	8		16	
		ACCDSAJK	LNKEDT	F3/T/3	22.20.06	22.20.10	00.00.04	1.12			1	1	3	0		16	
			PRINTER	F1/A/3	24.15.53	24.16.36							669	20	1	16	
		TOTAL BY JOB						0.05.14	68.87	2	201	12	2,500	689/ 689	20/ 20		
ACABSJCT	32699		READER	F1/T/3	21.26.02	21.27.53									2229	16	
		ACABSJCT1	FCOBCL	F3/T/3	21.57.40	21.58.52	00.01.12	35.23			3	620	639	18		16	
		ACABSJCT1	LNKEDT	F3/T/3	21.58.52	21.58.55	00.00.03	0.28			1	1	3	1		16	
		ACABSJCT2	FCOBCL	F3/T/3	21.58.59	22.00.02	00.01.03	29.15			3	551	733	16		16	
		ACABSJCT2	LNKEDT	F3/T/3	22.00.02	22.00.04	00.00.04	0.23			1	1	3	1		16	
		ACABSJCT3	FCOBCL	F3/T/3	22.00.10	22.01.02	00.00.52	21.01			3	390	458	11		16	
		ACABSJCT3	LNKEDT	F3/T/3	22.01.02	22.01.06	00.00.04	0.31			1	1	3	1		16	
		ACABSJCT4	FCOBCL	F3/T/3	22.01.10	22.02.04	00.00.54	15.54			3	462	320	7		16	
		ACABSJCT4	LNKEDT	F3/T/3	22.02.04	22.02.49	00.00.45	6.22			3	1,657	70	4		16	
			FCOBCL	F3/T/3	22.02.49	22.03.50	00.01.01	8.55			3	256	69	3		16	
			LNKEDT	F3/T/3	22.03.50	22.04.35	00.00.45	7.32			3	1,531	77	4		16	
			PRINTER	F1/J/3	25.44.55	25.47.30							642	19	1	16	
			PRINTER	F1/J/3	25.47.30	25.49.46							736	17	1	16	
			PRINTER	F1/J/3	25.49.46	25.51.13							461	12	1	16	
			PRINTER	F1/J/3	25.51.13	25.52.26							390	11	1	16	
			PRINTER	F1/J/3	25.52.26	25.53.04							166	7	1	16	
		TOTAL BY JOB						0.06.43	124.28			24	5,470	2,555/ 2,555	66/ 66		
ACABSJSS	32617		READER	F1/T/3	12.29.15	12.29.51									746	16	
		ACABSJ15	FCOBCL	F3/T/3	15.05.39	15.11.49	00.06.10	45.89			3	1,008	773	12		16	
		ACABSJ15	LNKEDT	F3/T/3	15.11.49	15.14.19	00.02.30	10.07			3	2,083	68	2		16	
		ACABSJ15		F3/T/3	15.14.19	15.14.51	00.00.32	10.42	1	58	2	3	3,122	25		16	
			PRINTER	F1/J/3	15.31.35	15.36.51							3,560	39	1	16	
		TOTAL BY JOB						0.09.12	66.36	1	58	8	3,094	3,560/ 3,563	39/ 39		

DAILY PERFORMANCE REPORT ON 19-OCT-61

DESCRIPTION	SHIFT 1 07.00-14.59	SHIFT 2 15.00-22.59	SHIFT 3 23.00-06.59	TOTAL 07.00-06.59
DEFINED TIME (HH.MM)	08.00	08.00	08.00	24.00
MEASURED INTERVAL (HH.MM)	09.29-14.59	15.00-22.58	23.00-02.11	09.29-02.11
MEASURED TIME (A)	05.29.39	07.58.38	03.11.04	16.41.39
PARTITION PROCESSOR TIME (HH.MM)				
B0	00.00.03			00.00.03
F1 (POWER)				
F2	00.40.48	01.06.20	00.02.29	01.49.38
F3	01.46.57	01.45.57	00.47.31	04.20.26
F4	00.19.51	00.46.17	00.05.08	01.11.17
TOTAL PROGRAM PROCESSOR TIME (P=B0+F1+...+F4)	02.47.40	03.38.35	00.55.09	07.21.24
TOTAL OVERHEAD TIME (O)	00.31.53	00.27.47	00.06.54	01.06.35
TOTAL SYSTEM WAIT TIME (W)	00.38.41	01.08.58	00.18.59	02.06.39
TOTAL ACCOUNT CPU TIME (C=B+O+W)	03.58.14	05.15.21	01.21.03	10.34.40
TOTAL UNACCOUNT CPU TIME (F=A-E)	01.31.24	02.43.16	01.50.00	06.06.58
PROGRAM PROCESSOR TIME IN PCT. (G=B/E*100)	70.37	69.31	68.04	69.55
OVERHEAD TIME IN PCT. (H=O/E*100)	13.38	8.81	8.53	10.49
SYSTEM WAIT TIME IN PCT. (I=W/E*100)	16.24	21.87	23.42	19.95
CPU UTILIZATION IN PCT. (G+H)	83.75	78.12	76.57	80.04
PARTITION OCCUPANCY(ELAPSED) TIME				
B0	00.00.36			00.00.36
F1 (POWER)				
F2	13.16.01	04.13.44	00.10.01	17.39.46
F3	05.03.53	07.40.27	01.56.06	14.40.26
F4	04.54.00	03.15.18	00.15.02	08.24.20
TOTAL OCCUPANCY TIME (J)	23.14.30	15.09.29	02.21.09	40.45.08
JOB UTILIZATION				
NO. OF DCS-JOB (K)	137	206	36	379
NO. OF JOB-STEP (L)	242	323	55	620
NO. OF DCS-JOB/MEASURED HOUR (K/A)	24.9	25.8	11.3	22.7
NO. OF JOB-STEP/MEASURED HOUR (L/A)	44.0	40.5	17.2	37.1
AVERAGE CPU TIME/JOB (E/K)*	104.3	91.8	135.0	100.4
AVERAGE CPU TIME/JOB STEP (E/L)*	59.0	58.5	88.4	61.4
AVERAGE OCCUPANCY TIME/JOB (J/K)*	610.7	244.8	235.2	387.0
AVERAGE OCCUPANCY TIME/JOB STEP (J/L)*	345.7	166.9	153.9	236.6
MULTIPROGRAMMING FACTOR (J/A)	4.2	1.9	.7	2.4

* EXCLUDE POWER JOB AND TIME UNIT IN SECOND

DAILY PERFORMANCE REPORT ON 19-OCT-81

DESCRIPTION	SHIFT 1 07.00-14.59	SHIFT 2 15.00-22.59	SHIFT 3 23.00-06.59	TOTAL 07.00-06.59
DEFINED TIME (H.MM)	08.00	08.00	08.00	24.00
MEASURED INTERVAL (H.MM)	09.29-14.59	15.00-22.58	23.00-02.11	09.29-02.11
MEASURED TIME (A)	05.29.39	07.58.36	03.11.04	16.41.39
<u>TAPE ACTIVITY</u>				
NO. OF TAPE ASSIGNMENT (A)	69	107	41	217
NO. OF TAPE SID COUNT (A)	60,792	222,743	95,430	378,965
NO. OF ASSIGNMENT/MEASURED HOUR (M/A)	12	13	12	13
NO. OF SID COUNT/MEASURED HOUR (S/A)	11,073	27,947	30,005	22,706
NO. OF ASSIGNMENT/JOB (A/J)*			1	
NO. OF SID COUNT/JOB (S/J)*	443	1,081	2,650	999
<u>DISC ACTIVITY</u>				
NO. OF DISC ASSIGNMENT (A)	601	780	145	1,526
NO. OF DISC SID COUNT (A)	273,331	189,414	76,352	539,097
NO. OF ASSIGNMENT/MEASURED HOUR (M/A)	109	97	45	91
NO. OF SID COUNT/MEASURED HOUR (S/A)	49,787	23,765	24,010	32,300
NO. OF ASSIGNMENT/JOB (A/J)*	4	3	4	4
NO. OF SID COUNT/JOB (S/J)*	1,995	919	2,120	1,422
<u>PRINTER ACTIVITY</u>				
NO. OF LINES PRINTED (A)	121,094	180,715	146,739	448,548
PRINTED TIME (S)	02.52.30	06.29.01	02.49.45	12.11.16
PRINTED SPEED LINES/MINUTE (R/S)	704	464	866	613
NO. OF PAGES PRINTED	2,462	5,124	2,161	9,747
PRINTER UTILIZATION IN PCT (S/A*100)	52.32	61.27	88.64	73.00
<u>READER ACTIVITY</u>				
NO. OF READER QUEUE (POWER JOB)	76	82	4	164
NO. OF RECORD	46,753	49,712	1,228	97,693
NO. OF RECORD/READER QUEUE	599	606	307	595
NO. OF READER QUEUE/MEASURED HOUR	14	10	1	9

ค.4 รายงานการสร้งแฟ้มข้อมูลประจำเดือน (JA3050)

JOB-ACCOUNTING PROJECT
REPORT CODE JA3050

COMPUTER SERVICE CENTER
CHULALONGKORN.....UNIVERSITY

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RUN-DATE 04-MAY-83

DAILY CONTROL REPORT OF ADD UP DAILY TRANS TO MONTHLY TRANS
FOR 19-OCT-81

	DATE	START-TIME HH.MM.SS	STOP-TIME HH.MM.SS	RECORD-ID	JOB NAME
FIRST RECORD READ FROM DAILY TRANS	19/10/81	09.28.38	09.28.59	R	STUDENT
RECORD READ FROM MASTER CONTROL	19/10/81	09.28.38	26.11.04		
LAST RECORD READ FROM DAILY TRANS	19/10/81	26.10.50	26.11.04	L	ARABKV41

	NUMBER OF RECORD		
	READER	EXECUTION	LIST
NO. OF RECORD READ	164	620	185
NO. OF RECORD WRITE	164	620	185
VALUE IN MASTER CONTROL	164	620	185

*** END OF REPORT ***

	NO. OF JOBS	NO. OF JOB STEPS	NO. OF ABEND JOBS	ELAPSED TIME (HH.MM)	MEASURED TIME (HH.MM)	MULT. PROG. FAC.	PROCESS TIME (HH.MM)	OVERHEAD TIME (HH.MM)	WAIT TIME (HH.MM)	PROCESS TIME PCT.	CVH TIME PCT.	TAPE SID COUNT	DISC SID COUNT	#CARD READ	#PAGE PRINT	PRINT TIME (HH.MM)
THU 1	1161	2225	217	75.26	23.59	3.14	19.29	01.49	02.33	81.62	7.65	554	753+	173+	15+	20.20
FRI 2	1084	2140	165	61.24	25.50	2.37	10.53	02.58	08.14	49.26	13.47	358	1,052+	166+	12	13.45
SAT 3	741	1494	103	49.05	15.11	3.22	08.56	01.58	05.25	54.73	12.03	213+	613	86+	13+	13.34
MON 5	365	616	46	34.28	12.51	2.68	05.26	01.05	03.12	55.81	11.28	435+	353	77	7+	07.09
TUE 6	625	1273	155	46.34	22.08	2.10	09.13	01.19	03.58	63.51	9.13	637	685+	129	9	12.02
WED 7	540	1048	112	46.57	19.01	2.57	12.31	02.06	05.19	62.75	10.55	755+	569+	97	8	09.51
THU 8	547	1100	82	53.56	15.14	3.54	08.03	01.30	03.49	60.21	11.20	451	559	122+	8	07.56
FRI 9	584	1278	127	51.19	17.32	2.92	07.16	01.31	04.47	53.55	11.20	406+	693+	134+	8+	07.54
SAT 10	354	685	55	28.45	13.15	2.16	05.41	00.44	02.14	65.65	8.55	350	331	75	6+	05.52
MON 12	437	800	67	51.20	16.35	3.09	10.11	01.09	02.51	71.67	8.15	450	441	95+	8	08.03
TUE 13	437	819	76	45.28	15.56	2.85	06.53	01.23	03.48	56.98	11.53	778	464+	95+	12+	08.40
WED 14	357	655	67	48.10	16.21	2.94	09.13	01.21	02.57	68.11	9.98	678+	549+	93	9	09.35
THU 15	391	682	82	46.37	23.03	2.02	11.02	01.31	02.58	71.00	9.82	830+	1,272+	89+	7+	06.49
FRI 16	6	6	0	1.19	2.19	0.56	00.21	00.05	00.00	80.36	15.63	0	218	1	0	00.33
SAT 17	266	474	41	17.46	11.51	1.49	03.30	02.05	07.48	26.15	15.54	237+	266+	56+	6	05.50
MON 19	379	620	61	40.45	16.42	2.43	07.21	01.06	02.06	69.55	10.48	379+	539	98+	10+	12.11
TUE 20	414	710	64	48.05	18.47	2.55	07.57	01.41	04.55	54.64	11.60	526	624+	90	10+	14.26
WED 21	387	672	65	33.50	17.03	1.98	10.16	00.50	01.34	81.02	6.59	602	540+	95	6	07.57
THU 22	359	583	47	26.21	20.33	1.28	07.02	00.35	02.06	72.26	6.00	366	408	99+	10+	10.12
FRI 23	3	3	1	8.54	2.37	3.38	02.23	00.02	00.21	85.53	1.41	1	0	0	0	02.35
SAT 24	317	542	57	29.03	22.37	1.28	11.41	00.29	01.15	87.02	3.62	421	402	62+	15	13.22
SUN 25	15	24	3	6.05	4.46	1.27	00.25	00.05	00.44	34.27	7.18	10+	38+	2+	1	01.49
MON 26	315	525	40	17.49	14.39	1.21	04.21	00.27	00.16	85.79	8.93	428+	350+	86	10+	10.07
TUE 27	473	772	52	62.55	7.57	10.42	27.04	01.12	02.25	88.15	3.93	439+	488	94+	12	14.59
WED 28	456	755	57	42.42	22.33	1.89	15.18	00.48	02.00	84.49	4.43	374+	439+	92+	10	14.18
THU 29	382	637	46	50.26	19.15	2.61	14.16	02.26	07.32	58.84	10.07	647	380+	63+	10	15.50
FRI 30	384	672	50	42.46	22.54	1.66	16.30	00.41	01.36	87.81	3.64	279+	406	85	7+	07.52
SAT 31	391	706	51	30.02	12.59	2.31	06.18	00.54	04.06	55.65	8.02	148+	272	54+	8+	06.37

TOTAL 12170 22496 1,989 1,120.17 454.28 2.46 259.30 33.50 90.49 67.65 8,741,823 13,723 2,406 241 270.14

REMARKS----- UNIT IN THOUSANDS

ROUND UP ONE MORE UNIT

*** END OF REPORT ***

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ค.6 รายงานการใช้คอมพิวเตอร์ประจำเดือนค่าแถมตามกลุ่มผู้ใช้ (JA5030-1)

JOB-ACCOUNTING SYSTEM

COMPUTER SERVICE CENTER

PAGE

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REPORT CODE JA5030-1

CHULALONGKORN.....UNIVERSITY

RUN DATE 26-APR-83

MONTHLY SYSTEM UTILIZATION SUMMARY BY USER GROUP
FOR OCTOBER 1981

USER GROUP CODE	NO.OF DOS/V5 JOBS	NO.OF JOB STEPS	NO.OF ABEND JOBS	CPU TIME (HH.MM.SS)	#OF TAPE ASSGN.	TAPE SIO COUNT (100CS)	#OF DISC ASSGN.	DISC SIC CCUNT (100CS)
FAAB	1	3	0	0.00.19	0	0	8	C
FBAB	17	17	4	0.18.54	4	5	49	26
FERT	3	3	2	0.42.29	3	26	9	5
FGAB	14	14	1	0.27.11	0	0	39	22
FHDB	3	3	0	0.04.31	3	13	6	C
FJAB	16	16	0	0.53.01	2	22	48	84
FKAB	3	3	3	0.08.03	6	0	6	C
FOAB	37	51	7	2.17.39	6	59	128	231
FOAR	3	3	0	0.01.34	0	0	7	C
FPH	1	1	0	0.00.43	1	8	2	C
TOTAL GROUP F	98	114	17	4.54.27	25	137	302	371
GAAB	14	18	3	0.28.19	0	0	51	9
GC	4	4	3	0.00.33	0	0	9	C
GCA	1	3	0	0.00.23	0	0	6	1
GCAA	938	2,392	360	5.06.17	0	0	993	634
GCAR	3	7	1	0.01.48	0	0	13	2
GCOO	1	3	0	0.00.12	0	0	6	C
GMAI	1	3	1	0.00.53	0	0	8	2
TOTAL GROUP G	962	2,430	368	5.38.28	0	0	86	651
HAAA	66	174	23	0.16.22	13	0	348	58
HEAL	2	2	0	0.01.52	0	0	5	1
HGUS	4	4	2	1.23.25	4	18	12	66
HSMA	136	248	6	0.29.36	0	0	468	38
HYGI	4	4	1	0.11.40	2	16	8	13
TOTAL GROUP H	212	432	32	2.22.57	19	34	841	178
IRRI	5	5	1	0.03.49	4	9	9	C
TOTAL GROUP I	5	5	1	0.03.49	4	9	9	C

ค.7 รายงานการใช้คอมพิวเตอร์ประจำเดือนจำแนกตามชื่อโปรแกรม (JA5030-2)

JOB-ACCOUNTING SYSTEM
 REPORT CODE JA5030-2

COMPUTER SERVICE CENTER
 CHULALONGKORN.....UNIVERSITY

PAGE 1
 RUN DATE 26-APR-83

MONTHLY SYSTEM UTILIZATION SUMMARY BY PARTICULAR PROGRAM
 FOR OCTOBER 1981

PROGRAM NAME	NO.OF RUN			DURATION TIME			CPU TIME			TAPE SIO COUNT			DISC SIO COUNT		
	TOTAL	PCT.	#ABEND	TOTAL (HH.MM)	PCT.	AVR. (HH.MM.SS)	TOTAL (HH.MM)	PCT.	AVR. (HH.MM.SS)	TOTAL (1000S)	PCT.	AVR.	TOTAL (1000S)	PCT.	AVR.
ASSEMBLY	774	3.4	16	40.34	3.6	0.03.08	9.38+	2.4	0.00.44	0	0.0	0	1,596	11.6	2,062
DITTO	777	3.4	95	31.47+	2.8	0.02.27	6.03+	1.5	0.00.28	1,884+	15.9	2,424	9	0.0	11
POWERVS	20	0.0	0	181.28+	16.1	9.04.23	63.40+	16.5	3.10.57	19+	0.1	940	17+	0.1	845
FCOBGL	2,320	10.3	54	77.58+	6.9	0.02.00	15.43+	4.0	0.00.24	9+	0.0	3	1,074	7.8	463
FFORTRAN	1,478	6.5	304	85.04+	7.5	0.03.27	14.30+	3.7	0.00.35	9	0.0	6	319+	2.3	215
LNKEDT	5,077	22.5	73	105.29+	9.4	0.01.14	16.58+	4.4	0.00.12	0	0.0	0	4,850+	35.3	555
RPGII	1,305	5.8	51	17.05+	1.5	0.00.47	2.38+	0.6	0.00.07	0	0.0	0	162	1.1	124
SGRT	734	3.2	90	41.50+	3.7	0.03.25	10.49	2.8	0.00.53	1,940	16.3	2,643	979+	7.1	1,333
SPSS	814	3.6	57	101.00+	9.0	0.07.26	39.00	10.1	0.02.52	974+	8.2	1,156	1,744+	12.7	2,142
WATFIV	2,367	10.5	33	32.43+	2.9	0.00.49	6.28+	1.6	0.00.09	0	0.0	0	31	0.2	13
NO NAME	4,739	21.0	1,021	220.29+	19.6	0.02.47	105.51+	27.5	0.01.20	3,386	28.6	714	696+	5.0	146
OTHERS	2,091	9.2	195	185.05	16.5	0.05.18	93.38+	24.3	0.02.41	3,613+	30.5	1,727	2,247	16.3	1,074
MONTHLY	22,496	99.4	1,989	1120.28	99.5	0.02.59	384.52	99.4	0.01.01	11,833	99.6	526	13,723	99.5	610

NOTE

+ ROUND UP ONE MORE UNIT
 PCT. PERCENTAGE IN MONTH
 AVR. AVERAGE PER RUN

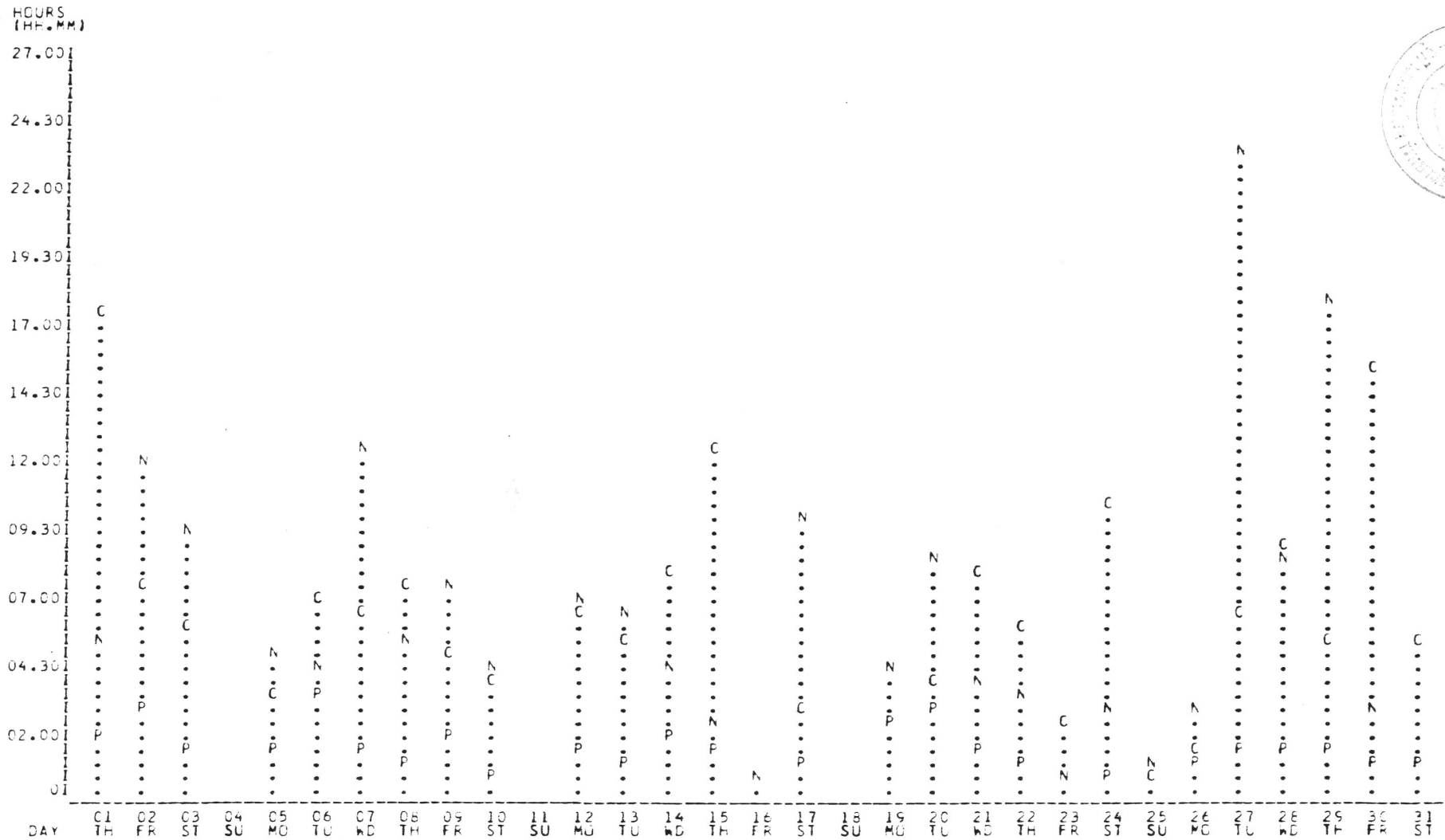
ค.8 รายงานกราฟเปรียบเทียบการใช้คอมพิวเตอร์ของบุคคลชาวไทย (JA6U11)

JOB-ACCOUNTING SYSTEM
REPORT CODE JA6011

COMPUTING SERVICE CENTER
CHULALONGKORN.....UNIVERSITY

PAGE 1/1
RUN DATE 05-MAY-83

CPU'S UTILIZATION BY THREE MAJOR GROUPS DURING THE MONTH OCTOBER 1981



TOTAL THIS MONTH

AVERAGE/DAY

C = CHULALONGKORN'S JOB 173.53
 N = NONCHULALONGKORN'S JOB 177.43
 P = PAYMENT'S JOB 33.10

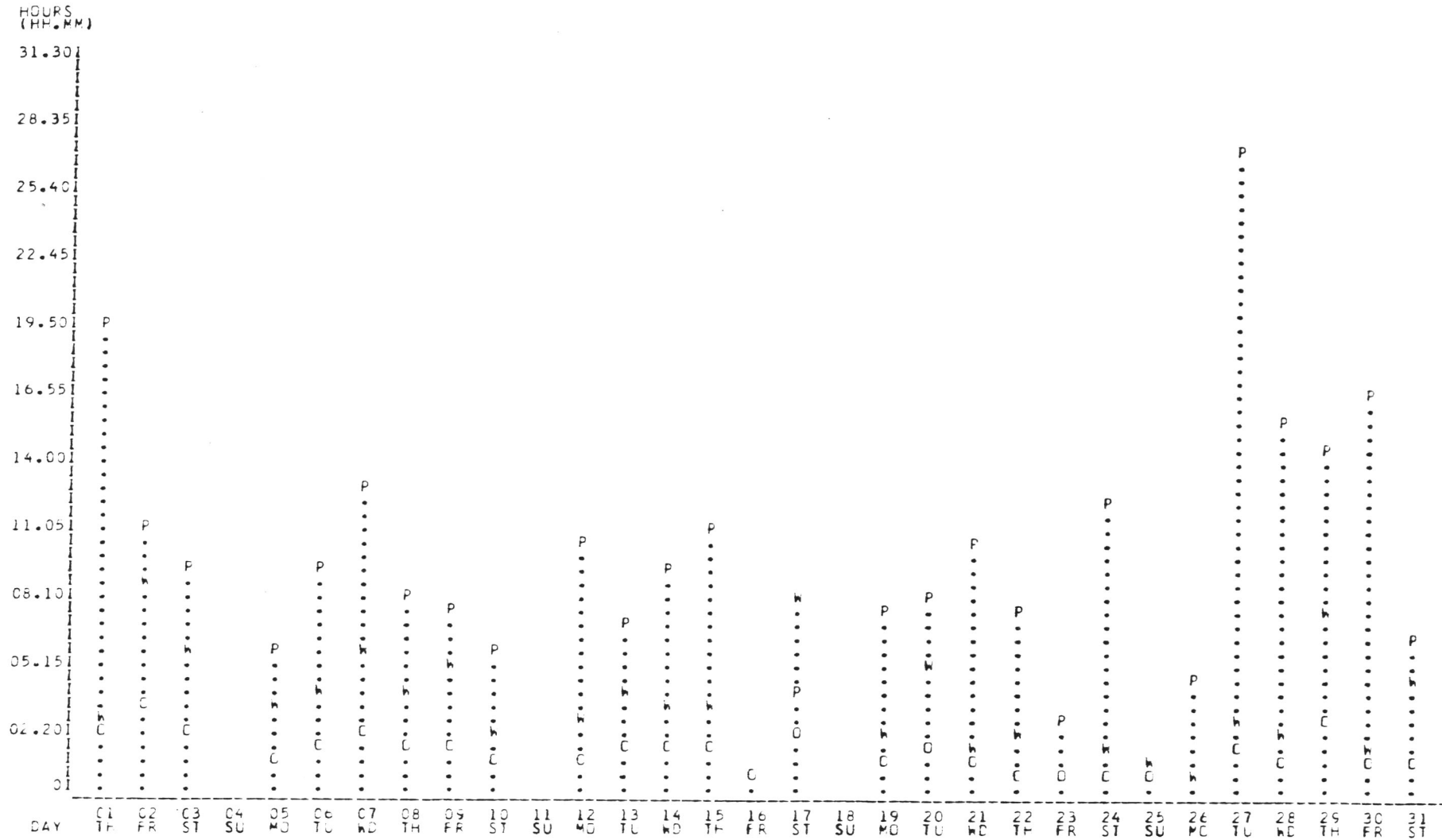
ท.9 รายงานการเพียบรวมเทียบเวลาตัวประมวลผลตามประเภทการใช้งาน (JA6012)

JOB-ACCOUNTING PROJECT
REPORT CODE JA6012

COMPUTER SERVICE CENTER
CHULALONGKORN UNIVERSITY

PAGE 1/1
RUN DATE C5-MAY-83

GRAPHICAL RECORD OF CPU UTILIZATION FOR THE MONTH OCTOBER 1981



TOTAL THIS MONTH

AVERAGE/DAY

P = PROBLEM PROGRAM CPU TIME 259.43
C = OVERHEAD TIME 34.01
W = WAIT TIME 91.02

9.17
1.13
3.15

ภาคผนวก ง.

แฟ้มข้อมูล และบัตรข้อมูล

ภาคผนวก ง.

ง.1 แฟ้มข้อมูลควบคุมหลัก ชื่อ JA.MASTER.CONTROL

แฟ้มข้อมูลเป็นจานแม่เหล็ก ระเบียบมีขนาด 180 ตัวอักษร จัดเรียงกันอยู่เป็นแบบลำดับของดรรชนี (Indexed Sequential) โดยมี วันที่ (เขตข้อมูลที่ 1) เป็นตัวกำหนดดรรชนี (Indexed Key) หนึ่งระเบียบของแฟ้มข้อมูลจะเก็บข้อมูลสรุป การใช้ระบบคอมพิวเตอร์ประจำวัน ดังมีรายละเอียดคือ

เขตข้อมูล	ลำดับ	ข้อมูล
1	1- 6	วันที่ปฏิบัติการ เก็บเป็น ปี, เดือน, วัน (Operation Date)
2	7-12	วันว่าง
3	13-14	จำนวนงาน (No. of jobs)
4	15-16	จำนวนโปรแกรม (No. of Job Steps)
5	17-18	จำนวนงานที่ถูกยกเลิก (No. of Abend Jobs)
6	19-22	ช่วงเวลา เก็บเป็น ชั่วโมง, นาที, วินาที (Elapsed Time)
7	23-26	จำนวนเวลาของตัวประมวลผลโปรแกรม (Process Time)
8	27-30	จำนวนเวลาของตัวประมวลผลระบบแล้วเสร็จเสียมา (Overhead Time)
9	31-34	จำนวนเวลาของตัวประมวลผลที่ต้องรอคอย (All-Bound Time)
10	35-38	จำนวนครั้งของการอ้างอิงเทปแม่เหล็ก (Tape SIO-Count)
11	39-42	จำนวนครั้งของการอ้างอิงจานแม่เหล็ก (Disc SIO-Count)
12	43-46	จำนวนบัตรที่อ่าน (# Cards Read)
13	47-50	จำนวนหน้ากระดาษที่พิมพ์ (# Pages Printed)
14	51-54	เวลาที่ใช้ในการพิมพ์ (Printed Time)
เขตข้อมูลที่ 3-14 จะมีสามชุดใน 1 ระเบียบ คือ		
ชุดแรก เขตข้อมูล 3-14 เป็นของกลุ่มผู้ใช้จากภายในจุฬาลงกรณ์มหาวิทยาลัย		
ชุดสอง เขตข้อมูล 15-26 เป็นของกลุ่มผู้ใช้จากภายนอกจุฬาลงกรณ์มหาวิทยาลัย		
ชุดสาม เขตข้อมูล 27-38 เป็นของกลุ่มผู้ใช้ที่ต้องถูกคิดค่าใช้จ่าย		

แฟ้มข้อมูลควบคุมหลัก ชื่อ JA.MASTER.CONTROL (ต่อ)

รายละเอียดของระเบียบ (ต่อ)

เขตข้อมูล	ลำดับ	ข้อมูล
39	139-142	เวลาเริ่มต้นของวันนี้ (เวลาเริ่มต้งานแรกของวัน)
40	143-146	เวลาสิ้นสุดของวันนี้ (เวลาสิ้นสุดงานสุดท้ายของวัน)
41	147-172	วันว่าง
42	173-174	เครื่องหมายพิเศษ* (WRITE-FLAG) มีค่าเป็นตัวอักษรภาษาอังกฤษ 'WW'
43	175-176	จำนวนระเบียบ-อาร์ ของวันนี้
44	177-178	จำนวนระเบียบ-แอล ของวันนี้
45	179-180	จำนวนระเบียบ-อี ของวันนี้

* เครื่องหมายพิเศษนี้มีไว้เพื่อควบคุมเมื่อทำงานโปรแกรม JA3050

หมายเหตุ. เขตข้อมูลที่มีหน่วยเป็น เวลาของแฟ้มข้อมูลนี้ เก็บไว้เป็น ชั่วโมง, นาที และวินาที

ง.2 บัตรข้อมูลกำหนดผลัดการทำงาน

บัตรข้อมูลนี้แสดง เวลาที่ใช้แบ่งผลัดการทำงานของ เจ้าหน้าที่คุมการปฏิบัติงานของ เครื่องคอมพิวเตอร์ ดังมีรายละเอียด คือ

เขตข้อมูล	ลำดับ	ข้อมูล
1	1- 4	เวลาเริ่มต้นผลัดแรก บอกเป็นตัวเลขสี่ตัว แสดงชั่วโมง นาที ตามนาฬิกา
2	5	เครื่องหมายจุลภาค หรือ เว้นว่าง
3	6- 9	เวลาเริ่มต้นของผลัดสอง
4	10	เครื่องหมายจุลภาค หรือ เว้นว่าง
5	11-14	เวลาเริ่มต้นของผลัดสาม
6	15	เครื่องหมายจุลภาค หรือ เว้นว่าง
7	16-19	เวลาสิ้นสุดของผลัดสาม
8	20-80	เว้นว่าง

ง.3 บัตรข้อมูลวันที่

บัตรข้อมูลนี้แสดง วัน เดือนปี เพื่อให้โปรแกรมประจำเดือนเลือกข้อมูลเฉพาะเดือนที่ต้องการจากแฟ้มข้อมูล JA.MASTER.CONTROL การกำหนดวันที่ลงในบัตรข้อมูลด้วย ก็เพื่อความ เป็นระบบของบัตรข้อมูลวันที่ โดยแท้จริง โปรแกรมประจำเดือนใช้เพียงส่วนของเดือนและปี รายละเอียดของบัตรข้อมูลคือ

เขตข้อมูล	ลำดับ	ข้อมูล
1	1-2	ตัวเลขสองตัวบอกวันที่
2	3-4	ตัวเลขสองตัวบอกลำดับของเดือน
3	5-6	ตัวเลขสองตัวสุดท้ายของปี ค.ศ.
4	7-80	เว้นว่าง

ง.4 บัตรข้อมูลควบคุม

บัตรข้อมูลชุดนี้ใช้เฉพาะโปรแกรม JA5030 มีช่องแบบฟอร์ม คือ แบบฟอร์มแรกใช้บัตรใบเดียว บอกจำนวนเพิ่มข้อมูลในเทปแม่เหล็ก 'ทปด'

แบบฟอร์มที่ส่งมี 10 บัตร แต่ละบัตรบอกชื่อโปรแกรม 1 ชื่อ (ชื่อโปรแกรมเหล่านี้คือตัวอักษรที่ใส่ใน ใบควบคุมงาน // EXEC XXXXXXXX) โปรแกรม JA5030 จะคำนวณการใช้คอมพิวเตอร์ตามชื่อโปรแกรมเหล่านี้

รายละเอียดของแบบฟอร์มแรก

เขตข้อมูล	ลำดับ	ข้อมูล
1	1-2	ตัวเลขช่องตัวบอกจำนวนเพิ่มข้อมูล
2	3-80	เว้นว่าง

รายละเอียดของแบบฟอร์มที่ส่ง

เขตข้อมูล	ลำดับ	ข้อมูล
1	1-8	ชื่อโปรแกรมเจาะขีดซ้าย
2	9-80	เว้นว่าง

ภาคผนวก จ.

บัตรข้อมูลควบคุมสำหรับโปรแกรมต่าง ๆ

จ.1 โปรแกรม JA1020

```

* $$ JOB   JNM=ABJBAC,CLASS=S
// JOB     ABJBAC
// OPTION  LOG,LINK
// EXEC    FCOBOL
.....  บัตรข้อมูลโปรแกรม .....
/*
// EXEC    LNKEDT
// ASSGN   SYS011,X'280'
// ASSGN   SYS012,DISK,VOL=CUDAT2,SHR
// DLBL    JARESDU,'JA.RESIDUE.TRANS',5,SD
// EXTENT  SYS012,CUDAT2,,6852,10
// ASSGN   SYS013,DISK,VOL=CUDAT2,SHR
// DLBL    JAMASTC,'JA.MASTER.CONTROL',60 , ISE
// EXTENT  SYS013,CUDAT2,1,0,6916,10
// EXTENT  SYS013,CUDAT2,4,1,6926,2
// ASSGN   SYS014,DISK,VOL=CUDAT2,SHR
// DLBL    JADAILY,'JA.DAILY,TRANS',5,SD
// EXTENT  SYS014,CUDAT2,,6862,50
// ASSGN   SYS006,SYSLST
// EXEC
/*
/&
* $$ EOJ

```


จ.2 โปรแกรม JA3010

```

* $$ JOB JNM=ABJBAC

// JOB ABJBAC

// OPTION LOG, LINK

// EXEC FCOBOL

..... ป้ดรข้ข้อมูลโปรแกรม .....

/*

// EXEC LNKEDT

// ASSGN SYS014, DISK, VOL=CUDAT2, SHR

// DLBL JADAILY, 'JA.DAILY.TRANS', 5, SD

// EXTENT SYS014, CUDAT2, ,, 6862, 50

// ASSGN SYS006, SYSLST

// EXEC

/*

/&

* $$ EOJ

```

๑.3 โปรแกรม JA3020

```

* $$ JOB   JNM=ABJBAC

// JOB     ABJBAC

// OPTION  LOG, LINK

// EXEC    FCOBOL

.....  บัตรข้อมูลโปรแกรม .....

/*

// EXEC    LNKEDT

// ASSGN   SYS014, DISK, VOL=CUDAT2, SHR

// DLBL    JADAILY, 'JA.DAILY.TRANS', 5, SD

// EXTENT  SYS014, CUDAT2, , , 6862, 50

// ASSGN   SYS006, SYSLST

// EXEC

บัตรข้อมูลผลสด เวลา 1 ใบ

/*

/&

* $$ EOJ

```

จ.4 โปรแกรม JA3050

```

* $$ JOB    JNM=ABJBAC,CLASS=S
// JOB      ABJBAC
// OPTION   LOG, LINK
// EXEC     FCOBOL
.....  บัตรข้อมูลโปรแกรม .....
/*
// EXEC     LNKEDT
// ASSGN   SYS013,DISK,VOL=CUDAT2,SHR
// DLBL    JAMASTC,'JA.MASTER.CONTROL',60, ISE
// EXTENT  SYS013,CUDAT2,1,0,6916,10
// EXTENT  SYS013,CUDAT2,4,1,6926,2
// ASSGN   SYS014,DISK,VOL=CUDAT2,SHR
// DLBL    JADAILY,'JA.DAILY.TRANS',60,SD
// EXTENT  SYS014,CUDAT2,,6862,50
// ASSGN   SYS011,X'280'
// PAUSE   PLS.MOUNT TAPE ....
// ASSGN   SYS006,SYSLST
// EXEC
/*
/&
* $$ EOJ

```

จ.5 โปรแกรม JA5010

```

* $$ JOB   JNM=ABJBAC
// JOB     ABJBAC
// OPTION  LOG, LINK
// EXEC    FCOBOL
.....  ป้ดรข้อมูลโปรแกรม .....
/*
// EXEC    LNKEDT
// ASSGN   SYS013, DISK, VOL=CUDAT2, SHR
// DLBL    JAMASTC, JA.MASTER.CONTROL, 60, ISE
// EXTENT  SYS013, CUDAT2, 1, 0, 6916, 10
// EXTENT  SYS013, CUDAT2, 4, 1, 6926, 2
// ASSGN   SYS006, SYSLST
// EXEC
ป้ดรข้อมูลวันที่ 1 ใบ
/*
/&
* $$ EOJ

```

จ.6 โปรแกรม JA5030

```

* $$ JOB   JNM=ABJBAC,CLASS=S
* $$ LST   LST=SYS007
* $$ LST   LST=SYS008

// JOB     ABJBAC

// OPTION  LOG,LINK

// EXEC    FCOBOL

.....  บัตรข้อมูลโปรแกรม .....

/*

// EXEC    LNKEDT

// ASSGN   SYS011,X'280'

// PAUSE   PLS.MOUNT JA-MONTHLY-TAPE

// ASSGN   SYS006,SYSLST

// ASSGN   SYS007,X'00E'

// ASSGN   SYS008,X'01E'

// EXEC

.....  บัตรข้อมูลควบคุมตามความต้องการของโปรแกรมที่ 11 ใบ

/*

/&

* $$ EOJ

```

จ.7 โปรแกรม JA6010

```

* $$ JOB   JNM=ABJBAC

// JOB     ABJBAC

// OPTION  LOG, LINK

// EXEC    FCOBOL

..... ป้ดรข้อมูลโปรแกรม .....

/*

// EXEC    LNKEDT

// ASSGN   SYS013, DISK, VOL=CUDAT2, SHR

// DLBL    JAMASTC, 'JA.MASTER.CONTROL', 60, ISE

// EXTENT  SYS013, CUDAT2, 1, 0, 6916, 10

// EXTENT  SYS013, CUDAT2, 4, 1, 6926, 2

// ASSGN   SYS015, DISK, VOL=CUDAT2, SHR

// DLBL    JAGRPH1, 'JA.GRAPHIC.USER', 0, SD

// EXTENT  SYS015, CUDAT2, , , 6912, 2

// ASSGN   SYS016, DISK, VOL=CUDAT2, SHR

// DLBL    JAGRPH2, 'JA.GRAPHIC.CPU', 0, SD

// EXTENT  SYS016, CUDAT2, , , 6914, 2

// ASSGN   SYS006, SYSLST

// EXEC

      ป้ดรข้อมูลวันที่ 1 ใบ

/*

/&

* $$ EOJ

```

จ.8 โปรแกรม JA6011

```

* $$ JOB   JNM=ABJBAC
// JOB     ABJBAC
// OPTION  LOG, LINK
// EXEC    FCOBOL
.....  บัตรข้อมูลโปรแกรม .....
/*
// EXEC    LNKEDT
// ASSGN   SYS015, DISK, VOL=CUDAT2, SHR
// DLBL    JAGRPH1, 'JA.GRAPHIC.USER', 0, SD
// EXTENT  SYS015, CUDAT2, ,, 6912, 2
// ASSGN   SYS006, SYSLST
// EXEC
/*
/&
* $$ EOJ

```

จ.9 โปรแกรม JA6012

```

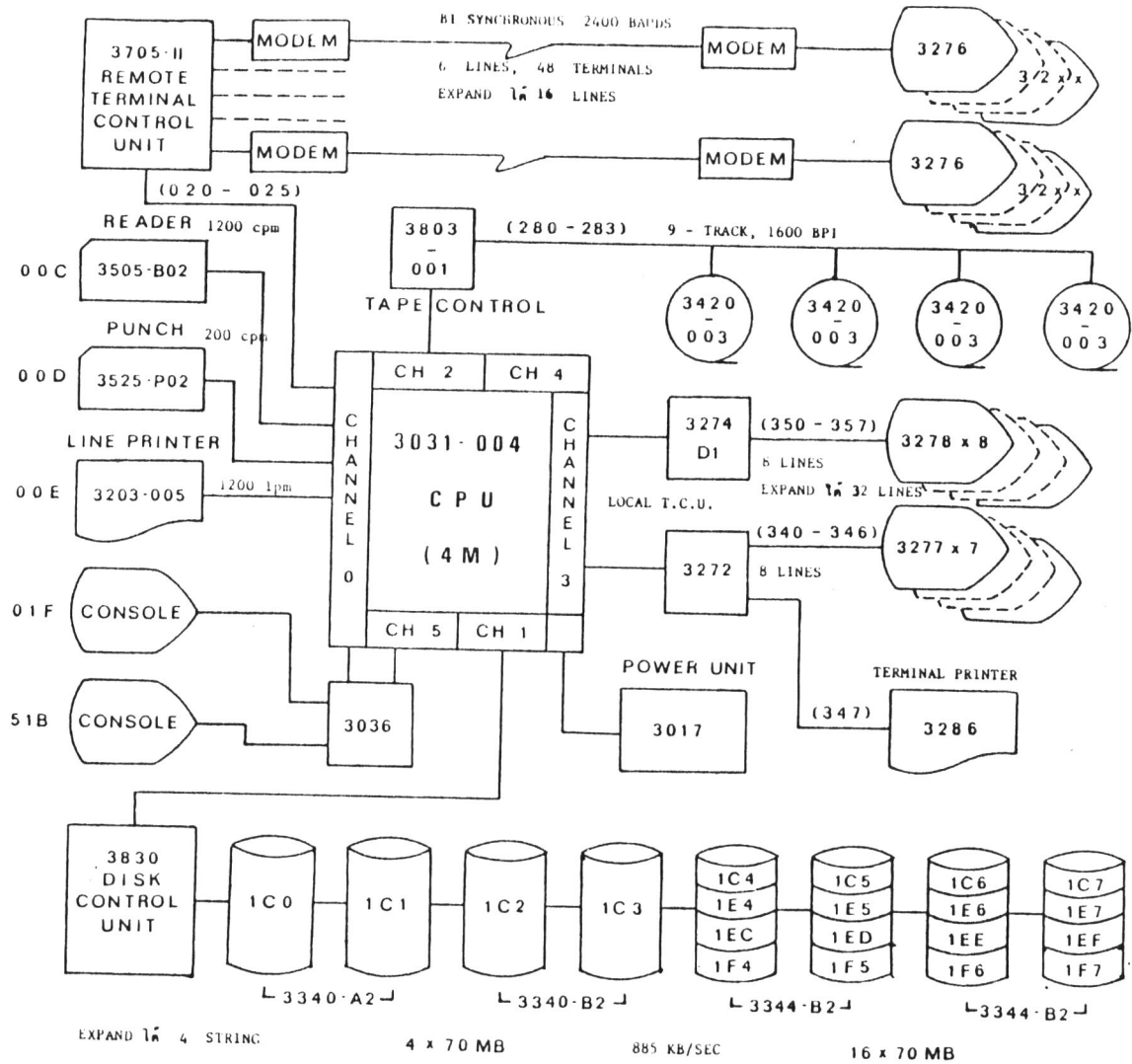
* $$ JOB   JNM=ABJBAC
// JOB     ABJBAC
// OPTION  LOG, LINK
// EXEC    FCOBOL
.....  บัตรข้อมูลโปรแกรม .....
/*
// EXEC    LNKEDT
// ASSGN   SYS016, DISK, VOL=CUDAT2, SHR
// DLBL    JAGRPH2, 'JA, GRAPHIC, CPU', 0, SD
// EXTENT  SYS016, CUDAT2, ,, 6914, 2
// ASSGN   SYS006, SYSLST
// EXEC
/*
/&
* $$ EOJ

```


ภาคผนวก ฉ

ผังภูมิแสดงอุปกรณ์ของระบบคอมพิวเตอร์ 3031 - 004

แผนผังของระบบเครื่องคอมพิวเตอร์



SYSTEM 3031 CONFIGURATION

ภาคผนวก ช

คำศัพท์

คำศัพท์

<u>ภาษาไทย</u>	ภาษาอังกฤษ	หน้า
การเข้าหาศูนย์กลาง	Centralization	1
แผนกระบบสารสนเทศ	Information System Department	1
ความมีประสิทธิภาพ	Efficientcy	2
ผลงานที่ได้รับ	Effectiveness	2
ข้อมูลสนเทศ	Information	2
ซอฟต์แวร์	Software	2
ส่วนรับงาน	Input	3
ส่วนประมวลผล	Processor	3
ส่วนแสดงผล	Output	3
คอมพิวเตอร์ขนาดกลาง	Medium Scale Computer	3
เครื่องพิมพ์ครั้งละบรรทัด	Line Printer	3
ส่งงาน	Submit	3
ระบบประมวลผลตามสาย	ON-LINE Processing	4
โปรแกรมหลักควบคุมระบบคอมพิวเตอร์	Operating System	4
อัตราส่งผ่าน	Throughput	4
หน่วยประมวลผลกลาง	Central Processing Unit	5
เจ้าหน้าที่คุมเครื่อง	Operator	5
ปฏิบัติการ	Execution	6
ไมโครวินาที	Microsecond	7
การแบ่งเนื้อที่หน่วยความจำหลักเป็นส่วนๆ	Memory Partitions	7
การจัดเนื้อที่หน่วยความจำหลักแบบพลวัต	Dynamic Allocation	7
ความจำเสมือน	Virtual Storage	7
การถ่ายเทระหว่างหน่วยความจำหลักจริง และเสมือน	Page-In and Page-Out	7

<u>ภาษาไทย</u>	<u>ภาษาอังกฤษ</u>	<u>หน้า</u>
หน่วยความจำสำรอง	Auxilliary Storage	8
เวลาที่ใช้ในการถ่ายเทข้อมูล	I/O Time	8
การเข้าถึง	Access Time	8
แทรค ซิลินเดอร์ หรือ บล็อก	Trach Cylinder of Block	8
ข้อมูลเกี่ยวกับการใช้คอมพิวเตอร์	Job Accounting	12
ชุดงาน	Job Stream	13
แถวคอย	Queue	13
แถวคอยของส่วนรับงาน เข้า	Reader Queue	13
แถวคอยของงานพิมพ์	Print Queue	13
แถวคอยของงานเจาะบัตร	Punch Queue	13
ระเบียน	Record	14
แฟ้มข้อมูลแบบ เรียงลำดับขนาดของระเบียน	Sequential File Variable	
ต่างกัน	Record Length	14
ระเบียนงานส่งเข้า	Reader Account Record	15
ระเบียนงานพิมพ์	List Account Record	16
ระเบียนงานเจาะบัตร	Punch Account Record	17
ระเบียนปฏิบัติการโปรแกรม	Execution Account Record	18
การวางระบบ	System Generation	18
หมายเลขของอุปกรณ์ในระบบ	Device Address	18
อุปกรณ์ประกอบของ เครื่องคอมพิวเตอร์	Hardware Configuration	20
หน่วยควบคุม	Control Unit	20
บัตรควบคุม	Job Control Card	22
เรียงลำดับ	Sort	23
สำเนาหลักฐาน	Hard Copy	26
ตัวแปลภาษา	Compiler	30
ที่พัก	Buffer	32
โปรแกรมย่อย	Sub Program	35
เคลื่อน เทปแม่เหล็กไปข้างหน้า	Forword Space File	35

ภาคผนวก ช.

Source Program

```

CBL APCST
00001 ID DIVISION.
00002 PROGRAM-ID. JA1020A.
00003 *
00004 * DAILY CONTROL REPORT OF SELECTING ACCOUNT TRANS. FILE *
00005 *
00006 ENVIRONMENT DIVISION.
00007 INPUT-OUTPUT SECTION.
00008 FILE-CONTROL.
00009 *
00010
00011 SELECT JASAVET ASSIGN TO SYS011-UT-3420-S.
00012 SELECT JARESDD ASSIGN TO SYS012-JA-3340-S-JARESDD.
00013
00014
00015 SELECT JADAILY ASSIGN TO SYS014-DA-3340-S-JADAILY.
00016
00017 SELECT MASTERC ASSIGN TO SYS013-MASTERC
00018 ORGANIZATION INDEXED
00019 ACCESS MODE IS RANDOM
00020 RECORD KEY IS MALDAT.
00021 FILE STATUS IS AA.
00022 *
00023 SELECT PFILE ASSIGN TO SYS006-DR-3203-S.
00024 *
00025 DATA DIVISION.
00026 FILE SECTION.
00027
00028 FD JASAVET LABEL RECORD OMITTED
00029 RECORDING MODE V
00030 DATA CONTAINS 58 TO 249
00031 DATA RECORDS ARE CRREC DEFEC OLREC.
00032 C01 OLREC.
00033 05 ACDATE PIC X(08).
00034 03 ACSTRT PIC 9(06) COMP-3.
00035 03 ACSTCP PIC 9(06) COMP-3.
00036 03 ACUSER.
00037 *****
00038 * USER INFORMATION *****
00039 * - US-TY VALUE 'A' = CHULA-JLE *
00040 * - US-PY VALUE 'E' THRU 'Z' = NON CHULA-JCE *
00041 * - OTHERS = PAYMENT JCE *
00042 *****
00043 05 FILLER PIC X(08).
00044 05 USTYPE PIC X(02).
00045 88 US-TY VALUE 10 THRU 99.
00046 88 US-PY VALUE 00 THRU 09.
00047 05 FILLER PIC X(06).
00048 03 ACNAME PIC X(08).
00049 03 ACNAME.
00050 05 ACNAME-USE PIC X.
00051 88 US-TY VALUE 'A'.
00052 88 US-PY VALUE 'B' THRU 'Z'.
00053 05 FILLER PIC X(07).
00054 C16 03 ACNUMB PIC 9(04) COMP-4.
00055 C19 03 ACIDEN PIC X(01).
00056 020 03 ACCANC PIC X(01).
00057 03 FILLER PIC X(06).
00058 C21 03 RDRICL PIC X(01).
00059 C22 03 RDRIDR PIC X(01).
00060 023 03 RDRNUM PIC 9(06) COMP-4.
00061 03 FILLER PIC X(02).
00062 024 O1 OLREC.
00063 05 ACDATE PIC X(08).
00064 C25 03 ACSTRT PIC 9(06) COMP-3.
00065 026 03 ACSTCP PIC 9(06) COMP-3.
00066 027 03 ACUSER.
00067 028 05 FILLER PIC X(08).
00068 C29 05 USTYPE PIC X(02).
00069 031 * 88 US-TY VALUE 10 THRU 99.
00070 032 * 88 US-PY VALUE 00 THRU 09.
00071 C33 05 FILLER PIC X(06).
00072 034 03 ACNAME.
00073 05 ACNAME-USE PIC X.
00074 88 US-TY VALUE 'A'.
00075 88 US-PY VALUE 'B' THRU 'Z'.
00076 05 FILLER PIC X(07).
00077 C35 03 ACNUMB PIC 9(04) COMP-4.
00078 C36 03 ACIDEN PIC X(01).
00079 C37 03 ACCANC PIC X(01).
00080 03 FILLER PIC X(06).

```

โปรแกรม JA1020

```

0000100
0000200
0000300
0000400
0000500
0000600
0000700
0000800
0000900
0001000
0001100
0001200
0001300
0001400
0001500
0001600
0001700
0001800
0001900
0002000
0002100
0002200
0002300
0002400
0002500
0002600
0002700
0002800
0002900
0003000
0003100
0003200
0003300
0003400
0003500
0003600
0003700

```

```

00091 C38 03 LSTCCL PIC X(01). 00003800
00092 C39 03 LSTICPK PIC X(01). 00003900
00093 C40 03 LSTALUM PIC S(06) COMP-4. 00004000
00094 C41 03 FILLER PIC XX. 00004100
00095 C42 03 LSTSLCF PIC X(01). 00004200
00096 C43 03 LSTCLCP PIC X(01). 00004300
00097 C44 03 LSTFLR PIC X(04). 00004400
00098 C45 03 LSTEXX PIC S(06) COMP-4. 00004500
00099 C46 03 LSTPAC PIC S(04) COMP-4. 00004600
00100 C47 03 LSTEXP PIC S(04) COMP-4. 00004700
00101 C48 01 LFERL. 00004800
00102 C49 03 ACDATE PIC X(06). 00004900
00103 C50 03 ACSTRT PIC S(06) COMP-3. 00005000
00104 C51 03 ACSTCP PIC S(06) COMP-3. 00005100
00105 C52 03 ACUSER. 00005200
00106 C53 05 FILLER PIC X(06). 00005300
00107 C54 05 LSTYPE PIC X(02). 00005400
00108 C55 * 06 US-TY VALUE 10 THRU 99. 00005500
00109 C56 * 06 US-PY VALUE 00 THRU 09. 00005600
00110 C57 05 FILLER PIC X(06). 00005700
00111 C58 03 ACNAME PIC X(06). 00005800
00112 C59 03 ACNAME PIC S(04) COMP-4. 00005900
00113 C60 03 ACIDEN PIC X(01). 00006000
00114 C61 03 ACCANC PIC X(01). 00006100
00115 C62 03 FILLER PIC X(06). 00006200
00116 C63 03 FAXCL PIC X(01). 00006300
00117 C64 03 EXIPR PIC X(01). 00006400
00118 C65 03 EXNLN PIC S(06) COMP-4. 00006500
00119 C66 03 EXNCD PIC S(06) COMP-4. 00006600
00120 C67 03 EXNPG PIC S(04) COMP-4. 00006700
00121 C68 03 FILLER PIC X(13). 00006800
00122 C69 03 EXDJOB. 00006900
00123 C70 05 EXLJOB-USE PIC X. 00007000
00124 C71 06 US-TY VALUE 'A'. 00007100
00125 C72 06 US-PY VALUE 'B' THRU 'Z'. 00007200
00126 C73 05 FILLER PIC X(07). 00007300
00127 C74 03 EXDUSER PIC X(16). 00007400
00128 C75 03 EXPIC PIC X(02). 00007500
00129 C76 03 EXCCANC PIC X(01). 00007600
00130 C77 03 EXTYPE PIC X(01). 00007700
00131 C78 03 FILLER PIC X(04). 00007800
00132 C79 03 EXPHASE PIC X(06). 00007900
00133 C80 03 EXENCAD PIC S(06) COMP-4. 00008000
00134 C81 03 EXCPUTM PIC S(06) COMP-4. 00008100
00135 C82 03 EXOVFTM PIC S(06) COMP-4. 00008200
00136 C83 03 EXALLTM PIC S(06) COMP-4. 00008300
00137 C84 03 EXXSIC12 OCCURS 20 TIMES. 00008400
00138 C85 05 EXAED PIC S(04) COMP-4. 00008500
*****
* DEVICE ADDRESS *
* - X'1F70' THRU X'1F7F' = 448 THRU 503 *
* - X'2800' THRU X'283F' = 640 THRU 643 *
*****
06 EDEV-SADD VALUE 448 THRU 503.
06 EDEV-TAED VALUE 640 THRU 643.
03 EEXJOB PIC S(06) COMP-4.
03 FILLER PIC X.

FD JADAILY LABEL RECORD ARE STANDARD
DATA RECORDS ARE JDRREC JDLREC JDEREC.

01 JDRREC.
03 ACCLDATE PIC 9(06).
03 ACCLDATE PIC 9(06).
03 ACSTRT PIC 9(06) COMP-3.
03 ACSTCP PIC 9(06) COMP-3.
03 ACUSER.
*****
* USER INFORMATION *
* US-TY VALUE 10 THRU 99 = TEST JOB *
* US-PY VALUE 00 THRU 09 = PRODUCTION JOB *
* OTHERS = UNDEFINED JOB *
*****
05 FILLER PIC X(08).
05 LSTYPE PIC X(02).
06 US-TY VALUE 10 THRU 99.
06 US-PY VALUE 00 THRU 09.
05 FILLER PIC X(06).
03 ACNAME PIC X(06).
03 ACNAME PIC S(04) COMP-4.
03 ACIDEN PIC X(01).

```


00162	106	03	ACCANC	PIC X(01).	000106CC
00163	107	03	ACCTICL	PIC X(01).	000107CC
00164	108	03	ACCTICR	PIC X(01).	000108CC
00165	109	03	ACCRICM	PIC 9(06) COMP-4.	000109CC
00166	110	C1	JRREC.		000110CC
00167	111	03	ACCPATE	PIC 9(06).	000111CC
00168	112	03	ACDATE	PIC 9(06).	000112CC
00169	113	03	ACSTRT	PIC 9(06) COMP-3.	000113CC
00170	114	03	ACSTLP	PIC 9(06) COMP-3.	000114CC
00171	115	03	ACUSER.		000115CC
00172	116	05	FILLER	PIC X(06).	000116CC
00173	117	05	CSTYPE	PIC X(02).	000117CC
00174	118	05	US-TY	VALUE 10 THRU 99.	000118CC
00175	119	05	US-PY	VALUE 00 THRU 09.	000119CC
00176	120	05	FILLER	PIC X(06).	000120CC
00177	121	03	ACNAME	PIC X(05).	000121CC
00178	122	03	ACNUMB	PIC 9(04) COMP-4.	000122CC
00179	123	03	ACIDEN	PIC X(01).	000123CC
00180	124	03	ACCANC	PIC X(01).	000124CC
00181	125	03	LSTICL	PIC X(01).	000125CC
00182	126	03	LSTICR	PIC X(01).	000126CC
00183	127	03	LSTALM	PIC 9(06) COMP-4.	000127CC
00184	128	03	LSTSUF	PIC X(01).	000128CC
00185	129	03	LSTICF	PIC X(01).	000129CC
00186	130	03	LSTICM	PIC X(04).	000130CC
00187	131	03	LSTEXR	PIC 9(06) COMP-4.	000131CC
00188	132	03	LSTPAG	PIC 9(04) COMP-4.	000132CC
00189	133	03	LSTEXP	PIC 9(04) COMP-4.	000133CC
00190	134	C1	JRREC.		000134CC
00191	135	03	ACCPATE	PIC 9(06).	000135CC
00192	136	03	ACDATE	PIC 9(06).	000136CC
00193	137	03	ACSTRT	PIC 9(06) COMP-3.	000137CC
00194	138	03	ACSTLP	PIC 9(06) COMP-3.	000138CC
00195	139	03	ACUSER.		000139CC
00196	140	05	FILLER	PIC X(06).	000140CC
00197	141	05	CSTYPE	PIC X(02).	000141CC
00198	142	05	US-TY	VALUE 10 THRU 99.	000142CC
00199	143	05	US-PY	VALUE 00 THRU 09.	000143CC
00200	144	05	FILLER	PIC X(06).	000144CC
00201	145	03	ACNAME	PIC X(05).	000145CC
00202	146	03	ACNUMB	PIC 9(04) COMP-4.	000146CC
00203	147	03	ACIDEN	PIC X(01).	000147CC
00204	148	03	ACCANC	PIC X(01).	000148CC
00205	149	03	EXICL	PIC X(01).	000149CC
00206	150	03	EXICR	PIC X(01).	000150CC
00207	151	03	EXNLN	PIC 9(06) COMP-4.	000151CC
00208	152	03	EXNCD	PIC 9(06) COMP-4.	000152CC
00209	153	03	EXNPD	PIC 9(04) COMP-4.	000153CC
00210	154	03	EXDJCE	PIC X(06).	000154CC
00211	155	03	EXDUSEK	PIC X(16).	000155CC
00212	156	03	EXPIC	PIC X(02).	000156CC
00213	157	03	EXDCANC	PIC X(01).	000157CC
00214	158	03	EXTYPE	PIC X(01).	000158CC
00215	159	03	EXPHASE	PIC X(08).	000159CC
00216	160	03	EXENDAD	PIC 9(06) COMP-4.	000160CC
00217	161	03	EXCPUTM	PIC 9(06) COMP-4.	000161CC
00218	162	03	EXCVFTM	PIC 9(06) COMP-4.	000162CC
00219	163	03	EXALLTM	PIC 9(06) COMP-4.	000163CC
00220	164	03	EXSICTB	GCCURS 20 TIMES.	000164CC
00221	165	05	EXADD	PIC 9(04) COMP-4.	000165CC
00222	166				000166CC
00223	167				000167CC
00224	168				000168CC
00225	169				000169CC
00226	170				000170CC
00227	171				000171CC
00228	172				000172CC
00229	173				000173CC
00230					
00231		FD	JANESDU	LABEL RECORD ARE STANDARD	
00232				DATA RECORDS ARE JRREC JRLREC JRREC.	
00233		C1	JRREC.		
00234		02	JR-DATE.		
00235		03	JR-DD	PIC 99.	
00236		03	FILLER	PIC X.	
00237		03	JR-MM	PIC 99.	
00238		03	FILLER	PIC X.	
00239		03	JR-YY	PIC 99.	
00240		02	FILLER	PIC X(04).	
00241		02	JR-STLP	PIC 9(06) COMP-3.	
00242		02	FILLER	PIC X(20).	

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00243      02 JR-IDEN      PIC X.
00244      02 FILLER      PIC X(15).
00245
00246      01 JRLREC      PIC X(64).
00247      01 JKRREC      PIC X(180).
00248
00249      * FD MASTERC      RECCRD CONTAINS 180 CHARACTERS
00250                          LABEL RECCRD IS STANDARD
00251                          DATA RECCRDS IS MASREC.
00252
00253      01 MAST-REC.
00254      03 MASCAT      PIC X(6).
00255      03 FILLER      PIC X(174).
00256
00257      FD PHILE      LABEL RECCRD IS OMITTED.
00258      01 OUT        PIC X(132).
00259
00260      * WORKING-STORAGE SECTION.
00261      77 I          PIC 9(02) VALUE 0.
00262      77 J          PIC 9(02) VALUE 0.
00263      77 Z          PIC 9(01) VALUE 0.
00264      77 AA         PIC X(02).
00265      77 R-TY      PIC X(01).
00266      77 XX         PIC 9(02) VALUE 0.
00267      77 W-MAX     PIC 9(04) VALUE +0.
00268      77 FG1       PIC 9(01) VALUE 0.
00269      77 CP-FC     PIC 9(01) VALUE 0.
00270      77 L-STCP    PIC 9(06) CCMP-4 VALUE 0.
00271      77 W-STRT    PIC 9(06) CCMP-4 VALUE 0.
00272      77 RCH-CT    PIC 9(06) CCMP-4 VALUE 0.
00273      77 EXE-CT    PIC 9(06) CCMP-4 VALUE 0.
00274      77 LST-CT    PIC 9(06) CCMP-4 VALUE 0.
00275      77 GRFC     PIC 9(06) CCMP-4 VALUE 0.
00276      77 W-CPLTM   PIC 9(09) CCMP-4 VALUE 0.
00277      77 W-CVFTM   PIC 9(09) CCMP-4 VALUE 0.
00278      77 T-ALLTM   PIC 9(09) CCMP-4 VALUE 0.
00279      77 T-CVFTM   PIC 9(09) CCMP-4 VALUE 0.
00280      77 T-ALLTM   PIC 9(09) CCMP-4 VALUE 0.
00281      77 U-CPLTM   PIC 9(09) CCMP-4 VALUE 0.
00282      77 U-CVFTM   PIC 9(09) CCMP-4 VALUE 0.
00283      77 U-ALLTM   PIC 9(09) CCMP-4 VALUE 0.
00284      77 SUM-FRAC  PIC 9(09) VALUE 0.
00285      77 CT-MONTH  PIC 9(06) CCMP-4 VALUE 0.
00286      77 CT-LMONTH PIC 9(06) CCMP-4 VALUE 0.
00287      77 CT-EMONTH PIC 9(06) CCMP-4 VALUE 0.
00288      77 CT-HRES   PIC 9(06) CCMP-4 VALUE 0.
00289      77 CT-LRES   PIC 9(06) CCMP-4 VALUE 0.
00290      77 CT-ERRES  PIC 9(06) CCMP-4 VALUE 0.
00291      77 P-D1      PIC X(32) VALUE 'CHULA-JCB'.
00292      77 P-D2      PIC X(32) VALUE 'NEN-CHULA-JLB'.
00293      77 P-D3      PIC X(32) VALUE 'PAYMENT-JCB'.
00294      77 P-D4      PIC X(32) VALUE 'TODAY'S TCTAL'.
00295      77 P-AUDIT   PIC X(17) VALUE 'AUDIT INFORMATION'.
00296      77 P-FMS     PIC X(08) VALUE 'HH.MM.SS'.
00297      77 P-A1      PIC X(29) VALUE
00298      'TCLAY MESURED-START TIME(A)'.
00299      77 P-A2      PIC X(29) VALUE
00300      'TCLAY MESURED-STOP TIME(B)'.
00301      77 P-A3      PIC X(29) VALUE
00302      'TODAY MESURED TIME(B-A)'.
00303      77 P-R        PIC X(11) VALUE 'READER(R)'.
00304      77 P-E        PIC X(14) VALUE 'EXECUTION(E)'.
00305      77 P-L        PIC X(09) VALUE 'LIST(L)'.
00306      77 P-T        PIC X(07) VALUE 'TOTAL'.
00307      77 P-E1      PIC X(39) VALUE
00308      'NO. OF RECORD READ FROM JA-INPUT-FILES'.
00309      77 P-E2      PIC X(39) VALUE
00310      'NO. OF RECCRD WRITE TO JA.DAILY.TRANS'.
00311      77 P-E3      PIC X(39) VALUE
00312      'NO. OF RECCRD WRITE TO JA.RESIDUE.TRANS'.
00313      77 ERR1      PIC X(32) VALUE
00314      '1 WRONG DATE FROM CONSOLE-KEYIN'.
00315      77 ERR2      PIC X(80) VALUE
00316      '2 DO NOT RUN JOB-ACCOUNTING IN SUBSEQUENTIALY DATE (I.E SKI
00317      'PER REPEAT SOME DAY)'.
00318      77 ERR3      PIC X(31) VALUE
00319      '3 USE WRONG JA.SAVE.TRANS FILE'.
00320      77 ERR4      PIC X(11) VALUE
00321      '4 OTHERS'.
00322
00323      177      01 MASREC.

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000177CO

000177CO

00324	175	03	MACCAT-C	PIC X(06).		00017800
00325	177	03	MCPDAT	PIC X(06).		00017900
00326	181	03	TAFMAS	CCCLRS	3 TIMES.	00018000
00327	181	05	MNCJEB	PIC S(04)	CCMP-4.	00018100
00328	182	05	MJSTEP	PIC S(04)	CCMP-4.	00018200
00329	183	05	MNCANC	PIC S(04)	CCMP-4.	00018300
00330	184	05	MELAPT	PIC S(06)	CCMP-3.	00018400
00331	185	05	MPLCSS	PIC S(06)	CCMP-3.	00018500
00332	186	05	MJVFF	PIC S(06)	CCMP-3.	00018600
00333	187	05	MVATT	PIC S(06)	CCMP-3.	00018700
00334	188	05	MSICT	PIC S(05)	CCMP-4.	00018800
00335	189	05	MSICU	PIC S(09)	CCMP-4.	00018900
00336	190	05	MNOPRT	PIC S(09)	CCMP-4.	00019000
00337	191	05	MPCPAG	PIC S(09)	CCMP-4.	00019100
00338	192	05	MPRIT	PIC S(06)	CCMP-3.	00019200
00339	193	03	MSTRAT	PIC S(06)	CCMP-3.	00019300
00340	194	03	MSTOP	PIC S(06)	CCMP-3.	00019400
00341	195	03	SPACEMAS	PIC X(26).		00019500
00342	196	03	MASFE	PIC X(02).		00019600
00343	197	03	MNCORR	PIC S(04)	CCMP-4.	00019700
00344	198	03	MNULST	PIC S(04)	CCMP-4.	00019800
00345	199	03	MNLEXE	PIC S(04)	CCMP-4.	00019900
00346						
00347		01	W-CODE.			
00348		03	W-CANC	PIC S(04)	CCMP-4.	
00349		03	RE-CANC	REDEFINES W-CANC.		
00350		03	W-C1	PIC X(01).		
00351		03	W-C2	PIC X(01).		
00352						
00353		01	W-STIME	PIC S(06).		
00354		01	RE-STIME	REDEFINES W-STIME.		
00355		03	S-FF	PIC S(02).		
00356		03	S-FM	PIC S(02).		
00357		03	S-SS	PIC S(02).		
00358						
00359		01	W-ETIME	PIC S(06).		
00360		01	RE-ETIME	REDEFINES W-ETIME.		
00361		03	E-FF	PIC S(02).		
00362		03	E-FM	PIC S(02).		
00363		03	E-SS	PIC S(02).		
00364						
00365		01	KEY-DATE.			
00366		03	CK	PIC X(02).		
00367		03	FILLER	PIC X(01).		
00368		03	MK	PIC X(02).		
00369		03	FILLER	PIC X(01).		
00370		03	YK	PIC X(02).		
00371						
00372		01	CDATE	PIC S(06).		
00373		01	DATEC	REDEFINES CDATE.		
00374		03	CD	PIC S(02).		
00375		03	CM	PIC S(02).		
00376		03	CY	PIC S(02).		
00377		01	CCDATE	PIC X(08).		
00378		01	DATECC	REDEFINES CDATE.		
00379		03	CC-DD	PIC S(2).		
00380		03	FILLER	PIC X.		
00381		03	CC-MM	PIC S(2).		
00382		03	FILLER	PIC X.		
00383		03	CC-YY	PIC S(2).		
00384		01	KEEP-DATE	PIC X(08).		
00385						
00386		01	MDATE	PIC S(06).		
00387		01	MDATE	REDEFINES MDATE.		
00388		03	DD	PIC S(02).		
00389		03	MM	PIC S(02).		
00390		03	YY	PIC S(02).		
00391		01	KC	PIC S(02).		
00392						
00393		01	SUM-TIME	PIC S(06).		
00394		01	RE-TIME	REDEFINES SUM-TIME.		
00395		03	T-HH	PIC S(02).		
00396		03	T-MM	PIC S(02).		
00397		03	T-SS	PIC S(02).		
00398						
00399		01	SUM-TEST.			
00400		03	SUMT1	PIC S(04) CCMP-4	VALUE 0.	
00401		03	SUMT2	PIC S(04) CCMP-4	VALUE 0.	
00402		03	SUMT3	PIC S(04) CCMP-4	VALUE 0.	
00403		03	SUMT4	PIC S(09).		
00404		03	RE-SUMT4	REDEFINES SUMT4.		

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00405 05 T-H4 PIC 9(03).
00406 05 T-M4 PIC 9(03).
00407 05 T-S4 PIC 9(03).
00408 03 SUMT5 PIC 9(05).
00409 03 RE-SUMT5 REDEFINES SUMT5.
00410 05 T-H5 PIC 9(03).
00411 05 T-M5 PIC 9(03).
00412 05 T-S5 PIC 9(03).
00413 03 SUMT6 PIC 9(09).
00414 03 RE-SUMT6 REDEFINES SUMT6.
00415 05 T-H6 PIC 9(03).
00416 05 T-M6 PIC 9(03).
00417 05 T-S6 PIC 9(03).
00418 03 SUMT7 PIC 9(09).
00419 03 RE-SUMT7 REDEFINES SUMT7.
00420 05 T-H7 PIC 9(03).
00421 05 T-M7 PIC 9(03).
00422 05 T-S7 PIC 9(03).
00423 03 SUMT8 PIC 9(09) CCMP-4 VALUE 0.
00424 03 SUMT9 PIC 9(09) CCMP-4 VALUE 0.
00425 03 SUMT10 PIC 9(09) CCMP-4 VALUE 0.
00426 03 SUMT11 PIC 9(09) CCMP-4 VALUE 0.
00427 03 SUMT12 PIC 9(09).
00428 03 RE-SUMT12 REDEFINES SUMT12.
00429 05 T-H12 PIC 9(03).
00430 05 T-M12 PIC 9(03).
00431 05 T-S12 PIC 9(03).
00432
00433 C1 SUM-PRCD.
00434 03 SUMP1 PIC 9(04) CCMP-4 VALUE 0.
00435 03 SUMP2 PIC 9(04) CCMP-4 VALUE 0.
00436 03 SUMP3 PIC 9(04) CCMP-4 VALUE 0.
00437 03 SUMP4 PIC 9(09).
00438 03 RE-SUMP4 REDEFINES SUMP4.
00439 05 SP-H4 PIC 9(03).
00440 05 SP-M4 PIC 9(03).
00441 05 SP-S4 PIC 9(03).
00442 03 SUMP5 PIC 9(09).
00443 03 RE-SUMP5 REDEFINES SUMP5.
00444 05 SP-H5 PIC 9(03).
00445 05 SP-M5 PIC 9(03).
00446 05 SP-S5 PIC 9(03).
00447 03 SUMP6 PIC 9(09).
00448 03 RE-SUMP6 REDEFINES SUMP6.
00449 05 SP-H6 PIC 9(03).
00450 05 SP-M6 PIC 9(03).
00451 05 SP-S6 PIC 9(03).
00452 03 SUMP7 PIC 9(09).
00453 03 RE-SUMP7 REDEFINES SUMP7.
00454 05 SP-H7 PIC 9(03).
00455 05 SP-M7 PIC 9(03).
00456 05 SP-S7 PIC 9(03).
00457 03 SUMP8 PIC 9(09) CCMP-4 VALUE 0.
00458 03 SUMP9 PIC 9(09) CCMP-4 VALUE 0.
00459 03 SUMP10 PIC 9(09) CCMP-4 VALUE 0.
00460 03 SUMP11 PIC 9(09) CCMP-4 VALUE 0.
00461 03 SUMP12 PIC 9(09).
00462 03 RE-SUMP12 REDEFINES SUMP12.
00463 05 SP-H12 PIC 9(03).
00464 05 SP-M12 PIC 9(03).
00465 05 SP-S12 PIC 9(03).
00466
00467 C1 SUM-UNJCB.
00468 03 SUMU1 PIC 9(04) CCMP-4 VALUE 0.
00469 03 SUMU2 PIC 9(04) CCMP-4 VALUE 0.
00470 03 SUMU3 PIC 9(04) CCMP-4 VALUE 0.
00471 03 SUMU4 PIC 9(09).
00472 03 RE-SUMU4 REDEFINES SUMU4.
00473 05 U-H4 PIC 9(03).
00474 05 U-M4 PIC 9(03).
00475 05 U-S4 PIC 9(03).
00476 03 SUMU5 PIC 9(09).
00477 03 RE-SUMU5 REDEFINES SUMU5.
00478 05 U-H5 PIC 9(03).
00479 05 U-M5 PIC 9(03).
00480 05 U-S5 PIC 9(03).
00481 03 SUMU6 PIC 9(09).
00482 03 RE-SUMU6 REDEFINES SUMU6.
00483 05 U-H6 PIC 9(03).
00484 05 U-M6 PIC 9(03).
00485 05 U-S6 PIC 9(03).

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00486 03 SUM07 PIC S(09).
00487 03 RE-SUM07 REDEFINES SUM07.
00488 05 U-H7 PIC S(03).
00489 05 U-M7 PIC S(03).
00490 05 U-S7 PIC S(03).
00491 03 SUM08 PIC S(09) CCMP-4 VALUE 0.
00492 03 SUM09 PIC S(09) CCMP-4 VALUE 0.
00493 03 SUM10 PIC S(09) CCMP-4 VALUE 0.
00494 03 SUM11 PIC S(09) CCMP-4 VALUE 0.
00495 03 SUM12 PIC S(09).
00496 03 RE-SUM12 REDEFINES SUM12.
00497 05 U-H12 PIC S(03).
00498 05 U-M12 PIC S(03).
00499 05 U-S12 PIC S(03).
00500
00501 C1 SUM-TOT.
00502 03 GSUM1 PIC S(06) CCMP-4 VALUE 0.
00503 03 GSUM2 PIC S(06) CCMP-4 VALUE 0.
00504 03 GSUM3 PIC S(06) CCMP-4 VALUE 0.
00505 03 GSUM4 PIC S(09).
00506 03 RE-GSUM4 REDEFINES GSUM4.
00507 05 G-H4 PIC S(03).
00508 05 G-M4 PIC S(03).
00509 05 G-S4 PIC S(03).
00510 03 GSUM5 PIC S(09).
00511 03 RE-GSUM5 REDEFINES GSUM5.
00512 05 G-H5 PIC S(03).
00513 05 G-M5 PIC S(03).
00514 05 G-S5 PIC S(03).
00515 03 GSUM6 PIC S(09).
00516 03 RE-GSUM6 REDEFINES GSUM6.
00517 05 G-H6 PIC S(03).
00518 05 G-M6 PIC S(03).
00519 05 G-S6 PIC S(03).
00520 03 GSUM7 PIC S(09).
00521 03 RE-GSUM7 REDEFINES GSUM7.
00522 05 G-H7 PIC S(03).
00523 05 G-M7 PIC S(03).
00524 05 G-S7 PIC S(03).
00525 03 GSUM8 PIC S(09) CCMP-4 VALUE 0.
00526 03 GSUM9 PIC S(09) CCMP-4 VALUE 0.
00527 03 GSUM10 PIC S(09) CCMP-4 VALUE 0.
00528 03 GSUM11 PIC S(09) CCMP-4 VALUE 0.
00529 03 GSUM12 PIC S(09).
00530 03 RE-GSUM12 REDEFINES GSUM12.
00531 05 G-H12 PIC S(03).
00532 05 G-M12 PIC S(03).
00533 05 G-S12 PIC S(03).
00534
00535 C1 F1.
00536 03 FILLER PIC X(56) VALUE 'JOB-ACCOUNTING REPORT'.
00537 03 FILLER PIC X(58) VALUE 'COMPUTER SERVICE CENTER'.
00538 03 FILLER PIC X(18) VALUE 'PAGE 1/1'.
00539
00540 C1 F2.
00541 03 FILLER PIC X(50) VALUE 'REPORT CODE JA1020'.
00542 03 FILLER PIC X(64) VALUE
00543 ' CHULALONGKORN...UNIVERSITY '.
00544 03 FILLER PIC X(09) VALUE 'RUN DATE'.
00545 03 P-DD PIC 99.
00546 03 FILLER PIC X(01) VALUE '-'.
00547 03 P-MM PIC X(03).
00548 03 FILLER PIC X(01) VALUE '-'.
00549 03 P-YY PIC 99.
00550
00551 C1 F3.
00552 03 FILLER PIC X(39) VALUE SPACE.
00553 03 FILLER PIC X(58) VALUE
00554 'DAILY CONTROL REPORT OF SELECTING ACCOUNT TRANSACTION FI
00555 'LE'.
00556
00557 C1 F4.
00558 03 FILLER PIC X(59) VALUE SPACE.
00559 03 FILLER PIC X(04) VALUE 'FCR'.
00560 03 P-KDD PIC X(02).
00561 03 FILLER PIC X(01) VALUE '-'.
00562 03 P-KMM PIC X(03).
00563 03 FILLER PIC X(01) VALUE '-'.
00564 03 P-KYY PIC X(02).
00565
00566 C1 F5.

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00646 03 P-EXL PIC Z,ZZZ,ZZ9B(03):
00647 03 P-LST PIC Z,ZZZ,ZZ9B(03):
00648 03 P-TCT PIC Z,ZZZ,ZZ9.
00651
00652 C1 H-AUDIT.
00653 03 AU-H.
00654 05 P-AU PIC X(17).
00655 05 SP1 PIC X(22).
00656 03 AU-RE REDEFINES AU-H.
00657 05 SP2 PIC X(10).
00658 05 RP-AU PIC X(29).
00659 03 FILLER PIC X(20) VALUE SPACE.
00660 03 TIME-F.
00661 05 SP3 PIC X(01).
00662 05 P-TIME PIC X(08).
00663 03 TIME-RE REDEFINES TIME-F.
00664 05 SL4 PIC X(01).
00665 05 RP-TIME PIC 99999999.
00666
00667 C1 HE1.
00668 03 FILLER PIC X(31) VALUE SPACE.
00669 03 FILLER PIC X(70) VALUE
00670 'DATE OF FIRST RECCRD OF JA.SAVE.TRANS IS NOT THE SAME AS
00671 'CONSOLE-KEYIN'.
00672
00673 C1 HE2.
00674 03 FILLER PIC X(39) VALUE SPACE.
00675 03 FILLER PIC X(30) VALUE
00676 'CONSULE-KEYIN(CC/MM/YY)'.
00677 03 CCATE PIC XX/XX/XX.
00678
00679 C1 HE3.
00680 03 FILLER PIC X(31) VALUE SPACE.
00681 03 FILLER PIC X(47) VALUE
00682 'INFORMATION OF FIRST RECORD IS (DATE CCL1-8)'.
00683 03 P-ACCATE PIC X(08).
00684
00685 C1 HE4.
00686 03 FILLER PIC X(39) VALUE SPACE.
00687 03 FILLER PIC X(28) VALUE
00688 'THE POSSIBLE ERRORS ARE.....'.
00689
00690 C1 HE5.
00691 03 FILLER PIC X(39) VALUE SPACE.
00692 03 P-ERR PIC X(30).
00693
00694 C1 TAB-DATE.
00695 03 TAB-D.
00696 05 M1 PIC X(03) VALUE 'JAN'.
00697 05 M2 PIC X(03) VALUE 'FEB'.
00698 05 M3 PIC X(03) VALUE 'MAR'.
00699 05 M4 PIC X(03) VALUE 'APR'.
00700 05 M5 PIC X(03) VALUE 'MAY'.
00701 05 M6 PIC X(03) VALUE 'JUN'.
00702 05 M7 PIC X(03) VALUE 'JUL'.
00703 05 M8 PIC X(03) VALUE 'AUG'.
00704 05 M9 PIC X(03) VALUE 'SEP'.
00705 05 M10 PIC X(03) VALUE 'OCT'.
00706 05 M11 PIC X(03) VALUE 'NOV'.
00707 05 M12 PIC X(03) VALUE 'DEC'.
00708 03 D-TAB REDEFINES TAB-D PIC X(03) OCCURS 12 TIMES.
00709
00710 *
00711 *****
00712 PROCEDURE DIVISION.
00713 BEGIN.
00714 OPEN INPUT JASAVET
00715 OUTPUT JAAAILY PFILE JARES DU
00716 I-C MASTERC.
00717 MOVE CURRENT-DATE TO CCDATE.
00718 MOVE CC-DD TO IC DD.
00719 MOVE CC-MM TO IC MM.
00720 MOVE CC-YY TO IC YY.
00721 PERFORM IF-DATE.
00722 MOVE DC TO IC P-DD.
00723 MOVE MM TO IC I.
00724 MOVE D-TAB(I) TO P-MM.
00725 MOVE YY TO P-YY.
00726 * ACCEPT CCATE FROM SYSIPT.
00727 MOVE JR-DD TO P-KDD.
00728 MOVE JR-MM TO I.
00729 MOVE D-TAB(I) TO P-KMM.
00730 MOVE JR-YY TO P-KYY.
00731 MOVE JR-DD TO DD. MOVE JR-MM TO MM. MOVE JR-YY TO YY.

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00729 PERFORM IF-DATE MOVE MDATE TO MACDAT PURDAT MACDAT-C.
00730 PERFORM IF-DATE.
00731 MOVE 0 TO SCMT4 SUM15 SUM16 SUM17 SUM12
00732 SCMP4 SUMP5 SUMP6 SUMP7 SUMP12
00733 SCMJ4 SUMJ5 SUMJ6 SUMJ7 SUMJ12
00734 GSUM4 GSUM5 GSUM6 GSUM7 GSUM12 SUM-TIME.
00735 GO TO JASAVET-FIRST-READ.
00736 * READ JARESDU AT END GO TO JASAVET-FIRST-READ.
00737 * MOVE JK-DD TO P-KDD.
00738 * MOVE JK-MM TO I.
00739 * MOVE D-TAB(1) TO P-KMM.
00740 * MOVE JK-YY TO P-KYY.
00741 * MOVE JK-DATE TO KEEP-DATE.
00742 * PERFORM PRINT-HEAD.
00743 * GO TO JARESDU-RTN.
00744 * JARESDU-HEAD.
00745 * READ JARESDU AT END GO TO STEP-2.
00746 * JARESDU-RTN.
00747 * IF JK-DATE = KEEP-DATE GO TO R1.
00748 * MOVE JK-STOP TO W-ETIME.
00749 * IF E-HH GREATER 07 OR E-HH = 07 MOVE 1 TO Z
00750 * GO TO PRINT-END.
00751 *R1.
00752 * IF JK-IDEN = 'R' MOVE JRRREC TO JDRREC PERFORM ST-22 ELSE
00753 * IF JK-IDEN = 'L' MOVE JRLREC TO JDLREC PERFORM ST-22 ELSE
00754 * IF JK-IDEN = 'E' MOVE JREREC TO JDEREC PERFORM ST-22 ELSE
00755 * GO TO JARESDU-READ.
00756 * GO TO JARESDU-HEAD.
00757 * JASAVET-FIRST-READ.
00758 * READ JASAVET AT END GO TO END-RTN.
00759 * MOVE ACDATE IN LRREC TO KEY-DATE CDATE.
00760 * MOVE ACSTRT IN LRREC TO W-STRT MSTRT.
00761 * MOVE CC-DD TO DD.
00762 * MOVE CC-MM TO MM.
00763 * MOVE CC-YY TO YY.
00764 * MOVE DK TO P-KDD.
00765 * MOVE KK TO I.
00766 * MOVE D-TAB(1) TO P-KMM.
00767 * MOVE YK TO P-KYY.
00768 * PERFORM PRINT-HEAD.
00769 * PERFORM ST-22.
00770 * GO TO STEP-2.
00771 *
00772 * RD JASAVET FILE *
00773 * *****
00774 * STEP-1.
00775 * READ JASAVET AT END GO TO END-RTN.
00776 * MOVE ACDATE IN CRREC TO KEY-DATE.
00777 * MOVE DK TO CD MOVE MK TO CM.
00778 * MOVE YK TO CY.
00779 * IF CDATE NOT = MDATE MOVE ACDATE IN CRREC TO P-ACDATE
00780 * GO TO ERR-RTN.
00781 * MOVE ACSTRT IN CRREC TO W-STRT MSTRT.
00782 * PERFORM PRINT-HEAD.
00783 *
00784 ***
00785 * STEP-2.
00786 * READ JASAVET AT END GO TO PRINT-END.
00787 * ST-22.
00788 * IF ACIDEN IN CRREC = 'R' MOVE ACDATE IN CRREC TO KEY-DATE
00789 * MOVE DK TO CD MOVE MK TO CM
00790 * MOVE YK TO CY
00791 * PERFORM CHECK-CPDATE THRU CKOP-EXIT
00792 * MOVE ACIDEN IN CRREC TO R-TY
00793 * PERFORM WR-RESIDUE
00794 *
00795 * IF OP-FG = 1 GO TO PRINT-END
00796 * ELSE ADD 1 TO CT-RMONTH
00797 * PERFORM CONDITION-RDR
00798 * MOVE ACSTRT IN CRREC TO L-STOP
00799 * PERFORM WRITE-DAILY-WDR.
00800 *
00801 * IF ACIDEN IN CLREC = 'L' MOVE ACDATE IN CLREC TO KEY-DATE
00802 * MOVE DK TO CD MOVE MK TO CM
00803 * MOVE YK TO CY
00804 * PERFORM CHECK-CPDATE THRU CKOP-EXIT
00805 * MOVE ACIDEN IN CLREC TO R-TY
00806 * PERFORM WR-RESIDUE
00807 *
00808 * IF OP-FG = 1 GO TO PRINT-END
00809 * ELSE ADD 1 TO CT-LMONTH
00810 * PERFORM CLNDITION-LST
00811 * MOVE ACSTRT IN CLREC TO L-STOP

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PERFORM WRITE-DAILY-LST.  
IF ACIDEN IN GEREC = 'E' MOVE ACDATE IN GEREC TO KEY-DATE  
MOVE DK TO CD MOVE MK TO CM  
MOVE YK TO CY  
PERFORM CHECK-CPDATE THRU CKUP-EXIT  
IF CP-FG = 1 MOVE ACIDEN IN GEREC TO K-TY  
PERFORM WR-RESIDUE  
* IF CP-FG = 1 GO TO PRINT-END  
ELSE ADD 1 TO CI-EMCNTH  
PERFORM CONDITION-EXE  
MOVE ACSTCP IN GEREC TO L-STOP  
PERFORM WRITE-DAILY-EXE.  
R2. GO TO STEP-2.  
***** PRINT LAST STEP *****  
* PRINT-END.  
MOVE P-D1 TO P-DET.  
MOVE SUM1 TO P-SUM1 MNCJCB(1).  
MOVE SUM2 TO P-SUM2 MJSTEP(1).  
MOVE SUM3 TO P-SUM3 MCANC(1).  
MOVE T-H4 TO P-H4 T-HH. MOVE T-M4 TO P-M4 T-MM.  
MOVE T-S4 TO P-S4 T-SS. MOVE SUM-TIME TO MELAPT(1).  
PERFORM SUM-TCT5.  
MOVE T-H5 TO P-H5 T-HH. MOVE T-M5 TO P-M5 T-MM.  
MOVE T-S5 TO P-S5 T-SS. MOVE SUM-TIME TO MPROSS(1).  
PERFORM SUM-TCT6.  
MOVE T-H6 TO P-H6 T-HH. MOVE T-M6 TO P-M6 T-MM.  
MOVE T-S6 TO P-S6 T-SS. MOVE SUM-TIME TO MOVH(1).  
PERFORM SUM-TCT7.  
MOVE T-H7 TO P-H7 T-HH. MOVE T-M7 TO P-M7 T-MM.  
MOVE T-S7 TO P-S7 T-SS. MOVE SUM-TIME TO MWAIT(1).  
MOVE SUM8 TO P-SUM8 MSIGT(1).  
MOVE SUM9 TO P-SUM9 MSICD(1).  
MOVE SUM10 TO P-SUM10 MNPRT(1).  
MOVE SUM11 TO P-SUM11 MNCPAG(1).  
MOVE T-H12 TO P-H12 T-HH. MOVE T-M12 TO P-M12 T-MM.  
MOVE T-S12 TO P-S12 T-SS. MOVE SUM-TIME TO MPRTT(1).  
WRITE OUT FROM DET1 BEFORE 2.  
MOVE P-D2 TO P-DET.  
MOVE SUMP1 TO P-SUM1 MNCJCB(2).  
MOVE SUMP2 TO P-SUM2 MJSTEP(2).  
MOVE SUMP3 TO P-SUM3 MCANC(2).  
MOVE SP-H4 TO P-H4 T-HH. MOVE SP-M4 TO P-M4 T-MM.  
MOVE SP-S4 TO P-S4 T-SS. MOVE SUM-TIME TO MELAPT(2).  
PERFORM SUM-TCTP5.  
MOVE SP-H5 TO P-H5 T-HH. MOVE SP-M5 TO P-M5 T-MM.  
MOVE SP-S5 TO P-S5 T-SS. MOVE SUM-TIME TO MPROSS(2).  
PERFORM SUM-TCTP6.  
MOVE SP-H6 TO P-H6 T-HH. MOVE SP-M6 TO P-M6 T-MM.  
MOVE SP-S6 TO P-S6 T-SS. MOVE SUM-TIME TO MOVH(2).  
PERFORM SUM-TCTP7.  
MOVE SP-H7 TO P-H7 T-HH. MOVE SP-M7 TO P-M7 T-MM.  
MOVE SP-S7 TO P-S7 T-SS. MOVE SUM-TIME TO MWAIT(2).  
MOVE SUMP8 TO P-SUM8 MSIGT(2).  
MOVE SUMP9 TO P-SUM9 MSICD(2).  
MOVE SUMP10 TO P-SUM10 MNPRT(2).  
MOVE SUMP11 TO P-SUM11 MNCPAG(2).  
MOVE SP-H12 TO P-H12 T-HH. MOVE SP-M12 TO P-M12 T-MM.  
MOVE SP-S12 TO P-S12 T-SS. MOVE SUM-TIME TO MPRTT(2).  
WRITE OUT FROM DET1 BEFORE 2.  
MOVE P-D3 TO P-DET.  
MOVE SUMU1 TO P-SUM1 MNCJCB(3).  
MOVE SUMU2 TO P-SUM2 MJSTEP(3).  
MOVE SUMU3 TO P-SUM3 MCANC(3).  
MOVE U-H4 TO P-H4 T-HH. MOVE U-M4 TO P-M4 T-MM.  
MOVE U-S4 TO P-S4 T-SS. MOVE SUM-TIME TO MELAPT(3).  
PERFORM SUM-TCTU5.  
MOVE U-H5 TO P-H5 T-HH. MOVE U-M5 TO P-M5 T-MM.  
MOVE U-S5 TO P-S5 T-SS. MOVE SUM-TIME TO MPROSS(3).  
PERFORM SUM-TCTU6.  
MOVE U-H6 TO P-H6 T-HH. MOVE U-M6 TO P-M6 T-MM.  
MOVE U-S6 TO P-S6 T-SS. MOVE SUM-TIME TO MOVH(3).  
PERFORM SUM-TCTU7.  
MOVE U-H7 TO P-H7 T-HH. MOVE U-M7 TO P-M7 T-MM.  
MOVE U-S7 TO P-S7 T-SS. MOVE SUM-TIME TO MWAIT(3).  
MOVE SUMU8 TO P-SUM8 MSIGT(3).
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00891      MOVE SUM09 TO P-SUM9 MSICD(3).
00892      MOVE SUM10 TO P-SUM10 MNCPRIT(3).
00893      MOVE SUM11 TO P-SUM11 MNDPAC(3).
00894      MOVE U-H12 TO P-H12 T-HH. MOVE U-M12 TO P-M12 T-MM.
00895      MOVE U-S12 TO P-S12 T-SS. MOVE SUM-TIME TO MPRIT(3).
00896      WRITE OUT FROM DET1 BEFORE 3.
00897
00898      ADD SUM11 SUMP1 SUMC1 TO GSUM1.
00899      ADD SUM12 SUMP2 SUMC2 TO GSUM2.
00900      ADD SUM13 SUMP3 SUMC3 TO GSUM3.
00901      PERFORM ADD-GTCT-TIME4.
00902      PERFORM ADD-GTCT-TIME5.
00903      PERFORM ADD-GTCT-TIME6.
00904      PERFORM ADD-GTCT-TIME7.
00905      ADD SUM18 SUMP8 SUMC8 TO GSUM8.
00906      ADD SUM19 SUMP9 SUMC9 TO GSUM9.
00907      ADD SUM10 SUMP10 SUMC10 TO GSUM10.
00908      ADD SUM11 SUMP11 SUMC11 TO GSUM11.
00909      PERFORM ADD-GTCT-TIME12.
00910
00911      MOVE P-04 TO P-DET.
00912      MOVE GSUM1 TO P-SUM1.
00913      MOVE GSUM2 TO P-SUM2.
00914      MOVE GSUM3 TO P-SUM3.
00915      MOVE G-H4 TO P-H4. MOVE G-M4 TO P-M4. MOVE G-S4 TO P-S4.
00916      MOVE G-H5 TO P-H5. MOVE G-M5 TO P-M5. MOVE G-S5 TO P-S5.
00917      MOVE G-H6 TO P-H6. MOVE G-M6 TO P-M6. MOVE G-S6 TO P-S6.
00918      MOVE G-H7 TO P-H7. MOVE G-M7 TO P-M7. MOVE G-S7 TO P-S7.
00919      MOVE GSUM8 TO P-SUM8.
00920      MOVE GSUM9 TO P-SUM9.
00921      MOVE GSUM10 TO P-SUM10.
00922      MOVE GSUM11 TO P-SUM11.
00923      MOVE G-H12 TO P-H12. MOVE G-M12 TO P-M12.
00924      MOVE G-S12 TO P-S12.
00925      WRITE OUT FROM DET1 BEFORE 6.
00926
00927      * PRINT-AUDIT.
00928      MOVE P-AUDIT TO P-AU.
00929      MOVE SPACE TO SP1 SP3.
00930      MOVE H-HMS TO P-TIME.
00931      WRITE OUT FROM H-AUDIT BEFORE 1.
00932      MOVE ALL '-' TO P-AU P-TIME.
00933      MOVE SPACE TO SP1 SP3.
00934      WRITE OUT FROM H-AUDIT BEFORE 2.
00935      MOVE P-A1 TO RP-AU. MOVE SPACE TO SP2.
00936      MOVE W-STRT TO W-TIME.
00937      IF S-HH GREATER 24 OR S-HH = 24 SUBTRACT 24 FROM S-HH.
00938      MOVE W-TIME TO RP-TIME.
00939      INSPECT RP-TIME REPLACING ALL ' ' BY '.'.
00940      WRITE OUT FROM H-AUDIT BEFORE 2.
00941      MOVE P-A2 TO RP-AU. MOVE SPACE TO SP2.
00942      MOVE L-STCP TO W-ETIME MSTCP.
00943      IF E-HH GREATER 24 OR E-HH = 24 SUBTRACT 24 FROM E-HH.
00944      MOVE W-ETIME TO RP-TIME.
00945      INSPECT RP-TIME REPLACING ALL ' ' BY '.'.
00946      MOVE SPACE TO SP4.
00947      WRITE OUT FROM H-AUDIT BEFORE 2.
00948      MOVE P-A3 TO RP-AU. MOVE SPACE TO SP2.
00949      PERFORM CHECK-TIME.
00950      MOVE SUM-TIME TO RP-TIME.
00951      INSPECT RP-TIME REPLACING ALL ' ' BY '.'.
00952      WRITE OUT FROM H-AUDIT BEFORE 6.
00953
00954      * PRINT-TLTRC.
00955      MOVE SPACE TO SPL1.
00956      MOVE ALL '-' TO L1 L2 L3 L4.
00957      WRITE OUT FROM H-L BEFORE 2.
00958      MOVE SPACE TO SPL1.
00959      MOVE P-K TO L1.
00960      MOVE P-E TO L2.
00961      MOVE P-L TO L3.
00962      MOVE P-T TO L4.
00963      WRITE OUT FROM H-L BEFORE 2.
00964      MOVE SPACE TO SP1.
00965      MOVE ALL '-' TO L1 L2 L3 L4.
00966      WRITE OUT FROM H-L BEFORE 2.
00967      MOVE P-E1 TO P-END.
00968      ADD CT-MONTH CT-KRES TO RDR-CT.
00969      ADD CT-MONTH CT-ERES TO EXE-CT.
00970      ADD CT-MONTH CT-LRES TO LST-CT.
00971      MOVE RDR-CT TO P-RDR.

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00572      MOVE EXE-CT TO P-EXE.
00573      MOVE LST-CT TO P-LST.
00574      ALL HDR-CT EXE-CT LST-CT TO GREG.
00575      MOVE GREG TO P-TOT.
00576      WRITE COT FROM H-END BEFORE 2.
00577      MOVE 0 TO GREG.
00578      MOVE P-E2 TO P-END.
00579      MOVE CT-RMONTH TO P-FDR MNCRDP.
00580      MOVE CT-EMONTH TO P-EXE MNGEXE.
00581      MOVE CT-LMONTH TO P-LST MNLST.
00582      ADD CT-RMONTH CT-EMONTH CT-LMONTH TO GREG.
00583      MOVE GREG TO P-TOT.
00584      WRITE COT FROM H-END BEFORE 2.
00585      MOVE 0 TO GREG.
00586      MOVE P-E3 TO P-END.
00587      MOVE CT-RRES TO P-RDR.
00588      MOVE CT-ERES TO P-EXE.
00589      MOVE CT-LRES TO P-LST.
00590      ADD CT-RRES CT-ERES CT-LRES TO GREG.
00591      MOVE GREG TO P-TOT.
00592      WRITE COT FROM H-END BEFORE 3.
00593      WRITE COT FROM H-END BEFORE 1.
00594
*
00595      WR-MAS.
00596      MOVE SPACE TO SPACEMAS MASFG.
00597      REAC MASTERC INVALID KEY GO TO WRWR-MAS.
00598      REWRITE MAST-REC FROM MASREC INVALID KEY
00599      DISPLAY '**** WRITE-MASTER-CONTROL INVALID KEY****'
01000      DISPLAY '**** KEY IS ' MACDAT
01001      DISPLAY '**** DATA IS ' MASREC.
01002      GO TO END-RTN.
01003
*
01004      WRWR-MAS.
01005      WRITE MAST-REC FROM MASREC INVALID KEY
01006      DISPLAY '**** WRITE-MASTER-CONTROL INVALID KEY****'
01007      DISPLAY '**** KEY IS ' MACDAT
01008      DISPLAY '**** DATA IS ' MASREC.
01009      GO TO END-RTN.
01010
*
01011      ***** SUB ROUTINE *****
01012
*
01013      CONDITION-EXE.
01014      IF US-PY IN CEREC PERFORM PRCD-RTN ELSE
01015      IF US-TY IN CEREC PERFORM TEST-RTN ELSE
01016      PERFORM UNJOB-RTN.
01017
*
01018      PRCD-RTN.
01019      IF EXTYPE IN CEREC = 'L' ADD 1 TO SUMP1.
01020      ADD 1 TO SUMP2.
01021      MOVE EXDCANC IN CEREC TO W-C2. MOVE LOW-VALUE TO W-C1.
01022      IF W-CANC NOT = 16 AND EXTYPE IN CEREC = 'L' ADD 1 TO SUMP3.
01023      MOVE ACSTRT IN CEREC TO W-STIME.
01024      MOVE ACSTOP IN CEREC TO W-ETIME.
01025      PERFORM CHECK-TIME. IF SUM-TIME = 0 MOVE 1 TO T-SS.
01026      PERFORM SUM-TOT4.
01027      ADD EXCPUTM IN CEREC TO W-CPUTM.
01028      ADD EXCVHTM IN CEREC TO W-CVHTM.
01029      ADD EXALLTM IN CEREC TO W-ALLTM.
01030      MOVE 1 TO J.
01031      PERFORM FIND-JCBP VARYING J FROM 1 BY 1 UNTIL
01032      J GREATER 20.
01033
*
01034      TEST-RTN.
01035      IF EXTYPE IN CEREC = 'L' ADD 1 TO SUMT1.
01036      ADD 1 TO SUMT2.
01037      MOVE EXDCANC IN CEREC TO W-C2. MOVE LOW-VALUE TO W-C1.
01038      IF W-CANC NOT = 16 AND EXTYPE IN CEREC = 'L' ADD 1 TO SUMT3.
01039      MOVE ACSTRT IN CEREC TO W-STIME.
01040      MOVE ACSTOP IN CEREC TO W-ETIME.
01041      PERFORM CHECK-TIME. IF SUM-TIME = 0 MOVE 1 TO T-SS.
01042      PERFORM SUM-TOT4.
01043      ADD EXCPUTM IN CEREC TO T-CPUTM.
01044      ADD EXCVHTM IN CEREC TO T-CVHTM.
01045      ADD EXALLTM IN CEREC TO T-ALLTM.
01046      MOVE 1 TO J.
01047      PERFORM FIND-JCBT VARYING J FROM 1 BY 1 UNTIL
01048      J GREATER 20.
01049
*
01050      UNJOB-RTN.
01051      IF EXTYPE IN CEREC = 'L' ADD 1 TO SUMP1.
01052      ADD 1 TO SUMP2.

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01054 MOVE EXDCANC IN DEREC TO W-C2. MOVE LOW-VALUE TO W-C1.
01055 IF W-CANC ACT = 'C' AND EXTYPE IN DEREC = 'L' ADD 1 TO SUMJ3.
01056 MOVE ACSTRT IN DEREC TO W-STIME.
01057 MOVE ACSTOP IN DEREC TO W-ETIME.
01058 PERFORM CHECK-TIME. IF SUM-TIME = 0 MOVE 1 TO T-SS.
01059 PERFORM SUM-TOTU4.
01060 ADD EXCPTM IN DEREC TO U-CPLTM.
01061 ADD EXCVFTM IN DEREC TO U-CVFTM.
01062 ADD EXALLTM IN DEREC TO U-ALLTM.
01063 MOVE 1 TO J.
01064 PERFORM FIND-JCBU VARYING J FROM 1 BY 1 UNTIL
01065 J GREATER 20.
01066
01067 FIND-JLEP.
01068 IF EDEV-TADD(J) ADD EEXJOB(J) TO SUMP8.
01069 IF EDEV-DADD(J) ADD EEXJOB(J) TO SUMP9.
01070
01071 FIND-JCIT.
01072 IF EDEV-TADD(J) ADD EEXJOB(J) TO SUMT8.
01073 IF EDEV-DADD(J) ADD EEXJOB(J) TO SUMT9.
01074
01075 FIND-JCBL.
01076 IF EDEV-TADD(J) ADD EEXJOB(J) TO SUMU8.
01077 IF EDEV-DADD(J) ADD EEXJOB(J) TO SUMU9.
01078 *
01079 * CONDITION-RDR.
01080 IF US-TY IN CRREC
01081 ADD RDRNUM IN CRREC TO SUMT10
01082 ELSE IF US-PY IN CRREC
01083 ADD RDRNUM IN CRREC TO SUMP10
01084 ELSE ADD RDRNUM IN CRREC TO SUMU10.
01085 *
01086 * ADD PAPA CONDITION-RDR TO REPLACE SUM OF LINE PRINT*
01087 *
01088 CONDITION-LST.
01089 IF US-PY IN CLREC PERFORM PROD-LST ELSE
01090 IF US-TY IN CLREC PERFORM TEST-LST ELSE
01091 PERFORM UNJCB-LST.
01092
01093 PROD-LST.
01094 * ADD LSTNUM IN CLREC TO SUMP10.
01095 ADD LSTPAG IN CLREC TO SUMP11.
01096 MOVE ACSTRT IN CLREC TO W-STIME.
01097 MOVE ACSTOP IN CLREC TO W-ETIME.
01098 PERFORM CHECK-TIME PERFORM ADD-TCT-PL.
01099
01100 TEST-LST.
01101 * ADD LSTNUM IN CLREC TO SUMT10.
01102 ADD LSTPAG IN CLREC TO SUMT11.
01103 MOVE ACSTRT IN CLREC TO W-STIME.
01104 MOVE ACSTOP IN CLREC TO W-ETIME.
01105 PERFORM CHECK-TIME PERFORM ADD-TCT-PT.
01106
01107 UNJCB-LST.
01108 * ADD LSTNUM IN CLREC TO SUMU10.
01109 ADD LSTPAG IN CLREC TO SUMU11.
01110 MOVE ACSTRT IN CLREC TO W-STIME.
01111 MOVE ACSTOP IN CLREC TO W-ETIME.
01112 PERFORM CHECK-TIME PERFORM ADD-TCT-PU.
01113 *
01114 WR-RESIDUE.
01115 IF R-TY = 'R' ADD 1 TO CT-RRES
01116 WRITE JRRREC FROM CRREC ELSE
01117 IF R-TY = 'L' ADD 1 TO CT-LRES
01118 WRITE JLRREC FROM CLREC ELSE
01119 ADD 1 TO CT-ERES
01120 WRITE JKRREC FROM CEREC.
01121
01122 ***** CHECK TIME *****
01123 CHECK-TIME.
01124 IF W-ETIME LESS W-STIME ADD 24 TO E-HH.
01125 IF E-SS GREATER S-SS OR E-SS = S-SS
01126 SUBTRACT S-SS FROM E-SS GIVING T-SS
01127 ELSE ADD 60 E-SS GIVING W-MAX
01128 SUBTRACT 1 FROM E-MM
01129 SUBTRACT S-SS FROM W-MAX GIVING T-SS.
01130 IF E-MM GREATER S-MM OR E-MM = S-MM
01131 SUBTRACT S-MM FROM E-MM GIVING T-MM
01132 ELSE ADD 60 E-MM GIVING W-MAX
01133 SUBTRACT 1 FROM E-HH

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01134 SUBTRACT S-MM FROM W-MAX GIVING T-MM.
01135 SUETRACT S-HH FROM E-HH GIVING T-HH.
01136 *****
01137
01138 ADD-TCT-PL.
01139   ADD T-SS TO SP-S12.
01140   IF SP-S12 LESS 60 ADD T-MM TO SP-M12
01141   ELSE MOVE SP-S12 TO W-MAX
01142   DIVIDE W-MAX BY 60 GIVING XX REMAINDER SP-S12
01143   ADD XX TO SP-M12 ADD T-MM TO SP-M12.
01144   IF SP-M12 LESS 60 ADD T-HH TO SP-H12
01145   ELSE MOVE SP-M12 TO W-MAX
01146   DIVIDE W-MAX BY 60 GIVING XX REMAINDER SP-M12
01147   ADD XX TO SP-H12 ADD T-HH TO SP-H12.
01148
01149 ADD-TCT-PT.
01150   ADD T-SS TO T-S12.
01151   IF T-S12 LESS 60 ADD T-MM TO T-M12
01152   ELSE MOVE T-S12 TO W-MAX
01153   DIVIDE W-MAX BY 60 GIVING XX REMAINDER T-S12
01154   ADD XX TO T-M12 ADD T-MM TO T-M12.
01155   IF T-M12 LESS 60 ADD T-HH TO T-H12
01156   ELSE MOVE T-M12 TO W-MAX
01157   DIVIDE W-MAX BY 60 GIVING XX REMAINDER T-M12
01158   ADD XX TO T-H12 ADD T-HH TO T-H12.
01159
01160 ADD-TCT-PU.
01161   ADD T-SS TO U-S12.
01162   IF U-S12 LESS 60 ADD T-MM TO U-M12
01163   ELSE MOVE U-S12 TO W-MAX
01164   DIVIDE W-MAX BY 60 GIVING XX REMAINDER U-S12
01165   ADD XX TO U-M12 ADD T-MM TO U-M12.
01166   IF U-M12 LESS 60 ADD T-HH TO U-H12
01167   ELSE MOVE U-M12 TO W-MAX
01168   DIVIDE W-MAX BY 60 GIVING XX REMAINDER U-M12
01169   ADD XX TO U-H12 ADD T-HH TO U-H12.
01170
01171 SUM-TCTP4.
01172   ADD T-SS TO SP-S4.
01173   IF SP-S4 LESS 60 ADD T-MM TO SP-M4
01174   ELSE MOVE SP-S4 TO W-MAX
01175   DIVIDE W-MAX BY 60 GIVING XX REMAINDER SP-S4
01176   ADD XX TO SP-M4 ADD T-MM TO SP-M4.
01177   IF SP-M4 LESS 60 ADD T-HH TO SP-H4
01178   ELSE MOVE SP-M4 TO W-MAX
01179   DIVIDE W-MAX BY 60 GIVING XX REMAINDER SP-M4
01180   ADD XX TO SP-H4 ADD T-HH TO SP-H4.
01181
01182 SUM-TCTP5.
01183   DIVIDE W-CVFTM BY 300 GIVING SUM-PRCC.
01184   DIVIDE SUM-PRCC BY 60 GIVING W-MAX REMAINDER SP-S5.
01185   DIVIDE W-MAX BY 60 GIVING SP-M5 REMAINDER SP-M5.
01186
01187 SUM-TCTP6.
01188   DIVIDE W-CVFTM BY 300 GIVING SUM-PRCC.
01189   DIVIDE SUM-PRCC BY 60 GIVING W-MAX REMAINDER SP-S6.
01190   DIVIDE W-MAX BY 60 GIVING SP-M6 REMAINDER SP-M6.
01191
01192 SUM-TCTP7.
01193   DIVIDE W-ALLTM BY 300 GIVING SUM-PRCC.
01194   DIVIDE SUM-PRCC BY 60 GIVING W-MAX REMAINDER SP-S7.
01195   DIVIDE W-MAX BY 60 GIVING SP-M7 REMAINDER SP-M7.
01196
01197 SUM-TCTT4.
01198   ADD T-SS TO T-S4.
01199   IF T-S4 LESS 60 ADD T-MM TO T-M4
01200   ELSE MOVE T-S4 TO W-MAX
01201   DIVIDE W-MAX BY 60 GIVING XX REMAINDER T-S4
01202   ADD XX TO T-M4 ADD T-MM TO T-M4.
01203   IF T-M4 LESS 60 ADD T-HH TO T-H4
01204   ELSE MOVE T-M4 TO W-MAX
01205   DIVIDE W-MAX BY 60 GIVING XX REMAINDER T-M4
01206   ADD XX TO T-H4 ADD T-HH TO T-H4.
01207
01208 SUM-TCTT5.
01209   DIVIDE T-CVFTM BY 300 GIVING SUM-PRCC.
01210   DIVIDE SUM-PRCC BY 60 GIVING W-MAX REMAINDER T-S5.
01211   DIVIDE W-MAX BY 60 GIVING T-H5 REMAINDER T-M5.
01212
01213 SUM-TCTT6.
01214   DIVIDE T-CVFTM BY 300 GIVING SUM-PRCC.
01215   DIVIDE SUM-PRCC BY 60 GIVING W-MAX REMAINDER T-S6.
01216   DIVIDE W-MAX BY 60 GIVING T-H6 REMAINDER T-M6.
01217
01218 SUM-TCTT7.
01219   DIVIDE T-ALLTM BY 300 GIVING SUM-PRCC.
01220   DIVIDE SUM-PRCC BY 60 GIVING W-MAX REMAINDER T-S7.
01221   DIVIDE W-MAX BY 60 GIVING T-H7 REMAINDER T-M7.
01222
01223 SUM-TCTU4.
01224   ADD T-SS TO U-S4.
01225   IF U-S4 LESS 60 ADD T-MM TO U-M4

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01215      ELSE MOVE U-S4 TO W-MAX
01216      DIVIDE W-MAX BY 60 GIVING XX REMAINDER U-S4
01217      ADD XX TO U-M4 ADD T-MM TO U-M4.
01218      IF U-M4 LESS 60 ADD T-HH TO U-H4
01219      ELSE MOVE U-M4 TO W-MAX
01220      DIVIDE W-MAX BY 60 GIVING XX REMAINDER U-M4
01221      ADD XX TO U-H4 ADD T-HH TO U-H4.
01222      SUM-TCT05.
01223      DIVIDE U-CFUTM BY 300 GIVING SUM-PRCC.
01224      DIVIDE SUM-PRCC BY 60 GIVING W-MAX REMAINDER U-S5.
01225      DIVIDE W-MAX BY 60 GIVING U-H5 REMAINDER U-M5.
01226      SUM-TCT06.
01227      DIVIDE U-CVFTM BY 300 GIVING SUM-PRCC.
01228      DIVIDE SUM-PRCC BY 60 GIVING W-MAX REMAINDER U-S6.
01229      DIVIDE W-MAX BY 60 GIVING U-H6 REMAINDER U-M6.
01230      SUM-TCT07.
01231      DIVIDE U-ALLTM BY 300 GIVING SUM-PRCC.
01232      DIVIDE SUM-PRCC BY 60 GIVING W-MAX REMAINDER U-S7.
01233      DIVIDE W-MAX BY 60 GIVING U-H7 REMAINDER U-M7.
01234      ADD-GTCT-TIME4.
01235      ADD T-S4 SP-S4 U-S4 TO G-S4.
01236      IF G-S4 LESS 60 ADD T-M4 SP-M4 U-M4 TO G-M4
01237      ELSE MOVE G-S4 TO W-MAX
01238      DIVIDE W-MAX BY 60 GIVING XX REMAINDER G-S4
01239      ADD XX TO G-M4 ADD T-M4 SP-M4 U-M4 TO G-M4.
01240      IF U-M4 LESS 60 ADD T-H4 SP-H4 U-H4 TO G-H4
01241      ELSE MOVE G-M4 TO W-MAX
01242      DIVIDE W-MAX BY 60 GIVING XX REMAINDER G-M4
01243      ADD XX TO G-H4 ADD T-H4 SP-H4 U-H4 TO G-H4.
01244      ADD-GTCT-TIME5.
01245      ADD T-S5 SP-S5 U-S5 TO G-S5.
01246      IF G-S5 LESS 60 ADD T-M5 SP-M5 U-M5 TO G-M5
01247      ELSE MOVE G-S5 TO W-MAX
01248      DIVIDE W-MAX BY 60 GIVING XX REMAINDER G-S5
01249      ADD XX TO G-M5 ADD T-M5 SP-M5 U-M5 TO G-M5.
01250      IF U-M5 LESS 60 ADD T-H5 SP-H5 U-H5 TO G-H5
01251      ELSE MOVE G-M5 TO W-MAX
01252      DIVIDE W-MAX BY 60 GIVING XX REMAINDER G-M5
01253      ADD XX TO G-H5 ADD T-H5 SP-H5 U-H5 TO G-H5.
01254      ADD-GTCT-TIME6.
01255      ADD T-S6 SP-S6 U-S6 TO G-S6.
01256      IF G-S6 LESS 60 ADD T-M6 SP-M6 U-M6 TO G-M6
01257      ELSE MOVE G-S6 TO W-MAX
01258      DIVIDE W-MAX BY 60 GIVING XX REMAINDER G-S6
01259      ADD XX TO G-M6 ADD T-M6 SP-M6 U-M6 TO G-M6.
01260      IF U-M6 LESS 60 ADD T-H6 SP-H6 U-H6 TO G-H6
01261      ELSE MOVE G-M6 TO W-MAX
01262      DIVIDE W-MAX BY 60 GIVING XX REMAINDER G-M6
01263      ADD XX TO G-H6 ADD T-H6 SP-H6 U-H6 TO G-H6.
01264      ADD-GTCT-TIME7.
01265      ADD T-S7 SP-S7 U-S7 TO G-S7.
01266      IF G-S7 LESS 60 ADD T-M7 SP-M7 U-M7 TO G-M7
01267      ELSE MOVE G-S7 TO W-MAX
01268      DIVIDE W-MAX BY 60 GIVING XX REMAINDER G-S7
01269      ADD XX TO G-M7 ADD T-M7 SP-M7 U-M7 TO G-M7.
01270      IF U-M7 LESS 60 ADD T-H7 SP-H7 U-H7 TO G-H7
01271      ELSE MOVE G-M7 TO W-MAX
01272      DIVIDE W-MAX BY 60 GIVING XX REMAINDER G-M7
01273      ADD XX TO G-H7 ADD T-H7 SP-H7 U-H7 TO G-H7.
01274      ADD-GTCT-TIME12.
01275      ADD T-S12 SP-S12 U-S12 TO G-S12.
01276      IF G-S12 LESS 60 ADD T-M12 SP-M12 U-M12 TO G-M12
01277      ELSE MOVE G-S12 TO W-MAX
01278      DIVIDE W-MAX BY 60 GIVING XX REMAINDER G-S12
01279      ADD XX TO G-M12 ADD T-M12 SP-M12 U-M12 TO G-M12.
01280      IF U-M12 LESS 60 ADD T-H12 SP-H12 U-H12 TO G-H12
01281      ELSE MOVE G-M12 TO W-MAX
01282      DIVIDE W-MAX BY 60 GIVING XX REMAINDER G-M12
01283      ADD XX TO G-H12 ADD T-H12 SP-H12 U-H12 TO G-H12.
01284
01285
01286      * WRITE-DAILY-RDR.
01287      MOVE ACSTRT IN DRREC TO ACSTRT IN JDRREC.
01288      MOVE ACSTCP IN DRREC TO ACSTCP IN JDRREC.
01289      MOVE ACUSER IN DRREC TO ACUSER IN JDRREC.
01290      MOVE ACNAME IN DRREC TO ACNAME IN JDRREC.
01291      MOVE ACNUMB IN DRREC TO ACNUMB IN JDRREC.
01292      MOVE ACIDEN IN DRREC TO ACIDEN IN JDRREC.
01293      MOVE ACCANC IN DRREC TO ACCANC IN JDRREC.
01294      MOVE RDRICL IN DRREC TO RDRICL IN JDRREC.
01295      MOVE RDRIOR IN DRREC TO RDRIOR IN JDRREC.

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01296 MOVE RERNUM IN CRREC TO KORNUM IN JORREC.
01297 WRITE JORREC.
01298
01299 WRITE-DAILY-LST.
01300 MOVE ACSTRT IN CLREC TO ACSTRT IN JDLREC.
01301 MOVE ACSTOP IN CLREC TO ACSTOP IN JDLREC.
01302 MOVE ACUSER IN CLREC TO ACUSER IN JDLREC.
01303 MOVE ACNAME IN CLREC TO ACNAME IN JDLREC.
01304 MOVE ACNUMB IN CLREC TO ACNUMB IN JDLREC.
01305 MOVE ACIDEN IN CLREC TO ACIDEN IN JDLREC.
01306 MOVE ACCANC IN CLREC TO ACCANC IN JDLREC.
01307 MOVE LSTCCL IN CLREC TO LSTCCL IN JDLREC.
01308 MOVE LSTCPR IN CLREC TO LSTCPR IN JDLREC.
01309 MOVE LSTNUM IN CLREC TO LSTNUM IN JDLREC.
01310 MOVE LSTSUF IN CLREC TO LSTSUF IN JDLREC.
01311 MOVE LSTCCP IN CLREC TO LSTCCP IN JDLREC.
01312 MOVE LSTFCR IN CLREC TO LSTFCR IN JDLREC.
01313 MOVE LSTEXR IN CLREC TO LSTEXR IN JDLREC.
01314 MOVE LSTPAG IN CLREC TO LSTPAG IN JDLREC.
01315 MOVE LSTEXP IN CLREC TO LSTEXP IN JDLREC.
01316 WRITE JDLREC.
01317
01318 WRITE-DAILY-EXE.
01319 MOVE ACSTRT IN JEREC TO ACSTRT IN JDEREC.
01320 MOVE ACSTOP IN JEREC TO ACSTOP IN JDEREC.
01321 MOVE ACUSER IN JEREC TO ACUSER IN JDEREC.
01322 MOVE ACNAME IN JEREC TO ACNAME IN JDEREC.
01323 MOVE ACNUMB IN JEREC TO ACNUMB IN JDEREC.
01324 MOVE ACIDEN IN JEREC TO ACIDEN IN JDEREC.
01325 MOVE ACCANC IN JEREC TO ACCANC IN JDEREC.
01326 MOVE EXICL IN JEREC TO EXICL IN JDEREC.
01327 MOVE EXIPR IN JEREC TO EXIPR IN JDEREC.
01328 MOVE EXNLN IN JEREC TO EXNLN IN JDEREC.
01329 MOVE EXNCD IN JEREC TO EXNCD IN JDEREC.
01330 MOVE EXNPG IN JEREC TO EXNPG IN JDEREC.
01331 MOVE EXCJOB IN JEREC TO EXCJOB IN JDEREC.
01332 MOVE EXCUSER IN JEREC TO EXCUSER IN JDEREC.
01333 MOVE EXPID IN JEREC TO EXPID IN JDEREC.
01334 MOVE EXCCANC IN JEREC TO EXCCANC IN JDEREC.
01335 MOVE EXTYPE IN JEREC TO EXTYPE IN JDEREC.
01336 MOVE EXPHASE IN JEREC TO EXPHASE IN JDEREC.
01337 MOVE EXENDAD IN JEREC TO EXENDAD IN JDEREC.
01338 MOVE EXCPUTM IN JEREC TO EXCPUTM IN JDEREC.
01339 MOVE EXLVHTM IN JEREC TO EXLVHTM IN JDEREC.
01340 MOVE EXALLTM IN JEREC TO EXALLTM IN JDEREC.
01341 PERFORM SIC-TAB VARYING I FROM 1 BY 1
01342 UNTIL I GREATER 12.
01343 WRITE JDEREC.
01344
01345 *
01346 CHECK-CPDATE.
01347 IF CP-FG = 1 GO TO CKCP-EXIT.
01348 MOVE ACSTRT IN CRREC TO W-STIME.
01349 MOVE ACSTOP IN CRREC TO W-ETIME.
01350 MOVE ACCDATE IN CRREC TO KLY-DATE.
01351 MOVE BK TO CD MOVE PK TO CM MOVE YK TO CY.
01352 PERFORM IF-LATE1.
01353 MOVE CDATE TO ACCDATE IN JDRREC
01354 ACOPDATE IN JDRREC.
01355 PERFORM IF-LATE1.
01356 IF CDATE = MDATE GO TO CKCP-EXIT.
01357 IF E-HH GREATER 07 OR E-HH = 07
01358 MOVE I TO CP-FG
01359 CLOSE JARESDU
01360 OPEN OUTPUT JARESDU GO TO CKCP-EXIT.
01361 ADD 24 TO E-HH. MOVE W-ETIME TO ACSTOP IN ORREC.
01362 MOVE MDATE TO CDATE.
01363 PERFORM IF-LATE1 MOVE CDATE TO ACOPDATE IN JDRREC.
01364 IF S-HH GREATER 07 OR S-HH = 07 NEXT SENTENCE
01365 ELSE ADD 24 TO S-HH MOVE W-STIME TO ACSTRT IN ORREC.
01366 CKCP-EXIT. EXIT.
01367 *
01368 SIC-TAB.
01369 MOVE EXSICTB(I) TO EXSICTB(I).
01370
01371 *
01372 * ERROR ROUTINE *
01373 *****
01374 ERR-RTN.
01375 MOVE SPACE TO C1.
01376 WRITE C1 BEFORE PAGE.
01377 MOVE SPACE TO C1.

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01377      WRITE COT BEFORE 3.
01378      WRITE COT FROM H01 BEFORE 2.
01379      MOVE MDATE TO EDATE.
01380      WRITE COT FROM F02 BEFORE 2.
01381      WRITE COT FROM F03 BEFORE 2.
01382      WRITE COT FROM F04 BEFORE 2.
01383      MOVE ERR1 TO P-ERR.
01384      WRITE COT FROM F05 BEFORE 2.
01385      MOVE ERR2 TO P-ERR.
01386      WRITE COT FROM F05 BEFORE 2.
01387      MOVE ERR3 TO P-ERR.
01388      WRITE COT FROM F05 BEFORE 2.
01389      MOVE ERR4 TO P-ERR.
01390      WRITE COT FROM F05 BEFORE 2.
01391      GO TO END-RTN.
01392      *
01393      PRINT-HEAD.
01394      MOVE SPACE TO COT.
01395      WRITE COT BEFORE PAGE.
01396      MOVE SPACE TO COT.
01397      WRITE COT BEFORE 3.
01398      WRITE COT FROM F1 BEFORE 2.
01399      WRITE COT FROM F2 BEFORE 2.
01400      WRITE COT FROM F3 BEFORE 2.
01401      WRITE COT FROM F4 BEFORE 2.
01402      MOVE ALL '-' TO P-LINE.
01403      WRITE COT FROM F-L BEFORE 1.
01404      WRITE COT FROM F5 BEFORE 1.
01405      WRITE COT FROM F6 BEFORE 1.
01406      WRITE COT FROM F7 BEFORE 1.
01407      WRITE COT FROM F-L BEFORE 2.
01408      *
01409      END-RTN.
01410      IF Z = 1
01411          DISPLAY 'MAYBE THERE ARE STILL HAVE' UPON SYSLST
01412          DISPLAY 'SOME RECORD IN JA.RESIDUE.TRANS' UPON SYSLST.
01413          CLOSE JASAVET JARESDU JADAILY MASTERC PFIL.
01414          STOP RUN.
01415      *
01416      * (YYMMDD) *
01417      *****
01418      TF-DATE.
01419      MOVE CD TO KD.
01420      MOVE YY TO CD.
01421      MOVE KD TO YY.
01422
01423      TF-DATE1.
01424      MOVE CD TO KD.
01425      MOVE CY TO CD.
01426      MOVE KD TO CY.

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CBI APGST
00001 ID DIVISION.
00002 PROGRAM-ID. JAS010A.
00003 ** DETAIL JCB-TLRNAROUNC-TIME REPORT GROUP BY PWR-JCB-NAME **
00004 ENVIRONMENT DIVISION.
00005 INPUT-OUTPUT SECTION.
00006 FILE-CONTROL.
00007 SELECT JADAILY ASSIGN TO SYS014-DA-3340-S-JADAILY.
00008 SELECT SORTF ASSIGN TO SYS001-DA-3340-S-SORTWK1.
00009 SELECT PRINT-FILE ASSIGN TO SYS006-UR-3203-S.
00010 DATA DIVISION.
00011 FILE SECTION.
00012 FD PRINT-FILE LABEL RECORD OMITTED.
00013 01 PRINT-REC PIC X(132).
00014 FD JADAILY LABEL RECORD STANDARD.
00015 01 IEREC PIC X(232).
00016 01 ILREC PIC X(28).
00017 01 IRREC PIC X(54).
00018
00019 SD SORTF RECORD CONTAINS 184 CHARACTERS
00020 LABEL RECORD IS STANDARD.
00021 01 SORT-REC.
00022 03 FILLER PIC X(16).
00023 03 SACSTLP PIC 9(06) COMP-3.
00024 03 SACUSER PIC X(16).
00025 03 SACNAME PIC X(08).
00026 03 SACNUMB PIC 9(04) COMP-4.
00027 03 FILLER PIC X(138).
00028
00029 WORKING-STORAGE SECTION.
00030 01 JDFREC.
00031 03 ACCPDATE PIC 9(06).
00032 03 ACDAATE PIC 9(06).
00033 03 ACSTRT PIC 9(06) COMP-3.
00034 03 ACSTCP PIC 9(06) COMP-3.
00035 03 ACUSER.
00036 *****
00037 * USER INFORMATION *
00038 * - US-TY VALUE 10 THRU 99 = TEST *
00039 * - US-PY VALUE 00 THRU 09 = PRODUCTION JOB *
00040 * - OTHERS = UNDEFINED JOB *
00041 *****
00042 05 FILLER PIC X(08).
00043 05 USTYPE PIC X(02).
00044 88 US-TY VALUE 10 THRU 99.
00045 88 US-PY VALUE 00 THRU 09.
00046 05 FILLER PIC X(06).
00047 03 ACNAME PIC X(08).
00048 03 ACNUMB PIC 9(04) COMP-4.
00049 03 ACIDEN PIC X(01).
00050 03 ACCANC PIC X(01).
00051 03 RDRICL PIC X(01).
00052 03 RDRICR PIC X(01).
00053 03 RDRNUM PIC 9(06) COMP-4.
00054
00055 01 JULREC.
00056 03 ACCPDATE PIC 9(06).
00057 03 ACDAATE PIC 9(06).
00058 03 ACSTRT PIC 9(06) COMP-3.
00059 03 ACSTCP PIC 9(06) COMP-3.
00060 03 ACUSER.
00061 05 FILLER PIC X(08).
00062 05 USTYPE PIC X(02).
00063 88 US-TY VALUE 10 THRU 99.
00064 88 US-PY VALUE 00 THRU 09.
00065 05 FILLER PIC X(06).
00066 03 ACNAME PIC X(08).
00067 03 ACNUMB PIC 9(04) COMP-4.
00068 03 ACIDEN PIC X(01).
00069 03 ACCANC PIC X(01).
00070 03 LSTCCL PIC X(01).
00071 03 LSTCFR PIC X(01).
00072 03 LSTINUM PIC 9(06) COMP-4.
00073 03 LSTSLF PIC X(01).
00074 03 LSTCLP PIC X(01).
00075 03 LSTFLR PIC X(04).
00076 03 LSTEXR PIC 9(06) COMP-4.
00077 03 LSTPAG PIC 9(04) COMP-4.
00078 03 LSTEXP PIC 9(04) COMP-4.
00079
00080 01 JULREC.
00081 03 ACCPDATE PIC 9(06).

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000086C0
000087C0
000088C0
000089C0
000090C0
000091C0
000092C0
000093C0
000094C0
000095C0
000096C0
000097C0
000098C0
000099C0
000100C0
000101C0
000102C0
000103C0
000104C0
000105C0
000106C0
000107C0
000108C0
000109C0
000110C0
000111C0
000112C0
000113C0
000114C0
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000116C0
000117C0
000118C0
000119C0
000120C0
000121C0
000122C0
000123C0
000124C0
000125C0
000126C0
000127C0
000128C0
000129C0
000130C0
000131C0
000132C0
000133C0
000134C0
000135C0

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000021 C3 ACDATE PIC 9(05). 000136CC
000022 C3 ACSTRT PIC 9(05) CCMP-3. 000137CC
000023 C3 ACSTLP PIC 9(06) CCMP-3. 000138CC
000024 C3 ACUSER. 000139CC
000025 C5 FILLER PIC X(08). 000140CC
000026 C5 USTYPTF PIC X(02). 000141CC
000027 88 US-TY VALUE 16 THRU 59. 000142CC
000028 68 US-PY VALUE 03 THRU 09. 000143CC
000029 C5 FILLER PIC X(06). 000144CC
000030 C3 ACNAME PIC X(03). 000145CC
000031 C3 ACNUMB PIC 9(04) CCMP-4. 000146CC
000032 C3 ACIDEN PIC X(01). 000147CC
000033 C3 ACCANC PIC X(01). 000148CC
000034 C3 EXICL PIC X(11). 000149CC
000035 C3 EXIPR PIC X(01). 000150CC
000036 C3 EXNLN PIC 9(06) CCMP-4. 000151CC
000037 C3 EXACD PIC 9(06) CCMP-4. 000152CC
000038 C3 EXNPU PIC 9(04) CCMP-4. 000153CC
000039 C3 EXCJLB PIC X(08). 000154CC
000040 C3 EXCUSER PIC X(16). 000155CC
000041 C3 EXPID PIC X(02). 000156CC
000042 C3 EXKDCANC PIC X(01). 000157CC
000043 C3 EXTYPE PIC X(01). 000158CC
000044 C3 EXPHASE PIC X(03). 000159CC
000045 C3 EXNCHC PIC 9(06) CCMP-4. 000160CC
000046 C3 EXCPCTM PIC 9(09) CCMP-4. 000161CC
000047 C3 EXCVFTM PIC 9(09) CCMP-4. 000162CC
000048 C3 EXALLTM PIC 9(09) CCMP-4. 000163CC
000049 C3 EXSICTP OCCURS 20 TIMES. 000164CC
000050 C5 EXADD PIC 9(04) CCMP-4. 000165CC
000051 ***** 000166CC
000052 * DEVICE ADDRESS * 000167CC
000053 * - X'1C0' THRU X'1F7' = 448 THRU 503 * 000168CC
000054 * - X'280' THRU X'283' = 640 THRU 643 * 000169CC
000055 ***** 000170CC
000056 88 DEV-DADD VALUE 448 THRU 503. 000171CC
000057 88 DEV-TADD VALUE 640 THRU 643. 000172CC
000058 C5 EXJOB PIC 9(06) CCMP-4. 000173CC
000059
000060 ** FORMAT OF PLAD PRINT **
000061
000062 01 HEADER1.
000063 C3 FILLER PIC X(53) VALUE 'JOB-ACCOUNTING PROJECT'.
000064 C3 FILLER PIC X(81) VALUE
000065 'COMPUTER SERVICE CENTER'.
000066 C3 FILLER PIC X(14) VALUE 'PAGE'.
000067 C5 CT:AGE PIC ZZZ9.
000068 01 HEADER2.
000069 C3 FILLER PIC X(150) VALUE 'REPORT CODE JA3010'.
000070 C3 FILLER PIC X(64) VALUE
000071 'CHULALONGKORN.....UNIVERSITY'.
000072 * C3 CSDE PIC 99.
000073 C3 FILLER PIC 99 VALUE 4.
000074 C3 FILLER PIC X VALUE '-'.
000075 C3 OSMM PIC X(03).
000076 C3 FILLER PIC X VALUE '-'.
000077 C3 CSYY PIC 99.
000078 01 HEADER3.
000079 C3 FILLER PIC X(36) VALUE SPACES.
000080 C3 FILLER PIC X(96) VALUE
000081 'DETAIL JOB-TURNAROUND-TIME REPORT GROUP BY
000082 'POWER-JOB-NAME'.
000083 -
000084 01 HEADER4.
000085 C3 FILLER PIC X(53) VALUE SPACES.
000086 C3 FILLER PIC X(05) VALUE 'FOR'.
000087 * C3 CDAY PIC X(11).
000088 C3 FILLER PIC X(3) VALUE SPACES.
000089 C3 CACPTDD PIC 99.
000090 C3 FILLER PIC X VALUE '-'.
000091 C3 CACPTMP PIC X(03).
000092 C3 FILLER PIC X VALUE '-'.
000093 C3 CACPTYY PIC 99.
000094 C3 FILLER PIC X(54) VALUE SPACES.
000095 01 HEADER5.
000096 C3 FILLER PIC X(132) VALUE ALL '-'.
000097 01 HEADER6.
000098 C3 FILLER PIC X(37) VALUE
000099 'POWER PCWER DCS PHASE'.
000100 C3 FILLER PIC X(38) VALUE
000101 'PART/ START STOP ELAPSED'.

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00142      03 FILLER      PIC X(40) VALUE
00143      03 FILLER      PIC CPU # TAPE # DISC #LINE'.
00144      03 FILLER      PIC X(17) VALUE
00145      03 FILLER      'PAGE #DF TERM'.
00146      01 HEADER7.
00147      03 FILLER      PIC X(37) VALUE
00148      03 FILLER      'JOB SEQ. JCB NAME'.
00149      03 FILLER      PIC X(38) VALUE
00150      03 FILLER      'CLASS/ TIME TIME TIME'.
00151      03 FILLER      PIC X(40) VALUE
00152      03 FILLER      'TIME T SID D SIG PRINT/'.
00153      03 FILLER      PIC X(17) VALUE
00154      03 FILLER      'PRINT/ READ/ CODE'.
00155      01 HEADER8.
00156      03 FILLER      PIC X(122) VALUE
00157      03 FILLER      'NAME NO. NAME PRI
00158      03 FILLER      '(HH.MM.SS)(HH.MM.SS)(HH.MM.SS) (SECOND)
00159      03 FILLER      'COUNT COUNT SPECL SPOOL'.
00160      03 FILLER      PIC X(10) VALUE 'COPY'.
00161      01 HEADER9.
00162      03 FILLER      PIC X(132) VALUE ALL '-'.
00163      ** FORMAT OF DETAIL PRINT **
00164
00165      01 JCB-HEAD.
00166      03 FILLER      PIC X(10).
00167      03 FILLER      PIC S(05).
00168      03 FILLER      PIC X(117) VALUE SPACES.
00169      01 L-PRINT.
00170      03 FILLER      PIC X(27) VALUE SPACES.
00171      03 FILLER      PIC X(13) VALUE 'READER F1/'.
00172      03 FILLER      PIC X.
00173      03 FILLER      PIC X VALUE '/'.
00174      03 FILLER      PIC X.
00175      03 FILLER      PIC XX VALUE SPACES.
00176      03 FILLER      PIC 99.
00177      03 FILLER      PIC X VALUE '..'.
00178      03 FILLER      PIC 99.
00179      03 FILLER      PIC X VALUE '..'.
00180      03 FILLER      PIC 99.
00181      03 FILLER      PIC XX VALUE SPACES.
00182      03 FILLER      PIC 99.
00183      03 FILLER      PIC X VALUE '..'.
00184      03 FILLER      PIC 99.
00185      03 FILLER      PIC X VALUE '..'.
00186      03 FILLER      PIC 99.
00187      03 FILLER      PIC X(20) VALUE SPACES.
00188      03 FILLER      PIC ZZZ9.
00189      03 FILLER      PIC X(02) VALUE SPACES.
00190      03 FILLER      PIC ZZZ.
00191      01 L-PRINT.
00192      03 FILLER      PIC X(27) VALUE SPACES.
00193      03 FILLER      PIC X(13) VALUE 'PRINTER F1/'.
00194      03 FILLER      PIC X.
00195      03 FILLER      PIC X VALUE '/'.
00196      03 FILLER      PIC X.
00197      03 FILLER      PIC XX VALUE SPACES.
00198      03 FILLER      PIC 99.
00199      03 FILLER      PIC X VALUE '..'.
00200      03 FILLER      PIC 99.
00201      03 FILLER      PIC X VALUE '..'.
00202      03 FILLER      PIC 99.
00203      03 FILLER      PIC XX VALUE SPACES.
00204      03 FILLER      PIC 99.
00205      03 FILLER      PIC X VALUE '..'.
00206      03 FILLER      PIC 99.
00207      03 FILLER      PIC XX VALUE SPACES.
00208      03 FILLER      PIC 99.
00209      03 FILLER      PIC X VALUE '..'.
00210      03 FILLER      PIC 99.
00211      03 FILLER      PIC X VALUE '..'.
00212      03 FILLER      PIC 99.
00213      03 FILLER      PIC X(44) VALUE SPACES.
00214      03 FILLER      PIC ZZZ,ZZ9.
00215      03 FILLER      PIC XX VALUE SPACES.
00216      03 FILLER      PIC Z,ZZ9.
00217      03 FILLER      PIC XX VALUE SPACES.
00218      03 FILLER      PIC ZZZ9.
00219      03 FILLER      PIC XX VALUE SPACES.
00220      03 FILLER      PIC ZZZ.
00221      03 FILLER      PIC XX VALUE SPACES.
00222      03 FILLER      PIC ZZZ.
00223      03 FILLER      PIC XX VALUE SPACES.
00224      03 FILLER      PIC ZZZ.
00225      03 FILLER      PIC XX VALUE SPACES.
00226      03 FILLER      PIC ZZZ.
00227      03 FILLER      PIC XX VALUE SPACES.
00228      03 FILLER      PIC ZZZ.
00229      03 FILLER      PIC X(17) VALUE SPACES.
00230      03 FILLER      PIC X(10).
00231      03 FILLER      PIC X(10).
00232      03 FILLER      PIC X(10).
00233      03 FILLER      PIC XX.
00234      03 FILLER      PIC X(17) VALUE SPACES.
00235      03 FILLER      PIC X(10).
00236      03 FILLER      PIC X(10).
00237      03 FILLER      PIC X(10).
00238      03 FILLER      PIC XX.
00239
00240
00241
00242

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00243	03	FILLER	PIC	X VALUE '/'.
00244	03	CXICL	PIC	X.
00245	03	FILLER	PIC	X VALUE '/'.
00246	03	CXIPK	PIC	X.
00247	03	FILLER	PIC	XX VALUE SPACES.
00248	03	CSTART-HH	PIC	99.
00249	03	FILLER	PIC	X VALUE '..'.
00250	03	CSTART-MM	PIC	99.
00251	03	FILLER	PIC	X VALUE '..'.
00252	03	CSTART-SS	PIC	99.
00253	03	FILLER	PIC	XX VALUE SPACES.
00254	03	CSTCP-HH	PIC	99.
00255	03	FILLER	PIC	X VALUE '..'.
00256	03	CSTCP-MM	PIC	99.
00257	03	FILLER	PIC	X VALUE '..'.
00258	03	CSTCP-SS	PIC	99.
00259	03	FILLER	PIC	XX VALUE SPACES.
00260	03	CJELAPHH	PIC	99.
00261	03	FILLER	PIC	X VALUE '..'.
00262	03	CJELAPMM	PIC	99.
00263	03	FILLER	PIC	X VALUE '..'.
00264	03	CJELAPSS	PIC	99.
00265	03	FILLER	PIC	X VALUE SPACES.
00266	03	CJCPU-TIME	PIC	ZZZ9.99.
00267	03	FILLER	PIC	XX VALUE SPACES.
00268	03	CJNJMTAPE	PIC	Z.
00269	03	FILLER	PIC	X VALUE SPACES.
00270	03	CJSIOTAPE	PIC	ZZZ,ZZZ.
00271	03	FILLER	PIC	XX VALUE SPACES.
00272	03	CJNUMDISP	PIC	Z9.
00273	03	FILLER	PIC	XX VALUE SPACES.
00274	03	CJSICDISP	PIC	ZZZ,ZZ9.
00275	03	FILLER	PIC	XX VALUE SPACES.
00276	03	CJEXNLN	PIC	ZZ,ZZ9.
00277	03	FILLER	PIC	XX VALUE SPACES.
00278	03	CJEXNPG	PIC	ZZZ9.
00279	03	FILLER	PIC	X(10) VALUE SPACES.
00280	03	CJTERM	PIC	ZZZ.
00281	01	PRINT-JCB1.		
00282	03	FILLER	PIC	X(27) VALUE SPACES.
00283	03	FILLER	PIC	X(38) VALUE 'TOTAL' BY JCB'.
00284	03	CJELAPHH	PIC	Z9.
00285	03	FILLER	PIC	X VALUE '..'.
00286	03	CJELAPMM	PIC	99.
00287	03	FILLER	PIC	X VALUE '..'.
00288	03	CJELAPSS	PIC	99.
00289	03	FILLER	PIC	XX VALUE SPACES.
00290	03	CJCPU-TIME	PIC	ZZZ9.99.
00291	03	FILLER	PIC	X VALUE SPACES.
00292	03	CJNJMTAPE	PIC	ZZ.
00293	03	FILLER	PIC	X VALUE SPACES.
00294	03	CJSIOTAPE	PIC	ZZZ,ZZZ.
00295	03	FILLER	PIC	X VALUE SPACES.
00296	03	CJNUMDISP	PIC	ZZ9.
00297	03	FILLER	PIC	XX VALUE SPACES.
00298	03	CJSICDISP	PIC	ZZZ,ZZ9.
00299	03	FILLER	PIC	X VALUE SPACES.
00300	03	CJLSTNUM	PIC	ZZZ,ZZ9.
00301	03	FILLER	PIC	X VALUE '/'.
00302	03	CJLSTPAG	PIC	ZZ,ZZ9.
00303	03	FILLER	PIC	X(11) VALUE '/'.
00304	01	PRINT-JCB2.		
00305	03	FILLER	PIC	X(107) VALUE SPACES.
00306	03	CJEXNLN	PIC	ZZZ,ZZ9.
00307	03	FILLER	PIC	X VALUE SPACES.
00308	03	CJEXNPG	PIC	ZZ,ZZ9.
00309	03	FILLER	PIC	X(11) VALUE SPACES.
00310	01	PRINT-GRAND1.		
00311	03	FILLER	PIC	X(10) VALUE SPACES.
00312	03	CJCTAL-NAME	PIC	X(55).
00313	03	CJELAPHH	PIC	Z9.
00314	03	FILLER	PIC	X VALUE '..'.
00315	03	CJELAPMM	PIC	99.
00316	03	FILLER	PIC	X VALUE '..'.
00317	03	CJELAPSS	PIC	99.
00318	03	FILLER	PIC	X VALUE SPACES.
00319	03	CJCPU-HH	PIC	Z9.
00320	03	FILLER	PIC	X VALUE '..'.
00321	03	CJCPU-MM	PIC	99.
00322	03	FILLER	PIC	X VALUE '..'.
00323	03	CJCPU-SS	PIC	99.

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00324 03 FILLER PIC X VALUE SPACES.
00325 03 CUNUMTAPE PIC ZZ.
00326 03 FILLER PIC X VALUE SPACES.
00327 03 CUSICTAPE PIC ZZZ,ZZZ.
00328 03 FILLER PIC X VALUE SPACES.
00329 03 CUNUMCISP PIC ZZ.
00330 03 FILLER PIC X VALUE SPACES.
00331 03 CUSICDISP PIC ZZZZ,ZZZ.
00332 03 FILLER PIC X VALUE SPACES.
00333 03 CULSTNUM PIC ZZ,ZZ.
00334 03 FILLER PIC X VALUE '/'.
00335 03 CULSTPAG PIC ZZ,ZZ.
00336 03 FILLER PIC X(11) VALUE '/'.
00337 C1 PRINT-GRANDZ.
00338 03 FILLER PIC X(107) VALUE SPACES.
00339 03 CUEXNLN PIC ZZ,ZZ.
00340 03 FILLER PIC X VALUE SPACES.
00341 03 CUEXAPG PIC ZZ,ZZ.
00342 03 FILLER PIC X(11) VALUE SPACES.
00343 ** DEFINES FIELDS FOR USE IN PROGRAM **
00344 C1 PACUSER.
00345 03 USER1 PIC XXX.
00346 03 USER2 PIC XX.
00347 03 USER3 PIC XXX.
00348 03 USER4 PIC XX.
00349 03 FILLER PIC X(06).
00350 C1 END-PRINT.
00351 03 FILLER PIC X(54) VALUE SPACES.
00352 03 FILLER PIC X(76) VALUE
00353 *** END OF REPORT ***.
00354 01 CP-LATE.
00355 03 SYY PIC 99.
00356 03 SPM PIC 99.
00357 03 SOL PIC 99.
00358 01 START-TIME PIC 9(06).
00359 01 START1 REDEFINES START-TIME.
00360 03 START-HH PIC 99.
00361 03 START-MM PIC 99.
00362 03 START-SS PIC 99.
00363 01 STOP-TIME PIC 9(06).
00364 01 STOP1 REDEFINES STOP-TIME.
00365 03 STOP-HH PIC 99.
00366 03 STOP-MM PIC 99.
00367 03 STOP-SS PIC 99.
00368 01 SACCANC.
00369 03 TERM PIC 9(04) COMP-4.
00370 03 TERM REDEFINES SACCANC.
00371 05 SACCANC PIC X(01).
00372 05 SACCANC PIC X(01).
00373 01 NAME-MONTH PIC X(36) VALUE
00374 'JANFEBMARAPR MAYJUNJUL AUGSEPTNOVDEC'.
00375 01 MONTH-NAME REDEFINES NAME-MONTH.
00376 03 NAME-M PIC X(03) OCCURS 12 TIMES.
00377 01 LINK-AREA.
00378 03 DATE-IN.
00379 05 D-IN PIC 99.
00380 05 M-IN PIC 99.
00381 05 Y-IN PIC 99.
00382 03 YEAR-TY PIC 9(02).
00383 03 DAY-WK PIC X(09).
00384 77 I PIC 99 VALUE 0.
00385 77 FIRSTI PIC 9 VALUE 0.
00386 77 LINE-NG PIC 9 VALUE 0.
00387 77 TPAGE PIC 9(04) VALUE 0.
00388 77 PACUSER PIC X(16).
00389 77 PACNUMB PIC 9(04) COMP-4 VALUE 0.
00390 77 NUMCISP PIC 99 VALUE 0.
00391 77 SILDISP PIC 9(06) VALUE 0.
00392 77 NUMTAPE PIC 99 VALUE 0.
00393 77 SICTAPE PIC 9(06) VALUE 0.
00394 77 TLT-CPU PIC 9(09) COMP-4 VALUE 0.
00395 77 NET-CPU PIC 9(09) COMP-4 VALUE 0.
00396 77 STR1L-HH PIC 99(04) COMP-4 VALUE +0.
00397 77 STR1L-MM PIC 99(04) COMP-4 VALUE +0.
00398 77 STR1L-SS PIC 99(04) COMP-4 VALUE +0.
00399 77 STR1L-TT PIC 99(04) COMP-4 VALUE +0.
00400 77 STR1L-FH PIC 99(04) COMP-4 VALUE +0.
00401 77 STR1L-MM PIC 99(04) COMP-4 VALUE +0.
00402 77 STR1L-SS PIC 99(04) COMP-4 VALUE +0.
00403 77 FLAP-HH PIC 99(04) COMP-4 VALUE +0.
00404 77 ELAP-MM PIC 99(04) COMP-4 VALUE +0.

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00405 77 ELAP-SS PIC 99(04) COMP-4 VALUE +0.
00406 77 JELAP-FH PIC 99(04) COMP-4 VALUE +0.
00407 77 JELAP-MM PIC 99(04) COMP-4 VALUE +0.
00408 77 JELAP-SS PIC 99(04) COMP-4 VALUE +0.
00409 77 CPU-TIME PIC 9(06)V99 COMP-3 VALUE 0.
00410 77 JCPU-TIME PIC 9(06)V99 COMP-3 VALUE 0.
00411 77 JNUMTAPE PIC 99 VALUE 0.
00412 77 JSICTAPE PIC 9(06) COMP-3 VALUE 0.
00413 77 JNUMDISP PIC 99 VALUE 0.
00414 77 JSICDISP PIC 9(06) COMP-3 VALUE 0.
00415 77 JLSTNUM PIC 9(05) VALUE 0.
00416 77 JLSTPAG PIC 9(05) VALUE 0.
00417 77 JEXNLS PIC 9(06) VALUE 0.
00418 77 JEXNLS PIC 9(05) VALUE 0.
00419 77 TCPC-FH PIC 99(04) COMP-4 VALUE +0.
00420 77 TCPC-MM PIC 99(04) COMP-4 VALUE +0.
00421 77 TCPC-SS PIC 99(04) COMP-4 VALUE +0.
00422 77 GLSTNUM PIC 9(06) VALUE 0.
00423 77 GLSTPAG PIC 9(05) VALUE 0.
00424 77 GELAP-FH PIC 99(04) COMP-4 VALUE +0.
00425 77 GELAP-MM PIC 99(04) COMP-4 VALUE +0.
00426 77 GELAP-SS PIC 99(04) COMP-4 VALUE +0.
00427 77 GNUMTAPE PIC 99 VALUE 0.
00428 77 GSICTAPE PIC 9(06) COMP-3 VALUE 0.
00429 77 GNUMDISP PIC 99 VALUE 0.
00430 77 GSICDISP PIC 9(06) COMP-3 VALUE 0.
00431 77 GEXNLS PIC 9(06) VALUE 0.
00432 77 GEXNLS PIC 9(05) VALUE 0.

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PROCEDURE DIVISION.

** ACCEPT AND MOVE FOR PRINT-HEAD **

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00436 BEGIN.
00437 WHEN OUTPUT PRINT-FILE.
00438 ACCEPT UP-DATE FROM DATE.
00439 ** MOVE SUD TO USUD.
00440 MOVE NAMEM(MSM) TO GSM.
00441 MOVE SYY TO USYY.
00442 SORT-FILE.
00443 SORT SORTF ASCENDING KEY SACNAME
00444 SACNUMB SACSTCF
00445 USING JADAILY
00446 OUTPUT PROCEDURE OUT-1.
00447 CLOSE PRINT-FILE.
00448 STEP RUN.

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CUT-1 SECTION.

** MAIN LOGIC RETURN SORT-FILE AND CONTROL BREAK **

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00451 READ-SORT.
00452 RETURN SORTF AT END PERFORM TOTAL-JOB THRU GRAND-TOTAL
00453 GO TO END-JOB.
00454 MOVE SORT-REC TO JDRREC JDLREC JDEREC.
00455 IF FIRST1 = 0 PERFORM FIRST-STEP THRU LOOP-EXIT
00456 ADD 1 TO LINE-NC
00457 MOVE SPACES TO PRINT-REC
00458 WRITE PRINT-REC FROM JCB-HEAD BEFORE 0.
00459 IF ACNUMB IN JDEREC NOT = PACNUMB PERFORM TCTAL-JOB
00460 IF WRITE PRINT-REC FROM JCB-HEAD BEFORE 0.
00461 IF ACIDEN IN JDEREC = 'R' PERFORM R-STEP.
00462 IF ACIDEN IN JDEREC = 'L' PERFORM L-STEP.
00463 IF ACIDEN IN JDEREC = 'E' PERFORM E-STEP.
00464 GO TO READ-SORT.

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** ROUTINE MOVE AND PRINT OF READER QUEUE **

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00470 R-STEP.
00471 MOVE RDRICL TO URDRICL.
00472 MOVE RDRICR TO URDRICR.
00473 MOVE ACSTRT IN JDRREC TO START-TIME.
00474 MOVE START-HH TO CSTART-HH IN R-PRINT.
00475 MOVE START-MM TO CSTART-MM IN R-PRINT.
00476 MOVE START-SS TO CSTART-SS IN R-PRINT.
00477 MOVE ACSTLP IN JDRREC TO STOP-TIME.
00478 MOVE STOP-HH TO CSTOP-HH IN R-PRINT.
00479 MOVE STOP-MM TO CSTOP-MM IN R-PRINT.
00480 MOVE STOP-SS TO CSTOP-SS IN R-PRINT.
00481 MOVE RDRNUM TO GRDRNUM.
00482 MOVE LCA-VALUE TO SALLCANC.

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00486 MOVE ACCANC IN JDRREC TO MACCANC.
00487 MOVE TERM TO CTERM IN R-PRINT.
00488 PERFORM CHECK-LINE.
00489 WRITE PRINT-REC FROM R-PRINT BEFORE 1.
00490 ADD 1 TO LINE-NO.
00491
** ROUTINE MOVE AND PRINT LF LIST QUEUE **
00492
L-STEP.
00493 MOVE LSTOCL TO CLSTOCL.
00494 MOVE LSTOPK TO CLSTOPK.
00495 MOVE ACSTRT IN JDRREC TO START-TIME.
00496 MOVE START-HH TO CSTART-HH IN L-PRINT.
00497 MOVE START-MM TO CSTART-MM IN L-PRINT.
00498 MOVE START-SS TO CSTART-SS IN L-PRINT.
00499 MOVE ACSTLP IN JDRREC TO STOP-TIME.
00500 MOVE STOP-HH TO CSTOP-HH IN L-PRINT.
00501 MOVE STOP-MM TO CSTOP-MM IN L-PRINT.
00502 MOVE STOP-SS TO CSTOP-SS IN L-PRINT.
00503 MOVE LSTRUM TO CLSTRUM.
00504 MOVE LSTPAC TO CLSTPAC.
00505 MOVE LKW-VALUE TO SACCANC.
00506 MOVE LSTCCP TO MACCANC.
00507 MOVE TERM TO CLSTCP.
00508 MOVE LKW-VALUE TO SACCANC.
00509 MOVE ACCANC IN JDRREC TO MACCANC.
00510 MOVE TERM TO CTERM IN L-PRINT.
00511 ADD LSTRUM TO JLSTRUM.
00512 ADD LSTPAC TO JLSTPAC.
00513 PERFORM CHECK-LINE.
00514 WRITE PRINT-REC FROM L-PRINT BEFORE 1.
00515 ADD 1 TO LINE-NO.
00516
** ROUTINE CALCULATE MOVE AND PRINT EXECUTION TIME **
00517
E-STEP.
00518 MOVE EXDJCB TO CEXDJCB.
00519 MOVE EXPHASE TO CEXPHASE.
00520 MOVE EXPID TO CEXPID.
00521 MOVE EXICL TO CEXICL.
00522 MOVE EXIPR TO CEXIPR.
00523 MOVE ACSTRT IN JDRREC TO START-TIME.
00524 MOVE START-HH TO CSTART-HH IN E-PRINT START1-HH.
00525 MOVE START-MM TO CSTART-MM IN E-PRINT START1-MM.
00526 MOVE START-SS TO CSTART-SS IN E-PRINT START1-SS.
00527 MOVE ACSTOP IN JDRREC TO STOP-TIME.
00528 MOVE STOP-HH TO CSTOP-HH IN E-PRINT STOP1-HH.
00529 MOVE STOP-MM TO CSTOP-MM IN E-PRINT STOP1-MM.
00530 MOVE STOP-SS TO CSTOP-SS IN E-PRINT STOP1-SS.
00531 MOVE EXNLN TO CEXNLN.
00532 MOVE EXNPC TO CEXNPC.
00533 MOVE LKW-VALUE TO SACCANC.
00534 MOVE EXDCANC TO MACCANC.
00535 MOVE TERM TO CTERM IN E-PRINT.
00536 IF STOP1-SS = START1-SS
00537   ADD 60 TO STOP1-SS
00538   SUBTRACT 1 FROM STOP1-MM.
00539 COMPUTE ELAP-SS = STOP1-SS - START1-SS.
00540 IF STOP1-MM = START1-MM
00541   ADD 60 TO STOP1-MM
00542   SUBTRACT 1 FROM STOP1-HH.
00543 COMPUTE ELAP-MM = STOP1-MM - START1-MM.
00544 IF STOP1-HH = START1-HH
00545   ADD 24 TO STOP1-HH.
00546 COMPUTE ELAP-HH = STOP1-HH - START1-HH.
00547 ADD ELAP-SS TO JELAP-SS.
00548 IF JELAP-SS = 60 OR = 60
00549   SUBTRACT 60 FROM JELAP-SS
00550   ADD 1 TO JELAP-MM.
00551 ADD ELAP-MM TO JELAP-MM.
00552 IF JELAP-MM = 60 OR = 60
00553   SUBTRACT 60 FROM JELAP-MM
00554   ADD 1 TO JELAP-HH.
00555 ADD ELAP-HH TO JELAP-HH.
00556 MOVE ELAP-HH TO CELAPHH.
00557 MOVE ELAP-MM TO CELAPMM.
00558 MOVE ELAP-SS TO CELAPSS.
00559 COMPUTE T-CPU = EXCVTMM + EXALLTM + EXCPLTM.
00560 ADD T-CPU TO NET-CPU.
00561 DIVIDE T-CPU BY 300 GIVING CPU-T.
00562 MOVE CPU-TIME TO LCPU-TIME.

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00567 ADD CPL-TIME TO JCPL-TIME.
00568 ADD EXNLN TO JEXNLN.
00569 ADD EXNPG TO JEXNPG.
00570 PERFORM SIG-COUNT VARYING I FROM 1 BY 1 UNTIL I 20.
00571 MOVE NUMDISP TO CNUMDISP.
00572 MOVE SIGDISP TO CSIGDISP.
00573 MOVE NUMTAPE TO CNUMTAPE.
00574 MOVE SICTAPE TO CSICTAPE.
00575 ADD NUMDISP TO JNUMDISP.
00576 ADD SIGDISP TO JSIGDISP.
00577 ADD NUMTAPE TO JNUMTAPE.
00578 ADD SICTAPE TO JSICTAPE.
00579 PERFORM CHECK-LINE.
00580 WRITE PRINT-REC FROM E-PRINT BEFORE 1.
00581 ADD 1 TO LINE-NC.
00582 MOVE ZERO TO NUMDISP SIGDISP NUMTAPE SICTAPE.
00583 SIG-COUNT.
00584 IF DEV-DADD(I) ADD 1 TO NUMDISP
00585 ADD EXJCB(I) TO SIGDISP.
00586 IF DEV-TADD(I) ADD 1 TO NUMTAPE
00587 ADD EXJCB(I) TO SICTAPE.
00588
00589 ** CHECK FIRST-STEP **
00590
00591 FIRST-STEP.
00592 MOVE 1 TO FIRST1.
00593 MOVE ACNUMB IN JOEREC TO PACNUMB CACNUMB.
00594 MOVE ACNAME IN JOEREC TO CACNAME.
00595 MOVE ACOPDATE IN JOEREC TO CP-DATE.
00596 MOVE SDC TO CACCPDCC D-IN.
00597 MOVE NAMEPM(SMM) TO CACCPMM.
00598 MOVE SYX TO CACCPYX Y-IN.
00599 MOVE SMM TO M-IN.
00600 MOVE 1 TO YEAR-TY.
00601 * CALL 'FNDDYWK' USING LINK-AREA.
00602 * MOVE DAY-WK TO CDAY.
00603
00604 ** WRITE PRINT-HEAD **
00605
00606 PRINT-HEAD.
00607 MOVE ZERO TO LINE-NC.
00608 MOVE SPACES TO PRINT-REC.
00609 WRITE PRINT-REC BEFORE PAGE.
00610 ADD 1 TO IPAGE.
00611 MOVE IPAGE TO CTPAGE.
00612 MOVE SPACES TO PRINT-REC.
00613 WRITE PRINT-REC BEFORE 4.
00614 WRITE PRINT-REC FROM HEADER1 BEFORE 1.
00615 WRITE PRINT-REC FROM HEADER2 BEFORE 2.
00616 WRITE PRINT-REC FROM HEADER3 BEFORE 1.
00617 WRITE PRINT-REC FROM HEADER4 BEFORE 2.
00618 WRITE PRINT-REC FROM HEADER5 BEFORE 1.
00619 WRITE PRINT-REC FROM HEADER6 BEFORE 1.
00620 WRITE PRINT-REC FROM HEADER7 BEFORE 1.
00621 WRITE PRINT-REC FROM HEADER8 BEFORE 1.
00622 WRITE PRINT-REC FROM HEADER9 BEFORE 2.
00623 LCCP-EXIT. EXIT.
00624
00625 ** CHECK LINE COUNT **
00626
00627 CHECK-LINE.
00628 IF LINE-NC 60 PERFORM PRINT-HEAD.
00629
00630 TCTAL-JCB.
00631 MOVE JLSTNUM TO OJLSTNUM.
00632 MOVE JLSTPAG TO OJLSTPAG.
00633 MOVE JELAP-HH TO OJELAP-HH.
00634 MOVE JELAP-MM TO OJELAP-MM.
00635 MOVE JELAP-SS TO OJELAP-SS.
00636 MOVE JCPL-TIME TO OJCPL-TIME.
00637 MOVE JEXNLN TO OJEXNLN.
00638 MOVE JEXNPG TO OJEXNPG.
00639 MOVE JNUMDISP TO OJNUMDISP.
00640 MOVE JSIGDISP TO OJSIGDISP.
00641 MOVE JNUMTAPE TO OJNUMTAPE.
00642 MOVE JSICTAPE TO OJSICTAPE.
00643 ADD JLSTNUM TO CLSTNUM.
00644 ADD JLSTPAG TO CLSTPAG.
00645 ADD JELAP-SS TO CELAP-SS.
00646 IF CELAP-SS 60 CR = 60
00647 SUBTRACT 60 FROM CELAP-SS

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00648 ADD 1 TO GELAP-MM.
00649 ADD JELAP-MM TO GELAP-MM.
00650 IF GELAP-MM 60 CR = 60
00651 SUBTRACT 60 FROM GELAP-MM
00652 ADD 1 TO GELAP-HH.
00653 ALD JELAP-HH TO GELAP-HH.
00654 ADD JEXNLN TO GEXNLN.
00655 ADD JEXNPG TO GEXNPG.
00656 ADD JNUMDISP TO GNUMDISP.
00657 ADD JSIGDISP TO GSIGDISP.
00658 ADD JNUMTAPE TO GNUMTAPE.
00659 ADD JSICTAPE TO GSICTAPE.
00660 MOVE ACNAME IN JDEREC TO DACNAME.
00661 MOVE ACNUMB IN JDEREC TO PACNUMB DACNUMB.
00662 PERFORM CHECK-LINE.
00663 MOVE SPACES TO PRINT-REC.
00664 WRITE PRINT-REC BEFORE 1.
00665 WRITE PRINT-REC FROM PRINT-JOB1 BEFORE 1.
00666 WRITE PRINT-REC FROM PRINT-JOB2 BEFORE 2.
00667 ADD 4 TO LINE-NO.
00668 PERFORM CLEAR-JCB.
00669 PERFORM CHECK-LINE.
00670 GRAND-TOTAL.
00671 DIVIDE NET-LCPU BY 300 GIVING NET-CPU.
00672 DIVIDE NET-CPU BY 60 GIVING NET-CPU REMAINDER TCPU-SS.
00673 DIVIDE NET-CPU BY 60 GIVING TCPU-HH REMAINDER TCPU-MM.
00674 MOVE TODAY'S TOTAL TO CTOTAL-NAME.
00675 MOVE JLSTNUM TO JLISTNUM.
00676 MOVE JLSTPAG TO JLISTPAG.
00677 MOVE GELAP-HH TO GJELAP-HH.
00678 MOVE GELAP-MM TO GJELAP-MM.
00679 MOVE GELAP-SS TO GJELAP-SS.
00680 MOVE TCPU-HH TO GCPU-HH.
00681 MOVE TCPU-MM TO GCPU-MM.
00682 MOVE TCPU-SS TO GCPU-SS.
00683 MOVE GEXNLN TO GJEXNLN.
00684 MOVE GEXNPG TO GJEXNPG.
00685 * MOVE GNUMDISP TO GNUMDISP. NOT ENOUGH SPACE TO PRINT
00686 MOVE 0 TO GNUMDISP.
00687 * MOVE GSIGDISP TO GSIGDISP. NOT ENOUGH SPACE TO PRINT
00688 MOVE 0 TO GNUMTAPE.
00689 MOVE 0 TO GNUMTAPE.
00690 MOVE GSICTAPE TO GSICTAPE.
00691 PERFORM CHECK-LINE.
00692 WRITE PRINT-REC FROM PRINT-GRAND1 BEFORE 1.
00693 WRITE PRINT-REC FROM PRINT-GRAND2 BEFORE 2.
00694 CLEAR-JCB.
00695 MOVE ZERO TO JLSTNUM JLSTPAG JELAP-HH JELAP-MM JELAP-SS
00696 JCPU-TIME JEXNLN JEXNPG JNUMTAPE JSICTAPE
00697 JNUMDISP JSIGDISP.
00698 ** END OF JCB STEP **
00699
00700 END-JCB.
00701 MOVE SPACES TO PRINT-REC.
00702 WRITE PRINT-REC BEFORE 1.
00703 WRITE PRINT-REC FROM END-PRINT BEFORE 0.
00704
00705

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10391 JCB JA3000A FLUSHED BY THE OPERATOR OR VSE/POWER.

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CBL APOST
00001 ID DIVISION. JA300050 JA300060
00002 PROGRAM-ID. JA3000A. JA300070
00003 DATE-WRITTEN. 23/02/83. JA300080
00004 ***** JA300090
00005 * TO PRINT JOB A/C - DAILY PERFORMANCE REPORT * JA300100
00006 ***** JA300110
00007 ***** JA300120
00008 ***** JA300130
00009 ENVIRONMENT DIVISION. JA300140
00010 SPECIAL-NAMES. CO1 IS NEWPAGE. JA300150
00011 INPUT-OUTPUT SECTION. JA300160
00012 FILE-CONTROL. JA300170
00013 SELECT JADAILY ASSIGN TO SYS014-DA-3340-S-JADAILY. JA300180
00014 SELECT PFILE ASSIGN TO SYS006-LR-3203-S. JA300190
00015 DATA DIVISION. JA300200
00016 FILE SECTION. JA300210
00017 FD JADAILY RECORD CONTAINS 54 TO 232 CHARACTERS JA300220
00018 LABEL RECORD IS STANDARD JA300230
00019 DATA RECORDS ARE JDLREC JDLREC JDEREC. JA300240
00020 ***** JA300250
00021 01 JDLREC. JA300260
00022 03 ACOPDATE PIC 9(06). JA300270
00023 03 ACDATE PIC 9(06). JA300280
00024 03 ACSTRT PIC 9(05) COMP-3. JA300290
00025 03 ACSTCP PIC 9(06) COMP-3. JA300300
00026 03 ACUSER. JA300310
00027 ***** JA300320
00028 * USER INFORMATION * JA300330
00029 * - US-TY VALUE 10 THRU 99 = TEST * JA300340
00030 * - US-PY VALUE 00 THRU 09 = PRODUCTION JOB * JA300350
00031 * - OTHERS = UNDEFINED JOB * JA300360
00032 ***** JA300370
00033 05 FILLER PIC X(08). JA300380
00034 05 USTYPE PIC X(02). JA300390
00035 88 US-TY VALUE 10 THRU 99. JA300400
00036 88 US-PY VALUE 00 THRU 09. JA300410
00037 05 FILLER PIC X(06). JA300420
00038 03 ACNAME PIC X(08). JA300430
00039 03 ACNUMB PIC 9(04) COMP-4. JA300440
00040 03 ACIDEN PIC X(01). JA300450
00041 03 ACCANC PIC X(01). JA300460
00042 03 ACDFICL PIC X(01). JA300470
00043 03 ACBRIDR PIC X(01). JA300480
00044 03 ACRRNUM PIC 9(06) COMP-4. JA300490
00045 01 JDLREC. JA300500
00046 03 ACOPDATE PIC 9(06). JA300510
00047 03 ACDATE PIC 9(06). JA300520
00048 03 ACSTRT PIC 9(06) COMP-3. JA300530
00049 03 ACSTCP PIC 9(06) COMP-3. JA300540
00050 03 ACUSER. JA300550
00051 05 FILLER PIC X(08). JA300560
00052 05 USTYPE PIC X(02). JA300570
00053 88 US-TY VALUE 10 THRU 99. JA300580
00054 88 US-PY VALUE 00 THRU 09. JA300590
00055 05 FILLER PIC X(06). JA300600
00056 03 ACNAME PIC X(08). JA300610
00057 03 ACNUMB PIC 9(04) COMP-4. JA300620
00058 03 ACIDEN PIC X(01). JA300630
00059 03 ACCANC PIC X(01). JA300640
00060 03 LSTGCL PIC X(01). JA300650
00061 03 LSTOPR PIC X(01). JA300660
00062 03 LSTNUM PIC 9(06) COMP-4. JA300670
00063 03 LSTSUF PIC X(01). JA300680
00064 03 LSTCCP PIC X(01). JA300690
00065 03 LSTFCR PIC X(04). JA300700
00066 03 LSTEXR PIC 9(06) COMP-4. JA300710
00067 03 LSTPAS PIC 9(04) COMP-4. JA300720
00068 03 LSTEXP PIC 9(04) COMP-4. JA300730
00069 01 JDEREC. JA300740
00070 03 ACOPDATE PIC 9(06). JA300750
00071 03 ACDATE PIC 9(06). JA300760
00072 03 ACSTRT PIC 9(06) COMP-3. JA300770
00073 03 ACSTCP PIC 9(06) COMP-3. JA300780
00074 03 ACUSER. JA300790
00075 05 FILLER PIC X(08). JA300800
00076 05 USTYPE PIC X(02). JA300810
00077 88 US-TY VALUE 10 THRU 99. JA300820
00078 88 US-PY VALUE 00 THRU 09. JA300830
00079 05 FILLER PIC X(06). JA300840
00080 03 ACNAME PIC 9(04). JA300850

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000861      03 ACNUMB      PIC 9(04) COMP-4.
000862      03 ACIDEN      PIC X(01).
000863      03 ACCANC      PIC X(01).
000864      03 EXICL        PIC X(01).
000865      03 EXIPR        PIC X(01).
000866      03 EXNLN        PIC 9(06) COMP-4.
000867      03 EXNLC        PIC 9(06) COMP-4.
000868      03 EXNPG        PIC 9(04) COMP-4.
000869      03 EXDJOB      PIC X(08).
000870      03 EXLUSER      PIC X(18).
000871      03 EXPID        PIC X(02).
000872      03 EXOCANC      PIC X(01).
000873      03 EXIYPE      PIC X(01).
000874      03 EXPHASE      PIC X(08).
000875      03 EXENDAD      PIC 9(05) COMP-4.
000876      03 EXCPUIM      PIC 9(06) COMP-4.
000877      03 EXLVHTM      PIC 9(06) COMP-4.
000878      03 EXALITM      PIC 9(06) COMP-4.
000879      03 EXSITB      UCCURS 20 TIMES.
000880      05 EXADD      PIC 9(04) COMP-4.
000881      *****
000882      * DEVICE ADDRESS *
000883      * - X'1C0' THRU X'1F7' = 448 THRU 503 *
000884      * - X'280' THRU X'2B3' = 640 THRU 643 *
000885      *****
000886      88 DEV-DADD VALUE 448 THRU 503.
000887      88 DEV-TADD VALUE 640 THRU 643.
000888      05 EXJOB      PIC 9(06) COMP-4.
000889
000890      FD PROFILE      RECORD CONTAINS 133 CHARACTERS
000891                      LABEL RECORD IS OMITTED
000892
000893      01 OUT          DATA RECORD IS OUT.
000894                      PIC X(133).
000895
000896      *
000897      * WORKING-STORAGE SECTION.
000898      77 P2          PIC X(03) VALUE '2/2'.
000899      77 BLK        PIC X(01) VALUE ' '.
000900      77 I          PIC 9(02).
000901      77 J          PIC 9(02).
000902      77 STR        PIC 9(09)V9(02) COMP-4.
000903      77 STP        PIC 9(09)V9(02) COMP-4.
000904      77 M          PIC 9(01).
000905      77 N          PIC 9(01).
000906      77 MAT1C1     PIC 9(02)V9(02).
000907      77 MAT1C2     PIC 9(02)V9(02).
000908      77 WCAL        PIC 9(09)V9(02) COMP-4.
000909      77 W11        PIC 9(09).
000910      77 W12        PIC 9(09) COMP-4.
000911      77 W13        PIC 9(09) COMP-4.
000912      77 W14        PIC 9(09) COMP-4.
000913      77 W15        PIC 9(09)V9(02) COMP-4.
000914      77 W16        PIC 9(09)V9(02) COMP-4.
000915      77 W17        PIC 9(09)V9(02) COMP-4.
000916      77 W18        PIC 9(09)V9(02) COMP-4.
000917      77 W19        PIC 9(09)V9(02) COMP-4.
000918      77 W20        PIC 9(09)V9(02) COMP-4.
000919      77 W21        PIC 9(09)V9(02) COMP-4.
000920      77 W22        PIC 9(09)V9(02) COMP-4.
000921      77 W23        PIC 9(09)V9(02) COMP-4.
000922      77 W24        PIC 9(09)V9(02) COMP-4.
000923      77 W25        PIC 9(09)V9(02) COMP-4.
000924      77 W26        PIC 9(09)V9(02) COMP-4.
000925      77 W27        PIC 9(09)V9(02) COMP-4.
000926      77 W28        PIC 9(09)V9(02) COMP-4.
000927      77 W29        PIC 9(09)V9(02) COMP-4.
000928      77 W30        PIC 9(09)V9(02) COMP-4.
000929      77 W31        PIC 9(09)V9(02) COMP-4.
000930      77 W32        PIC 9(09)V9(02) COMP-4.
000931      77 W33        PIC 9(09)V9(02) COMP-4.
000932      77 W34        PIC 9(09)V9(02) COMP-4.
000933      77 W35        PIC 9(09)V9(02) COMP-4.
000934      77 W36        PIC 9(09)V9(02) COMP-4.
000935      77 W37        PIC 9(09)V9(02) COMP-4.
000936      77 W38        PIC 9(09)V9(02) COMP-4.
000937      77 W39        PIC 9(09)V9(02) COMP-4.
000938      77 W40        PIC 9(09)V9(02) COMP-4.
000939      01 TABLE-1. OCCURS 65 TIMES.
000940      05 TAB-1     OCCURS 10 TIMES.
000941      01 WDATE      PIC 9(06).
000942      01 RDATE      REDEFINES WDATE.
000943      05 YY        PIC 9(02).
000944      05 MM        PIC 9(02).
000945      05 DD        PIC 9(02).
000946      01 CC-LATE.
000947      05 CC-DD    PIC 99.
000948      05 FILLER    PIC X.
000949      05 CC-MM     PIC 99.
000950      05 FILLER    PIC X.
000951      05 CC-YY     PIC 99.
000952      01 MATHM.
000953      05 FILLER    PIC X(03) VALUE 'JAN'.
000954      05 FILLER    PIC X(03) VALUE 'FEB'.
000955      05 FILLER    PIC X(03) VALUE 'MAR'.
000956      05 FILLER    PIC X(03) VALUE 'APR'.
000957      05 FILLER    PIC X(03) VALUE 'MAY'.
000958      05 FILLER    PIC X(03) VALUE 'JUN'.
000959      05 FILLER    PIC X(03) VALUE 'JUL'.
000960      05 FILLER    PIC X(03) VALUE 'AUG'.
000961      05 FILLER    PIC X(03) VALUE 'SEP'.

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00162	05	FILLER	PIC X(03)	VALUE	'GCT'.	JA30167C
00163	05	FILLER	PIC X(03)	VALUE	'NCV'.	JA30168C
00164	05	FILLER	PIC X(03)	VALUE	'DEC'.	JA30169C
00165	01	PICT	REDEFINES			JA30170C
00166	05	MM	CCURS 12	TIMES	PIC X(03).	JA30171C
00167	01	WORK1.				JA30172C
00168	05	WORK14.				JA30173C
00169	05	WORK11	PIC Z99.			JA30174C
00170	05	FILLER	PIC X(01)	VALUE	'..'	JA30175C
00171	05	WORK15.				JA30176C
00172	05	WORK12	PIC 99.			JA30177C
00173	05	FILLER	PIC X(01)	VALUE	'..'	JA30178C
00174	05	WORK13	PIC 99.			JA30179C
00175	01	WORK2.				JA30180C
00176	05	WORK21	PIC 99.			JA30181C
00177	05	FILLER	PIC X(01)	VALUE	'..'	JA30182C
00178	05	WORK22	PIC 99.			JA30183C
00179	05	FILLER	PIC X(01)	VALUE	'..'	JA30184C
00180	05	WORK23	PIC 99.			JA30185C
00181	05	FILLER	PIC X(01)	VALUE	'..'	JA30186C
00182	05	WORK24	PIC 99.			JA30187C
00183	01	ACCA.				JA30188C
00184	05	ACC11	PIC 9(02).			JA30189C
00185	05	ACC12	PIC 9(02).			JA30190C
00186	05	FILLER	PIC X(01).			JA30191C
00187	05	ACC1	PIC 9(02).			JA30192C
00188	05	ACC2	PIC 9(02).			JA30193C
00189	05	FILLER	PIC X(01).			JA30194C
00190	05	ACC3	PIC 9(02).			JA30195C
00191	05	ACC2	PIC 9(02).			JA30196C
00192	05	FILLER	PIC X(01).			JA30197C
00193	05	ACC4	PIC 9(02).			JA30198C
00194	05	ACC42	PIC 9(02).			JA30199C
00195	01	WORK3.				JA30200C
00196	05	FILLER	PIC 9(02).			JA30201C
00197	05	FILLER	PIC X(01)	VALUE	'..'	JA30202C
00198	05	FILLER	PIC X(03).			JA30203C
00199	05	FILLER	PIC X(01)	VALUE	'..'	JA30204C
00200	05	FILLER	PIC 9(02).			JA30205C
00201	01	LINK-AREA.				JA30206C
00202	05	DATE-IN	PIC 9(06).			JA30207C
00203	05	YEAR-TY	PIC 9(02).			JA30208C
00204	05	DAY-WK	PIC X(09).			JA30209C
00205	01	WCLNV.				JA30210C
00206	05	HTIME	PIC 9(07).			JA30211C
00207	05	HTIME	REDEFINES	HTIME.		JA30212C
00208	10	HOUR	PIC 9(03).			JA30213C
00209	10	MIN	PIC 9(02).			JA30214C
00210	10	SECN	PIC 9(02).			JA30215C
00211	05	WSEC	PIC 9(09)			JA30216C
00212	05	WMIN	PIC 9(09)			JA30217C
00213	01	FORM1.				JA30218C
00214	05	FORM10	PIC X(60).			JA30219C
00215	05	FORM11	CCURS 4	TIMES.		JA30220C
00216	10	FORM12	PIC X(09).			JA30221C
00217	10	FILLER	PIC X(11).			JA30222C
00218	01	FORM2	REDEFINES	FORM1.		JA30223C
00219	05	FILLER	PIC X(60).			JA30224C
00220	05	FORM21	CCURS 4	TIMES.		JA30225C
00221	10	FORM22	PIC Z,ZZZ,ZZZ.			JA30226C
00222	10	FILLER	PIC X(11).			JA30227C
00223	01	FORM3	REDEFINES	FORM1.		JA30228C
00224	05	FILLER	PIC X(60).			JA30229C
00225	05	FORM31	CCURS 4	TIMES.		JA30230C
00226	10	FORM32	PIC ZZZ,ZZZ.Z.			JA30231C
00227	10	FILLER	PIC X(11).			JA30232C
00228	01	FORM4	REDEFINES	FORM1.		JA30233C
00229	05	FILLER	PIC X(60).			JA30234C
00230	05	FORM41	CCURS 4	TIMES.		JA30235C
00231	10	FORM42	PIC ZZ,ZZZ,ZZ.			JA30236C
00232	10	FILLER	PIC X(11).			JA30237C
00233	01	PP	PIC X(02).			JA30238C
00234	00	AF0	VALUE	'B6'.		JA30239C
00235	00	AF1	VALUE	'F1'.		JA30240C
00236	00	AF2	VALUE	'F2'.		JA30241C
00237	00	AF3	VALUE	'F3'.		JA30242C
00238	00	AF4	VALUE	'F4'.		JA30243C
00239	00	AF5	VALUE	'F5'.		JA30244C
00240	00	AF6	VALUE	'F1', 'F2', 'F3'.		JA30245C
00241	00	AF7	VALUE	'F1'.		JA30246C
00242	01	AF8	VALUE	'F1'.		JA30247C

00243	05	DESC5	B3'. PIC X(12) VALUE	JA302450
00244	05	DESC6	F1 (POWER)'. PIC X(20) VALUE	JA302450
00245	05	DESC7	F2'. PIC X(30) VALUE	JA302500
00246	05	DESC8	F3'. PIC X(24) VALUE	JA302510
00247	05	DESC9	F4'. PIC X(12) VALUE	JA302520
00248	05	DESC10	F5'. PIC X(12) VALUE	JA302530
00249	05	DESC11	PIC X(53) VALUE	JA302540
00250	05	DESC12	'TOTAL PROBLEM PROGRAM PROCESSOR TIME (B=BG+F1+...+F4)'. PIC X(27) VALUE	JA302550
00251	05	DESC13	'TOTAL OVERHEAD TIME (C)'. PIC X(26) VALUE	JA302560
00252	05	DESC14	'TOTAL SYSTEM WAIT TIME (D)'. PIC X(32) VALUE	JA302570
00253	05	DESC15	'TOTAL ACCOUNT CPU TIME (F=B+C+D)'. PIC X(32) VALUE	JA302580
00254	05	DESC16	'TOTAL UNACCOUNT CPU TIME (F=A-E)'. PIC X(50) VALUE	JA302590
00255	05	DESC17	'PROBLEM PROGRAM PROCESSOR TIME IN PCT. (G=E/E*100)'. PIC X(37) VALUE	JA302600
00256	05	DESC18	'OVERHEAD TIME IN PCT. (H=C/E*100)'. PIC X(40) VALUE	JA302610
00257	05	DESC19	'SYSTEM WAIT TIME IN PCT. (I=D/E*100)'. PIC X(25) VALUE	JA302620
00258	05	DESC20	'CPU UTILIZATION IN PCT. (G+H)'. PIC X(24) VALUE	JA302630
00259	05	DESC21	'TOTAL OCCUPANCY TIME (J)'. PIC X(18) VALUE	JA302640
00260	05	DESC22	'NO. OF BUS-JOB (K)'. PIC X(19) VALUE	JA302650
00261	05	DESC23	'NO. OF JOB-STEP (L)'. PIC X(34) VALUE	JA302660
00262	05	DESC24	'NO. OF BUS-JOB/MEASURED HOUR (K/A)'. PIC X(35) VALUE	JA302670
00263	05	DESC25	'NO. OF JOB-STEP/MEASURED HOUR (L/A)'. PIC X(27) VALUE	JA302680
00264	05	DESC26	'AVERAGE CPU TIME/JOB (E/K)*'. PIC X(32) VALUE	JA302690
00265	05	DESC27	'AVERAGE CPU TIME/JOB STEP (E/L)*'. PIC X(33) VALUE	JA302700
00266	05	DESC28	'AVERAGE OCCUPANCY TIME/JOB (J/K)*'. PIC X(38) VALUE	JA302710
00267	05	DESC29	'AVERAGE OCCUPANCY TIME/JOB STEP (J/L)*'. PIC X(26) VALUE	JA302720
00268	05	DESC30	'NO. OF TAPE ASSIGNMENT (M)'. PIC X(25) VALUE	JA302730
00269	05	DESC31	'NO. OF TAPE SID COUNT (N)'. PIC X(37) VALUE	JA302740
00270	05	DESC32	'NO. OF ASSIGNMENT/MEASURED HOUR (M/A)'. PIC X(36) VALUE	JA302750
00271	05	DESC33	'NO. OF SID COUNT/MEASURED HOUR (N/A)'. PIC X(28) VALUE	JA302760
00272	05	DESC34	'NO. OF ASSIGNMENT/JOB (M/K)*'. PIC X(27) VALUE	JA302770
00273	05	DESC35	'NO. OF SID COUNT/JOB (N/K)*'. PIC X(26) VALUE	JA302780
00274	05	DESC36	'NO. OF DISC ASSIGNMENT (P)'. PIC X(25) VALUE	JA302790
00275	05	DESC37	'NO. OF DISC SID COUNT (Q)'. PIC X(37) VALUE	JA302800
00276	05	DESC38	'NO. OF ASSIGNMENT/MEASURED HOUR (P/A)'. PIC X(36) VALUE	JA302810
00277	05	DESC39	'NO. OF SID COUNT/MEASURED HOUR (Q/A)'. PIC X(28) VALUE	JA302820
00278	05	DESC40	'NO. OF ASSIGNMENT/JOB (P/K)*'. PIC X(27) VALUE	JA302830
00279	05	DESC41	'NO. OF SID COUNT/JOB (Q/K)*'. PIC X(26) VALUE	JA302840
00280	05	DESC42	'NO. OF DISC ASSIGNMENT (R)'. PIC X(24) VALUE	JA302850
00281	05	DESC43	'NO. OF LINES PRINTED (R)'. PIC X(16) VALUE	JA302860
00282	05	DESC44	'PRINTED TIME (S)'. PIC X(32) VALUE	JA302870
00283	05	DESC45	'PRINTED SPEED LINES/MINUTE (R/S)'. PIC X(20) VALUE	JA302880
00284	05	DESC46	'NO. OF PAGES PRINTED'. PIC X(20) VALUE	JA302890

00324	05	DESC52	PIC X(36)	VALUE		JAB0325C
00325		'PRINTER UTILIZATION IN PCT (S/A*100)'				JAB03300
00326	05	DESC53	PIC X(31)	VALUE		JAB03310
00327		'NO. OF READER QUEUE (PCKER JOB)'				JAB03320
00328	05	DESC54	PIC X(13)	VALUE		JAB03330
00329		'NO. OF RECORD'				JAB03340
00330	05	DESC55	PIC X(26)	VALUE		JAB03350
00331		'NO. OF RECORD/READER QUEUE'				JAB03360
00332	05	DESC56	PIC X(33)	VALUE		JAB03370
00333		'NO. OF READER QUEUE/MEASURED HOUR'				JAB03380
00334	01	HEAD-1				JAB03390
00335	05	FILLER	PIC X(54)	VALUE		JAB03400
00336		'JOB ACCOUNTING SYSTEM'				JAB03410
00337	05	FILLER	PIC X(59)	VALUE		JAB03420
00338		'COMPUTER SERVICE CENTER'				JAB03430
00339	05	FILLER	PIC X(16)	VALUE	'PAGE'	JAB03440
00340	05	PI	PIC X(03)	VALUE	'1/2'	JAB03450
00341	01	HEAD-2				JAB03460
00342	05	FILLER	PIC X(49)	VALUE		JAB03470
00343		'REPORT CODE JAB020'				JAB03480
00344	05	FILLER	PIC X(64)	VALUE		JAB03490
00345		'CHULALENGKORN...UNIVERSITY'				JAB03500
00346	05	FILLER	PIC X(10)	VALUE	'RUN DATE'	JAB03510
00347	05	SYS-D	PIC X(05)			JAB03520
00348	01	HEAD-3				JAB03530
00349	05	FILLER	PIC X(47)	VALUE	SPACE.	JAB03540
00350	05	FILLER	PIC X(28)	VALUE		JAB03550
00351		'DAILY PERFORMANCE REPORT UN.'				JAB03560
00352	05	CPA-D	PIC X(19)			JAB03570
00353	01	HEAD-4				JAB03580
00354	05	FILLER	PIC X(10)	VALUE	SPACE.	JAB03590
00355	05	FILLER	PIC X(50)	VALUE	'DESCRIPTION'	JAB03600
00356	05	FILLER	PIC X(20)	VALUE	'SHIFT 1'	JAB03610
00357	05	FILLER	PIC X(20)	VALUE	'SHIFT 2'	JAB03620
00358	05	FILLER	PIC X(21)	VALUE	'SHIFT 3'	JAB03630
00359	05	FILLER	PIC X(11)	VALUE	'TCTAL'	JAB03640
00360	01	HEAD-5				JAB03650
00361	05	FILLER	PIC X(58)	VALUE	SPACE.	JAB03660
00362	05	HEAD-51	PIC X(11)			JAB03670
00363	05	FILLER	PIC X(09)	VALUE	SPACE.	JAB03680
00364	05	HEAD-52	PIC X(11)			JAB03690
00365	05	FILLER	PIC X(09)	VALUE	SPACE.	JAB03700
00366	05	HEAD-53	PIC X(11)			JAB03710
00367	05	FILLER	PIC X(09)	VALUE	SPACE.	JAB03720
00368	05	HEAD-5T	PIC X(11)			JAB03730
00369	01	HEAD-6				JAB03740
00370	05	FILLER	PIC X(64)	VALUE		JAB03750
00371		'DEFINED TIME (HH.MM)'				JAB03760
00372	05	HEAD-61	PIC X(05)			JAB03770
00373	05	FILLER	PIC X(15)	VALUE	SPACE.	JAB03780
00374	05	HEAD-62	PIC X(05)			JAB03790
00375	05	FILLER	PIC X(15)	VALUE	SPACE.	JAB03800
00376	05	HEAD-63	PIC X(05)			JAB03810
00377	05	FILLER	PIC X(15)	VALUE	SPACE.	JAB03820
00378	05	HEAD-6T	PIC X(05)			JAB03830
00379	01	HEAD-7				JAB03840
00380	05	FILLER	PIC X(58)	VALUE		JAB03850
00381		'MEASURED INTERVAL (HH.MM)'				JAB03860
00382	05	HEAD-71 OCCURS 4	TIMES.			JAB03870
00383	10	HEAD-72	PIC X(11)			JAB03880
00384	10	HEAD-73	PIC X(09)			JAB03890
00385	01	HEAD-8				JAB03900
00386	05	FILLER	PIC X(60)	VALUE	'MEASURED TIME (A)'	JAB03920
00387	05	HEAD-81 OCCURS 4	TIMES.			JAB03930
00388	10	HEAD-82	PIC X(09)			JAB03940
00389	10	HEAD-83	PIC X(11)			JAB03950
00390	01	HEAD-9				JAB03960
00391	05	GROUP1	PIC X(33)	VALUE		JAB03970
00392		'PARTITION PROCESSOR TIME (HH.MM)'				JAB03980
00393	05	GROUP2	PIC X(33)	VALUE		JAB03990
00394		'PARTITION OCCUPANCY(ELAPSED) TIME'				JAB04000
00395	05	GROUP3	PIC X(15)	VALUE		JAB04010
00396		'JOB UTILIZATION'				JAB04020
00397	05	GROUP4	PIC X(29)	VALUE		JAB04030
00398		'MULTIPROGRAMMING FACTOR (J/A)'				JAB04040
00399	05	GROUP5	PIC X(13)	VALUE		JAB04050
00400		'TAPE ACTIVITY'				JAB04060
00401	05	GROUP6	PIC X(13)	VALUE		JAB04070
00402		'DISC ACTIVITY'				JAB04080
00403	05	GROUP7	PIC X(16)	VALUE		JAB04090
00404		'PRINTER ACTIVITY'				JAB04100

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00405          05 GROUP8          PIC X(15) VALUE
00406          *READER ACTIVITY*.
00407          05 GROUP9          PIC X(19) VALUE
00408          ** EXCLUDE POWER JCB*.
00409          05 GROUP10         PIC X(25) VALUE
00410          * AND TIME UNIT IN SECONDS*.
00411          01 HEAD-L.
00412          05 LINE1           PIC X(26) VALUE
00413          -----
00414          05 LINE2           PIC X(33) VALUE
00415          -----
00416          05 LINE3           PIC X(15) VALUE
00417          -----
00418          05 LINE4           PIC X(23) VALUE
00419          -----
00420          05 LINE5           PIC X(13) VALUE
00421          -----
00422          05 LINE7           PIC X(16) VALUE
00423          -----
00424          05 FILLER         PIC X(06) VALUE
00425          -----
00426          PROCEDURE          DIVISION.
00427          FLWK.
00428          OPEN INPUT JADAILY OUTPUT PFILE.
00429          PERFORM CL-TAB VARYING J FROM 1 BY 1 UNTIL J GREATER 4
00430          AFTER 1 FROM 1 BY 1 UNTIL 1 GREATER 65.
00431          PERFORM PRE-HEAD THRU PRE-X.
00432          PERFORM GET-DATA THRU GET-X.
00433          PERFORM CAL-DATA THRU CAL-X.
00434          VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
00435          PERFORM PRINT-RPT THRU PRINT-X.
00436          CLOSE JADAILY PFILE.
00437          STOP RUN.
00438
00439          *****
00440          * CLEAR TABLE *
00441          *****
00442          CL-TAB.
00443          MOVE 0 TO TAB(I, J).
00444
00445          *****
00446          * CONVERT TO SECONDS *
00447          *****
00448          CONSEC.
00449          MULTIPLY 60 BY HOUR GIVING WSEC.
00450          ADD MINT TO WSEC.
00451          MULTIPLY 60 BY WSEC.
00452          ADD SECN TO WSEC.
00453
00454          *****
00455          * CONVERT TO HOUR *
00456          *****
00457          CONHOUR.
00458          DIVIDE 60 INTO WSEC GIVING WMIN REMAINDER SECN.
00459          DIVIDE 60 INTO WMIN GIVING HOUR REMAINDER MINT.
00460
00461          *****
00462          * READ DATA *
00463          *****
00464          GET-DATA.
00465          MOVE ACSTRT OF JORREC TO WTIME.
00466          PERFORM CONSEC.
00467          MOVE WSEC TO STR.
00468          MOVE ACSTUP OF JORREC TO WTIME.
00469          PERFORM CONSEC.
00470          MOVE WSEC TO STP.
00471          IF STR GREATER STP ADD 86400 TO STP.
00472          IF STR NOT LESS TAB(1, 1) AND STR LESS TAB(1, 2) AND
00473          STP NOT LESS TAB(1, 1) AND STP LESS TAB(1, 2)
00474          MOVE 1 TO J
00475          MOVE 0 TO M N
00476          ELSE
00477          IF STR NOT LESS TAB(1, 2) AND STR LESS TAB(1, 3) AND
00478          STP NOT LESS TAB(1, 2) AND STP LESS TAB(1, 3)
00479          MOVE 2 TO J
00480          MOVE 0 TO M N
00481          ELSE
00482          IF STR NOT LESS TAB(1, 3) AND STR LESS TAB(1, 4) AND
00483          STP NOT LESS TAB(1, 3) AND STP LESS TAB(1, 4)
00484          MOVE 3 TO J
00485          MOVE 0 TO M N

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00567 *****
00568 ADD-E
00569 MOVE EXPID TO PP.
00570 IF ABG ADD WCAL TO TAB(20, J) TAB(20, 4)
00571 ELSE
00572 IF AF1 ADD WCAL TO TAB(21, J) TAB(21, 4)
00573 ELSE
00574 IF AF2 ADD WCAL TO TAB(22, J) TAB(22, 4)
00575 ELSE
00576 IF AF3 ADD WCAL TO TAB(23, J) TAB(23, 4)
00577 ELSE
00578 IF AF4 ADD WCAL TO TAB(24, J) TAB(24, 4)
00579 ELSE
00580 IF AF5 ADD WCAL TO TAB(25, J) TAB(25, 4)
00581 ELSE
00582 DISPLAY 'UNDEFINED EXPID TYPE' UPON CONSOLE.
00583 IF ABG ADD EXCPUTM TO TAB(5, J) TAB(5, 4)
00584 ELSE
00585 IF AF1 ADD EXCPUTM TO TAB(6, J) TAB(6, 4)
00586 ELSE
00587 IF AF2 ADD EXCPUTM TO TAB(7, J) TAB(7, 4)
00588 ELSE
00589 IF AF3 ADD EXCPUTM TO TAB(8, J) TAB(8, 4)
00590 ELSE
00591 IF AF4 ADD EXCPUTM TO TAB(9, J) TAB(9, 4)
00592 ELSE
00593 IF AF5 ADD EXCPUTM TO TAB(10, J) TAB(10, 4)
00594 ELSE
00595 DISPLAY 'UNDEFINED EXPID TYPE' UPON CONSOLE.
00596 ADD EXCVHTM TO TAB(12, J) TAB(12, 4).
00597 ADD EXALLTM TO TAB(13, J) TAB(13, 4).
00598 IF SYS ADD EXCPUTM TO TAB(58, J) TAB(58, 4).
00599 IF EXTYPE = 'L' ADD 1 TO TAB(27, J) TAB(27, 4)
00600 IF SYS ADD 1 TO TAB(60, J) TAB(60, 4).
00601 ADD 1 TO TAB(28, J) TAB(28, 4).
00602 IF SYS ADD 1 TO TAB(61, J) TAB(61, 4).
00603 MOVE J TO INAS TSIO DNAS DSIO.
00604 PERFORM SICT VARYING I FROM 1 BY 1 UNTIL I GREATER 12.
00605 ADD DNAS TO TAB(42, J) TAB(42, 4).
00606 ADD DSIO TO TAB(43, J) TAB(43, 4).
00607 ADD TNAS TO TAB(36, J) TAB(36, 4).
00608 ADD TSIO TO TAB(37, J) TAB(37, 4).
00609 IF SYS ADD DNAS TO TAB(64, J) TAB(64, 4)
00610 ADD DSIO TO TAB(65, J) TAB(65, 4)
00611 ADD TNAS TO TAB(62, J) TAB(62, 4)
00612 ADD TSIO TO TAB(63, J) TAB(63, 4).
00613
00614 *****
00615 * LIST RECCRD *
00616 *****
00617 ADD-L.
00618 ADD LSTNUM TO TAB(48, J) TAB(48, 4).
00619 ADD WCAL TO TAB(49, J) TAB(49, 4).
00620 ADD LSTPAG TO TAB(51, J) TAB(51, 4).
00621
00622 *****
00623 * READ RECCRD *
00624 *****
00625 ADD-R.
00626 ADD 1 TO TAB(53, J) TAB(53, 4).
00627 ADD RORNUM TO TAB(54, J) TAB(54, 4).
00628
00629 *****
00630 * EXECUTE RECCRD 2-3 SHIFTS *
00631 *****
00632 ADD-E1.
00633 MOVE EXPID TO PP.
00634 IF ABG ADD W11 TO TAB(20, N)
00635 ADD W12 TO TAB(20, M)
00636 ADD W13 TO TAB(20, J)
00637 ADD WCAL TO TAB(20, 4)
00638 ELSE
00639 IF AF1 ADD W11 TO TAB(21, N)
00640 ADD W12 TO TAB(21, M)
00641 ADD W13 TO TAB(21, J)
00642 ADD WCAL TO TAB(21, 4)
00643 ELSE
00644 IF AF2 ADD W11 TO TAB(22, N)
00645 ADD W12 TO TAB(22, M)
00646 ADD W13 TO TAB(22, J)
00647 ADD WCAL TO TAB(22, 4)

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00729      ADD DNAS TO TAB(42, 4).
00730      IF SYS ADD W11 TO TAB(64, N)
00731          ADD W12 TO TAB(64, M)
00732          ADD W13 TO TAB(64, J)
00733          ADD DNAS TO TAB(64, 4).
00734      MULTIPLY DSIC BY RATIO1 GIVING W11.
00735      MULTIPLY DSIC BY RATIO2 GIVING W12.
00736      SUBTRACT W11 W12 FROM DSIC GIVING W13.
00737      ADD W11 TO TAB(43, N).
00738      ADD W12 TO TAB(43, M).
00739      ADD W13 TO TAB(43, J).
00740      ADD DSIC TO TAB(43, 4).
00741      IF SYS ADD W11 TO TAB(65, N)
00742          ADD W12 TO TAB(65, M)
00743          ADD W13 TO TAB(65, J)
00744          ADD DSIC TO TAB(65, 4).
00745      MULTIPLY TNAS BY RATIO1 GIVING W11.
00746      MULTIPLY TNAS BY RATIO2 GIVING W12.
00747      SUBTRACT W11 W12 FROM TNAS GIVING W13.
00748      ADD W11 TO TAB(36, N).
00749      ADD W12 TO TAB(36, M).
00750      ADD W13 TO TAB(36, J).
00751      ADD TNAS TO TAB(36, 4).
00752      IF SYS ADD W11 TO TAB(62, N)
00753          ADD W12 TO TAB(62, M)
00754          ADD W13 TO TAB(62, J)
00755          ADD TNAS TO TAB(62, 4).
00756      MULTIPLY TSIC BY RATIO1 GIVING W11.
00757      MULTIPLY TSIC BY RATIO2 GIVING W12.
00758      SUBTRACT W11 W12 FROM TSIC GIVING W13.
00759      ADD W11 TO TAB(37, N).
00760      ADD W12 TO TAB(37, M).
00761      ADD W13 TO TAB(37, J).
00762      ADD TSIC TO TAB(37, 4).
00763      IF SYS ADD W11 TO TAB(63, N)
00764          ADD W12 TO TAB(63, M)
00765          ADD W13 TO TAB(63, J)
00766          ADD TSIC TO TAB(63, 4).
00767
00768      *****
00769      * LIST RECORD 2-3 SHIFTS *
00770      *****
00771      ADD-L1.
00772      MULTIPLY LSTNUM BY RATIO1 GIVING W11.
00773      MULTIPLY LSTNUM BY RATIO2 GIVING W12.
00774      SUBTRACT W11 W12 FROM LSTNUM GIVING W13.
00775      ADD W11 TO TAB(46, N).
00776      ADD W12 TO TAB(46, M).
00777      ADD W13 TO TAB(46, J).
00778      ADD LSTNUM TO TAB(46, 4).
00779      MULTIPLY WCAL BY RATIO1 GIVING W11.
00780      MULTIPLY WCAL BY RATIO2 GIVING W12.
00781      SUBTRACT W11 W12 FROM WCAL GIVING W13.
00782      ADD W11 TO TAB(49, N).
00783      ADD W12 TO TAB(49, M).
00784      ADD W13 TO TAB(49, J).
00785      ADD WCAL TO TAB(49, 4).
00786      MULTIPLY LSTPAG BY RATIO1 GIVING W11.
00787      MULTIPLY LSTPAG BY RATIO2 GIVING W12.
00788      SUBTRACT W11 W12 FROM LSTPAG GIVING W13.
00789      ADD W11 TO TAB(51, N).
00790      ADD W12 TO TAB(51, M).
00791      ADD W13 TO TAB(51, J).
00792      ADD LSTPAG TO TAB(51, 4).
00793
00794      *****
00795      * READ RECORD 2-3 SHIFTS *
00796      *****
00797      ADD-R1.
00798      ADD 1 TO TAB(53, J) TAB(53, 4).
00799      MULTIPLY RDRNUM BY RATIO1 GIVING W11.
00800      MULTIPLY RDRNUM BY RATIO2 GIVING W12.
00801      SUBTRACT W11 W12 FROM RDRNUM GIVING W13.
00802      ADD W11 TO TAB(54, N).
00803      ADD W12 TO TAB(54, M).
00804      ADD W13 TO TAB(54, J).
00805      ADD LSTNUM TO TAB(54, 4).
00806
00807      *****
00808      * COUNT SIG *****
00809      *****

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SILCT.  
IF DEV-DALD(I) ADD 1 TO DNAS  
ADD EXJOB(I) TO DSIC.  
IF DEV-TACD(I) ADD 1 TO TNAS  
ADD EXJOB(I) TO TSIC.  
*****  
* CALCULATE DATA *  
*****  
CAL-DATA.  
SUBTRACT TAB(2, J) FROM TAB(3, J) GIVING TAB(4, J).  
IF TAB(4, J) = 0 GO TO CAL-X.  
DIVIDE 300 INTO TAB(5, J).  
DIVIDE 300 INTO TAB(6, J).  
DIVIDE 300 INTO TAB(7, J).  
DIVIDE 300 INTO TAB(8, J).  
DIVIDE 300 INTO TAB(9, J).  
DIVIDE 300 INTO TAB(10, J).  
ADD TAB(5, J) TAB(6, J) TAB(7, J) TAB(8, J) TAB(9, J)  
TAB(10, J) TO TAB(11, J).  
DIVIDE 300 INTO TAB(12, J).  
DIVIDE 300 INTO TAB(13, J).  
ADD TAB(11, J) TAB(12, J) TAB(13, J) TO TAB(14, J).  
SUBTRACT TAB(14, J) FROM TAB(4, J) GIVING TAB(15, J).  
IF TAB(14, J) NOT = 0  
MULTIPLY 100 BY TAB(11, J) GIVING TAB(16, J)  
DIVIDE TAB(14, J) INTO TAB(16, J)  
MULTIPLY 100 BY TAB(12, J) GIVING TAB(17, J)  
DIVIDE TAB(14, J) INTO TAB(17, J)  
MULTIPLY 100 BY TAB(13, J) GIVING TAB(18, J)  
DIVIDE TAB(14, J) INTO TAB(18, J).  
ADD TAB(16, J) TAB(17, J) TO TAB(19, J).  
ADD TAB(20, J) TAB(21, J) TAB(22, J) TAB(23, J) TAB(24, J)  
TAB(25, J) TO TAB(26, J).  
DIVIDE 3000 INTO TAB(27, J) GIVING W14.  
DIVIDE W14 INTO TAB(27, J) GIVING TAB(29, J).  
DIVIDE W14 INTO TAB(28, J) GIVING TAB(30, J).  
DIVIDE 300 INTO TAB(31, J).  
SUBTRACT TAB(32, J) FROM TAB(14, J) GIVING W11.  
SUBTRACT TAB(33, J) FROM TAB(27, J) GIVING W12.  
SUBTRACT TAB(34, J) FROM TAB(28, J) GIVING W13.  
IF W12 NOT = 0  
DIVIDE W12 INTO W11 GIVING TAB(31, J).  
IF W13 NOT = 0  
DIVIDE W13 INTO W11 GIVING TAB(32, J).  
SUBTRACT TAB(35, J) FROM TAB(26, J) GIVING W11.  
IF W12 NOT = 0  
DIVIDE W12 INTO W11 GIVING TAB(33, J).  
IF W13 NOT = 0  
DIVIDE W13 INTO W11 GIVING TAB(34, J).  
DIVIDE TAB(4, J) INTO TAB(26, J) GIVING TAB(35, J).  
DIVIDE W14 INTO TAB(36, J) GIVING TAB(38, J).  
DIVIDE W14 INTO TAB(37, J) GIVING TAB(39, J).  
SUBTRACT TAB(62, J) FROM TAB(36, J) GIVING W11.  
SUBTRACT TAB(63, J) FROM TAB(37, J) GIVING W13.  
IF W12 NOT = 0  
DIVIDE W12 INTO W11 GIVING TAB(40, J)  
DIVIDE W12 INTO W13 GIVING TAB(41, J).  
DIVIDE W14 INTO TAB(42, J) GIVING TAB(44, J).  
DIVIDE W14 INTO TAB(43, J) GIVING TAB(45, J).  
SUBTRACT TAB(64, J) FROM TAB(42, J) GIVING W11.  
SUBTRACT TAB(65, J) FROM TAB(43, J) GIVING W13.  
IF W12 NOT = 0  
DIVIDE W12 INTO W11 GIVING TAB(46, J)  
DIVIDE W12 INTO W13 GIVING TAB(47, J).  
IF TAB(49, J) NOT = 0  
DIVIDE 60 INTO TAB(49, J) GIVING W11  
DIVIDE W11 INTO TAB(48, J) GIVING TAB(50, J).  
MULTIPLY 100 BY TAB(49, J) GIVING TAB(52, J).  
DIVIDE TAB(4, J) INTO TAB(52, J).  
IF TAB(53, J) NOT = 0  
DIVIDE TAB(53, J) INTO TAB(54, J) GIVING TAB(55, J).  
DIVIDE W14 INTO TAB(53, J) GIVING TAB(56, J).  
CAL-X.  
EXIT.  
*****  
* PRINT REPORT *  
*****  
PRINT-RT.  
MOVE SPAC TO LUT.
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00891	WRITE OUT BEFORE NEWPAGE.	JA3C8780	
00892	MOVE SPACE TO OUT.	JA3C8790	
00893	WRITE OUT BEFORE 2.	JA3C8800	
00894	WRITE OUT FROM HEAD-1 BEFORE 1.	JA3C8810	
00895	WRITE OUT FROM HEAD-2 BEFORE 2.	JA3C8820	
00896	WRITE OUT FROM HEAD-3 BEFORE 2.	JA3C8830	
00897	WRITE OUT FROM HEAD-1 BEFORE 1.	JA3C8840	
00898	WRITE OUT FROM HEAD-4 BEFORE 1.	JA3C8850	
00899	WRITE OUT FROM HEAD-5 BEFORE 1.	JA3C8860	
00900	WRITE OUT FROM HEAD-L BEFORE 1.	JA3C8870	
00901	SUBTRACT TAB(1, 1) FROM TAB(1, 2) GIVING WSEC.	JA3C8880	
00902	IF WSEC = 0	MOVE SPACE TO HEAD-61	JA3C8890
00903	ELSE	PERFORM CONHOUR	JA3C8900
00904		MOVE HOUR TO WORK12	JA3C8910
00905		MOVE MINT TO WORK13	JA3C8920
00906		MOVE WORK15 TO HEAD-61.	JA3C8930
00907	SUBTRACT TAB(1, 2) FROM TAB(1, 3) GIVING WSEC.	JA3C8940	
00908	IF WSEC = 0	MOVE SPACE TO HEAD-62	JA3C8950
00909	ELSE	PERFORM CONHOUR	JA3C8960
00910		MOVE HOUR TO WORK12	JA3C8970
00911		MOVE MINT TO WORK13	JA3C8980
00912		MOVE WORK15 TO HEAD-62.	JA3C8990
00913	SUBTRACT TAB(1, 3) FROM TAB(1, 4) GIVING WSEC.	JA3C9000	
00914	IF WSEC = 0	MOVE SPACE TO HEAD-63	JA3C9010
00915	ELSE	PERFORM CONHOUR	JA3C9020
00916		MOVE HOUR TO WORK12	JA3C9030
00917		MOVE MINT TO WORK13	JA3C9040
00918		MOVE WORK15 TO HEAD-63.	JA3C9050
00919	SUBTRACT TAB(1, 1) FROM TAB(1, 4) GIVING WSEC.	JA3C9060	
00920	IF WSEC = 0	MOVE SPACE TO HEAD-6T	JA3C9070
00921	ELSE	PERFORM CONHOUR	JA3C9080
00922		MOVE HOUR TO WORK12	JA3C9090
00923		MOVE MINT TO WORK13	JA3C9100
00924		MOVE WORK15 TO HEAD-6T.	JA3C9110
00925	WRITE OUT FROM HEAD-6 BEFORE 1.	JA3C9120	
00926	PERFORM F7 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA3C9130	
00927	WRITE OUT FROM HEAD-7 BEFORE 1.	JA3C9140	
00928	PERFORM H8 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA3C9150	
00929	WRITE OUT FROM HEAD-8 BEFORE 2.	JA3C9160	
00930	WRITE OUT FROM GROUP1 BEFORE 1.	JA3C9170	
00931	WRITE OUT FROM LINE2 BEFORE 1.	JA3C9180	
00932	MOVE SPACE TO FORM1.	JA3C9190	
00933	MOVE DESC5 TO FORMID.	JA3C9200	
00934	MOVE 5 TO 1.	JA3C9210	
00935	PERFORM F1 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA3C9220	
00936	WRITE OUT FROM FORM1 BEFORE 1.	JA3C9230	
00937	MOVE DESC6 TO FORMID.	JA3C9240	
00938	MOVE 6 TO 1.	JA3C9250	
00939	PERFORM F1 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA3C9260	
00940	WRITE OUT FROM FORM1 BEFORE 1.	JA3C9270	
00941	MOVE DESC7 TO FORMID.	JA3C9280	
00942	MOVE 7 TO 1.	JA3C9290	
00943	PERFORM F1 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA3C9300	
00944	WRITE OUT FROM FORM1 BEFORE 1.	JA3C9310	
00945	MOVE DESC8 TO FORMID.	JA3C9320	
00946	MOVE 8 TO 1.	JA3C9330	
00947	PERFORM F1 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA3C9340	
00948	WRITE OUT FROM FORM1 BEFORE 1.	JA3C9350	
00949	MOVE DESC9 TO FORMID.	JA3C9360	
00950	MOVE 9 TO 1.	JA3C9370	
00951	PERFORM F1 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA3C9380	
00952	WRITE OUT FROM FORM1 BEFORE 1.	JA3C9390	
00953	MOVE DESC10 TO FORMID.	JA3C9400	
00954	MOVE 10 TO 1.	JA3C9410	
00955	PERFORM F1 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA3C9420	
00956	WRITE OUT FROM FORM1 BEFORE 1.	JA3C9430	
00957	PERFORM F1 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA3C9440	
00958	WRITE OUT FROM FORM1 BEFORE 1.	JA3C9450	
00959	MOVE DESC11 TO FORMID.	JA3C9460	
00960	MOVE 11 TO 1.	JA3C9470	
00961	PERFORM F1 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA3C9480	
00962	WRITE OUT FROM FORM1 BEFORE 1.	JA3C9490	
00963	MOVE DESC12 TO FORMID.	JA3C9500	
00964	MOVE 12 TO 1.	JA3C9510	
00965	PERFORM F1 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA3C9520	
00966	WRITE OUT FROM FORM1 BEFORE 1.	JA3C9530	
00967	MOVE DESC13 TO FORMID.	JA3C9540	
00968	MOVE 13 TO 1.	JA3C9550	
00969	PERFORM F1 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA3C9560	
00970	WRITE OUT FROM FORM1 BEFORE 1.	JA3C9570	
00971	PERFORM F1 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA3C9580	

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WRITE OUT FROM FORM1 BEFORE 1.
MOVE DESC14 TO FORMID.
MOVE 14 TO 1.
PERFORM F1 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
WRITE OUT FROM FORM1 BEFORE 1.
MOVE DESC15 TO FORMID.
MOVE 15 TO 1.
PERFORM F1 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
WRITE OUT FROM FORM1 BEFORE 2.
MOVE DESC16 TO FORMID.
MOVE 16 TO 1.
PERFORM F4 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
WRITE OUT FROM FORM1 BEFORE 1.
MOVE DESC17 TO FORMID.
MOVE 17 TO 1.
PERFORM F4 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
WRITE OUT FROM FORM1 BEFORE 1.
MOVE DESC18 TO FORMID.
MOVE 18 TO 1.
PERFORM F4 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
WRITE OUT FROM FORM1 BEFORE 2.
MOVE DESC19 TO FORMID.
MOVE 19 TO 1.
PERFORM F4 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
WRITE OUT FROM FORM1 BEFORE 2.
WRITE OUT FROM GROUP2 BEFORE 1.
WRITE OUT FROM LINE2 BEFORE 1.
MOVE DESC5 TO FORMID.
MOVE 20 TO 1.
PERFORM F1 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
WRITE OUT FROM FORM1 BEFORE 1.
MOVE DESC6 TO FORMID.
MOVE 21 TO 1.
PERFORM F1 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
WRITE OUT FROM FORM1 BEFORE 1.
MOVE DESC7 TO FORMID.
MOVE 22 TO 1.
PERFORM F1 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
WRITE OUT FROM FORM1 BEFORE 1.
MOVE DESC8 TO FORMID.
MOVE 23 TO 1.
PERFORM F1 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
WRITE OUT FROM FORM1 BEFORE 1.
MOVE DESC9 TO FORMID.
MOVE 24 TO 1.
PERFORM F1 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
WRITE OUT FROM FORM1 BEFORE 2.
MOVE DESC10 TO FORMID.
MOVE 25 TO 1.
PERFORM F1 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
WRITE OUT FROM FORM1 BEFORE 2.
MOVE DESC26 TO FORMID.
MOVE 26 TO 1.
PERFORM F1 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
WRITE OUT FROM FORM1 BEFORE 2.
WRITE OUT FROM GROUP3 BEFORE 1.
WRITE OUT FROM LINE3 BEFORE 1.
MOVE DESC27 TO FORMID.
MOVE 27 TO 1.
PERFORM F2 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
WRITE OUT FROM FORM1 BEFORE 1.
MOVE DESC28 TO FORMID.
MOVE 28 TO 1.
PERFORM F2 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
WRITE OUT FROM FORM1 BEFORE 1.
MOVE DESC29 TO FORMID.
MOVE 29 TO 1.
PERFORM F3 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
WRITE OUT FROM FORM1 BEFORE 1.
MOVE DESC30 TO FORMID.
MOVE 30 TO 1.
PERFORM F3 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
WRITE OUT FROM FORM1 BEFORE 2.
MOVE DESC31 TO FORMID.
MOVE 31 TO 1.
PERFORM F3 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
WRITE OUT FROM FORM1 BEFORE 1.
MOVE DESC32 TO FORMID.
MOVE 32 TO 1.
PERFORM F3 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
WRITE OUT FROM FORM1 BEFORE 1.

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01053	MOVE DESC33 TO FORMID.	JA3104CC
01054	MOVE 33 TO 1.	JA310410
01055	PERFORM F3 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA31042C
01056	WRITE OUT FROM FORM1 BEFORE 1.	JA31043C
01057	MOVE DESC34 TO FORMID.	JA31044C
01058	MOVE 34 TO 1.	JA31045C
01059	PERFORM F3 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA31046C
01060	WRITE OUT FROM FORM1 BEFORE 2.	JA31047C
01061	MOVE GROUP4 TO FORMID.	JA31048C
01062	MOVE 35 TO 1.	JA31049C
01063	PERFORM F3 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA31050C
01064	WRITE OUT FROM FORM1 BEFORE 1.	JA31051C
01065	WRITE OUT FROM LINE4 BEFORE 3.	JA31052C
01066	MOVE SPACE TO CUT.	
01067	STRING GROUP9 GROUP10 DELIMITED BY SIZE INTO CUT.	JA310530
01068	WRITE OUT BEFORE 1.	JA310540
01069	MOVE SPACE TO CUT.	JA31055C
01070	WRITE OUT BEFORE NEWPAGE.	JA31056C
01071	MOVE SPACE TO CUT.	JA31057C
01072	WRITE OUT BEFORE 2.	JA31058C
01073	MOVE P2 TO P1.	JA31059C
01074	WRITE OUT FROM HEAD-1 BEFORE 1.	JA31060C
01075	WRITE OUT FROM HEAD-2 BEFORE 2.	JA31061C
01076	WRITE OUT FROM HEAD-3 BEFORE 3.	JA31062C
01077	WRITE OUT FROM HEAD-4 BEFORE 4.	JA31063C
01078	WRITE OUT FROM HEAD-5 BEFORE 5.	JA31064C
01079	WRITE OUT FROM HEAD-6 BEFORE 6.	JA31065C
01080	WRITE OUT FROM HEAD-7 BEFORE 7.	JA31066C
01081	WRITE OUT FROM HEAD-8 BEFORE 8.	JA31067C
01082	WRITE OUT FROM HEAD-9 BEFORE 9.	JA31068C
01083	WRITE OUT FROM GROUP5 BEFORE 1.	JA31069C
01084	WRITE OUT FROM LINES BEFORE 1.	JA31070C
01085	MOVE DESC36 TO FORMID.	JA310710
01086	MOVE 36 TO 1.	JA310720
01087	PERFORM F2 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA310730
01088	WRITE OUT FROM FORM1 BEFORE 1.	JA310740
01089	MOVE DESC37 TO FORMID.	JA310750
01090	MOVE 37 TO 1.	JA31076C
01091	PERFORM F2 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA31077C
01092	WRITE OUT FROM FORM1 BEFORE 1.	JA31078C
01093	MOVE DESC38 TO FORMID.	JA31079C
01094	MOVE 38 TO 1.	JA31080C
01095	PERFORM F2 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA31081C
01096	WRITE OUT FROM FORM1 BEFORE 1.	JA31082C
01097	MOVE DESC39 TO FORMID.	JA31083C
01098	MOVE 39 TO 1.	JA31084C
01099	PERFORM F2 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA31085C
01100	WRITE OUT FROM FORM1 BEFORE 1.	JA31086C
01101	MOVE DESC40 TO FORMID.	JA31087C
01102	MOVE 40 TO 1.	JA31088C
01103	PERFORM F2 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA31089C
01104	WRITE OUT FROM FORM1 BEFORE 1.	JA31090C
01105	MOVE DESC41 TO FORMID.	JA31091C
01106	MOVE 41 TO 1.	JA31092C
01107	PERFORM F2 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA31093C
01108	WRITE OUT FROM FORM1 BEFORE 3.	JA31094C
01109	WRITE OUT FROM GROUP6 BEFORE 1.	JA31095C
01110	WRITE OUT FROM LINES BEFORE 1.	JA31096C
01111	MOVE DESC42 TO FORMID.	JA31097C
01112	MOVE 42 TO 1.	JA31098C
01113	PERFORM F2 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA31099C
01114	WRITE OUT FROM FORM1 BEFORE 1.	JA31100C
01115	MOVE DESC43 TO FORMID.	JA31101C
01116	MOVE 43 TO 1.	JA31102C
01117	PERFORM F2 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA31103C
01118	WRITE OUT FROM FORM1 BEFORE 1.	JA31104C
01119	MOVE DESC44 TO FORMID.	JA31105C
01120	MOVE 44 TO 1.	JA31106C
01121	PERFORM F2 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA31107C
01122	WRITE OUT FROM FORM1 BEFORE 1.	JA31108C
01123	MOVE DESC45 TO FORMID.	JA31109C
01124	MOVE 45 TO 1.	JA31110C
01125	PERFORM F2 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA31111C
01126	WRITE OUT FROM FORM1 BEFORE 1.	JA31112C
01127	MOVE DESC46 TO FORMID.	JA31113C
01128	MOVE 46 TO 1.	JA31114C
01129	PERFORM F2 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.	JA31115C
01130	WRITE OUT FROM FORM1 BEFORE 1.	JA31116C
01131	MOVE DESC47 TO FORMID.	JA31117C
01132	MOVE 47 TO 1.	JA31118C
01133		JA31119C

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01134 PERFORM F2 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
01135 WRITE OUT FROM FORM1 BEFORE 3.
01136 WRITE OUT FROM GROUP7 BEFORE 1.
01137 WRITE OUT FROM LINE7 BEFORE 1.
01138 MOVE DESC48 TO FORMID.
01139 MOVE 48 TO 1.
01140 PERFORM F2 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
01141 WRITE OUT FROM FORM1 BEFORE 1.
01142 MOVE DESC49 TO FORMID.
01143 MOVE 49 TO 1.
01144 PERFORM F1 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
01145 WRITE OUT FROM FORM1 BEFORE 1.
01146 MOVE DESC50 TO FORMID.
01147 MOVE 50 TO 1.
01148 PERFORM F2 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
01149 WRITE OUT FROM FORM1 BEFORE 1.
01150 MOVE DESC51 TO FORMID.
01151 MOVE 51 TO 1.
01152 PERFORM F2 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
01153 WRITE OUT FROM FORM1 BEFORE 1.
01154 MOVE DESC52 TO FORMID.
01155 MOVE 52 TO 1.
01156 PERFORM F4 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
01157 WRITE OUT FROM FORM1 BEFORE 3.
01158 WRITE OUT FROM GROUP8 BEFORE 1.
01159 WRITE OUT FROM LINE8 BEFORE 1.
01160 MOVE DESC53 TO FORMID.
01161 MOVE 53 TO 1.
01162 PERFORM F2 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
01163 WRITE OUT FROM FORM1 BEFORE 1.
01164 MOVE DESC54 TO FORMID.
01165 MOVE 54 TO 1.
01166 PERFORM F2 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
01167 WRITE OUT FROM FORM1 BEFORE 1.
01168 MOVE DESC55 TO FORMID.
01169 MOVE 55 TO 1.
01170 PERFORM F2 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
01171 WRITE OUT FROM FORM1 BEFORE 1.
01172 MOVE DESC56 TO FORMID.
01173 MOVE 56 TO 1.
01174 PERFORM F2 VARYING J FROM 1 BY 1 UNTIL J GREATER 4.
01175 WRITE OUT FROM FORM1 BEFORE 11.
01176 WRITE OUT FROM GROUP9 BEFORE 1.
01177 WRITE OUT FROM GROUP10 BEFORE 1.
01178 * PRINT-A.
01179 * EXIT.
01180
01181 *****
01182 * PREPARE HEAD 7 *
01183 *****
01184 F7.
01185 MOVE SPACE TO HEAD-73(J).
01186 MOVE TAB(2, J) TO WSEC.
01187 IF WSEC GREATER 86400 SUBTRACT 86400 FROM WSEC.
01188 PERFORM CONFOUR.
01189 MOVE HOUR TO WORK21.
01190 MOVE MINT TO WORK22.
01191 MOVE TAB(3, J) TO WSEC.
01192 IF WSEC GREATER 86400 SUBTRACT 86400 FROM WSEC.
01193 PERFORM CONFOUR.
01194 MOVE HOUR TO WORK23.
01195 MOVE MINT TO WORK24.
01196 IF WORK21 = 0 AND WORK22 AND WORK23 AND WORK24
01197 MOVE SPACE TO HEAD-72(J)
01198 ELSE
01199 MOVE WORK2 TO HEAD-72(J).
01200
01201 *****
01202 * PREPARE HEAD 8 *
01203 *****
01204 F8.
01205 MOVE SPACE TO HEAD-83(J).
01206 MOVE TAB(4, J) TO WSEC.
01207 IF WSEC = 0
01208 MOVE SPACE TO HEAD-82(J)
01209 ELSE
01210 PERFORM CONFOUR
01211 MOVE HOUR TO WORK11
01212 MOVE MINT TO WORK12
01213 MOVE WCON TO WORK13
01214 MOVE WORK1 TO HEAD-82(J).

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*****  
* PREPARE DATA FORM 1 *  
*****  
F1. MOVE TAB(1, J) TO WSEC.  
IF WSEC = 0  
MOVE SPACE TO FORM12(J)  
ELSE  
PERFORM CONTOUR  
MOVE HOUR TO WORK11  
MOVE MINT TO WORK12  
MOVE SECN TO WORK13  
MOVE WORK1 TO FORM12(J).  
  
*****  
* PREPARE DATA FORM 2 *  
*****  
F2. MOVE TAB(1, J) TO FORM22(J).  
  
*****  
* PREPARE DATA FORM 3 *  
*****  
F3. MOVE TAB(1, J) TO FORM32(J).  
  
*****  
* PREPARE DATA FORM 4 *  
*****  
F4. MOVE TAB(1, J) TO FORM42(J).  
  
*****  
* PREPARE UNDERLINE FORM *  
*****  
F5. MOVE SPACE TO FORM1.  
MOVE LINES TO FORM12(J).  
  
*****  
* PREPARE HEADING *  
*****  
PRE-HEAD.  
* ACCEPT WDATE FROM DATE.  
MOVE CURRENT-DATE TO CC-DATE.  
MOVE CC-DD TO DD.  
MOVE CC-MM TO MM.  
MOVE CC-YY TO YY.  
MOVE YY TO WYY.  
MOVE MM(MM) TO WMM.  
MOVE DD TO WDD.  
MOVE WORK3 TO SYS-D.  
READ JADAILY AT END  
DISPLAY 'NO JADAILY FILE ' UPON SYSLST  
CLOSE JADAILY PFILE  
STOP RUN.  
MOVE ACCDATE OF JDRREC TO WDATE.  
MOVE YY TO WYY.  
MOVE MM(MM) TO WMM.  
MOVE DD TO WDD.  
MOVE WYY TO ED.  
MOVE WDD TO YD.  
MOVE WDATE TO DATE-IN.  
MOVE 01 TO YEAR-1Y.  
  
*** CALL 'FNDDYWK' USING LINK-AREA.  
MOVE SPACES TO DAY-WK.  
MOVE SPACES TO CPR-D.  
STRING DAY-WK DELIMITED BY BLK  
SPACE WORK3 DELIMITED BY SIZE INTO CPR-D.  
ACCEPT ACCAR FROM SYSLST.  
MOVE ACC11 TO WORK21.  
MOVE ACC12 TO WORK22.  
IF ACC22 = 0  
SUBTRACT 1 FROM ACC21 GIVING WORK23  
MOVE 59 TO WORK24  
ELSE  
MOVE ACC21 TO WORK23  
SUBTRACT 1 FROM ACC22 GIVING WORK24.  
MOVE WORK23 TO HEAD-51.  
MOVE ACC21 TO WORK21.
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JAB11195C
JAB12000C
JAB120010
JAB120020C
JAB120030C
JAB120040C
JAB120050C
JAB120060C
JAB120070C
JAB120080C
JAB120090C
JAB120100C
JAB120110C
JAB120120C
JAB120130C
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JAB120200C
JAB120210C
JAB120220C
JAB120230C
JAB120240C
JAB120250C
JAB120260C
JAB120270C
JAB120280C
JAB120290C
JAB120300C
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JAB120370C
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JAB120400C
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JAB120600C
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JAB120650C
JAB120660C
JAB120670C
JAB120680C
JAB120690C
JAB120700C
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JAB120790C
JAB120800C

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JA3020A

06.23.21

19/05/83

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01296      MOVE ACC22 TO WCRK22.
01297      IF ACC32 = 0
01298          SUBTRACT 1 FROM ACC31 GIVING WCRK23
01299          MOVE 59 TO WCRK24
01300      ELSE
01301          MOVE ACC31 TO WCRK23
01302          SUBTRACT 1 FROM ACC32 GIVING WCRK24.
01303      MOVE WCRK2 TO HEAD-52.
01304      MOVE ACC31 TO WCRK21.
01305      MOVE ACC32 TO WCRK22.
01306      IF ACC42 = 0
01307          SUBTRACT 1 FROM ACC41 GIVING WCRK23
01308          MOVE 59 TO WCRK24
01309      ELSE
01310          MOVE ACC41 TO WCRK23
01311          SUBTRACT 1 FROM ACC42 GIVING WCRK24.
01312      MOVE WCRK2 TO HEAD-53.
01313      MOVE ACC11 TO WCRK21.
01314      MOVE ACC12 TO WCRK22.
01315      MOVE WCRK2 TO HEAD-51.
01316      MOVE ACC11 TO HOUR.
01317      MOVE ACC12 TO MINT.
01318      MOVE 0 TO SECN.
01319      PERFORM CNVSEC.
01320      MOVE WSEC TO TAB(1, 1).
01321      MOVE ACC21 TO HOUR.
01322      MOVE ACC22 TO MINT.
01323      MOVE 0 TO SECN.
01324      PERFORM CNVSEC.
01325      MOVE WSEC TO TAB(1, 2).
01326      MOVE ACC31 TO HOUR.
01327      MOVE ACC32 TO MINT.
01328      MOVE 0 TO SECN.
01329      PERFORM CNVSEC.
01330      MOVE WSEC TO TAB(1, 3).
01331      MOVE ACC41 TO HOUR.
01332      MOVE ACC42 TO MINT.
01333      MOVE 0 TO SECN.
01334      PERFORM CNVSEC.
01335      MOVE WSEC TO TAB(1, 4).
01336      IF TAB(1, 1) GREATER TAB(1, 2) ADD 86400 TO TAB(1, 2).
01337      IF TAB(1, 2) GREATER TAB(1, 3) ADD 86400 TO TAB(1, 3).
01338      IF TAB(1, 3) GREATER TAB(1, 4) ADD 86400 TO TAB(1, 4).
01339      PRE-X.
01340      EXIT.

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JA31286CC
JA312871C
JA312882C
JA312893C
JA312904C
JA312915C
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JA312981C
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CBL APCS1
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ID          DIVISION.
PROGRAM-ID. JA3050A.
** LAILY CONTROL REPORT OF ADD UP DAILY TRANS TO MONTH TAPE FILE **
ENVIRONMENT DIVISION.
INPUT-OUTPUT SECTION.
FILE-CONTROL.

      SELECT MASTER-FILE ASSIGN TO SYS013-MASTERF
              ORGANIZATION IS INDEXED ACCESS MODE IS DYNAMIC
              FILE STATUS IS W-STATUSC
              RECORD KEY IS MAS-KEY.
      SELECT DAILY-FILE ASSIGN TO SYS014-DA-3340-S-JADAILY.
      SELECT MONTH-FILE ASSIGN TO SYS011-UT-3420-S.
      SELECT PRINT-FILE ASSIGN TO SYS006-UR-3203-S.

DATA          DIVISION.
FILE          SECTION.

FD PRINT-FILE LABEL RECORD OMITTED.
  C1 PRINT-REC          PIC X(132).

FD MASTER-FILE LABEL RECORD STANDARD.
  C1 MASREC.
     03 MAS-KEY.
        05 MAS-YY          PIC 9(02).
        05 MAS-MM          PIC 9(02).
        05 MAS-DD          PIC 9(02).
     03 FILLER            PIC X(132).
     03 MSTART            PIC 9(06) COMP-3.
     03 MSTOP             PIC 9(06) COMP-3.
     03 FILLER            PIC X(26).
     03 WRITE-FLAG        PIC XX.
     03 NO-R              PIC 9(04) COMP-4.
     03 NO-L              PIC 9(04) COMP-4.
     03 NO-E              PIC 9(04) COMP-4.

FD DAILY-FILE LABEL RECORD STANDARD
  C1 DEREC.
     03 ACCLDATE          PIC 9(6).
     03 ACCLDATE REDEFINES ACCLDATE.
        05 AC-YY          PIC 9(02).
        05 AC-MM          PIC 9(02).
        05 AC-DD          PIC 9(02).
     03 ACCDATE          PIC 9(6).
     03 ACSTART          PIC 9(06) COMP-3.
     03 ACSTOP           PIC 9(06) COMP-3.
     03 FILLER            PIC X(16).
     03 ACRAME           PIC X(08).
     03 FILLER            PIC X(02).
     03 ACIDEN           PIC X.
     03 FILLER            PIC X(185).
  01 DLREC              PIC X(54).
  01 LLREC              PIC X(68).

FD MONTH-FILE LABEL RECORD OMITTED RECORDING MODE IS V
  C1 MEREC              PIC X(232).
  01 MLREC              PIC X(68).
  01 MRREC              PIC X(54).

WORKING-STORAGE SECTION.

** FORMAT OF HEAD PRINT **

  C1 HEADER1.
     03 FILLER            PIC X(53) VALUE 'JOB-ACCOUNTING PROJECT'.
     03 FILLER            PIC X(61) VALUE 'COMPUTER SERVICE CENTER'.
     03 FILLER            PIC X(15) VALUE 'PAGE'.
     03 FILLER            PIC X(03) VALUE '1/1'.
  01 HEADER2.
     03 FILLER            PIC X(48) VALUE 'REPORT CODE      JA3050A'.
     03 FILLER            PIC X(66) VALUE 'CHULALONGKORN.....UNIVERSITY '.
     03 FILLER            PIC X(09) VALUE 'RUN-DATE'.
     03 CSDO              PIC S9.
     03 FILLER            PIC X VALUE '-'.
     03 CSDP              PIC X(03).
     03 FILLER            PIC X VALUE '-'.
  
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JA3050

JA3050

00081	03	LSYY	PIC 99.	
00082	C1	HEADER3.		
00083	03	FILLER	PIC X(36) VALUE SPACES.	
00084	03	FILLER	PIC X(96) VALUE	
00085	03	FILLER	*DAILY CONTROL REPORT OF ADD UP DAILY.TRANS	
00086			* TC MONTHLY.TRANS*.	
00087	C1	HEADER4.		
00088	03	FILLER	PIC X(58) VALUE SPACES.	
00089	03	FILLER	PIC X(05) VALUE 'FCR'.	
00090	03	CACDD	PIC 99.	
00091	03	FILLER	PIC X(01) VALUE '-'.	
00092	03	CACMM	PIC XXX.	
00093	03	FILLER	PIC X(01) VALUE '-'.	
00094	03	LACY	PIC 99.	
00095	03	FILLER	PIC X(60) VALUE SPACES.	
00096	C1	HEADER5.		
00097	03	FILLER	PIC X(42) VALUE SPACES.	
00098	03	FILLER	PIC X(15) VALUE 'DATE'.	
00099	03	FILLER	PIC X(33) VALUE 'START-TIME	STOP-TIME'.
00100	03	FILLER	PIC X(20) VALUE 'RECORD-ID'.	
00101	03	FILLER	PIC X(22) VALUE 'JOB NAME'.	
00102	C1	HEADER6.		
00103	03	FILLER	PIC X(58) VALUE SPACES.	
00104	03	FILLER	PIC X(74) VALUE 'HH.MM.SS	HH.MM.SS.'.
00105	C1	HEADER7.		
00106	03	FILLER	PIC X(54) VALUE SPACES.	
00107	03	FILLER	PIC X(78) VALUE 'NUMBER OF RECORD'.	
00108	C1	HEADER8.		
00109	03	FILLER	PIC X(40) VALUE SPACES.	
00110	03	FILLER	PIC X(44) VALUE ALL '-'.	
00111	03	FILLER	PIC X(48) VALUE SPACES.	
00112	C1	HEADER9.		
00113	03	FILLER	PIC X(40) VALUE SPACES.	
00114	03	FILLER	PIC X(18) VALUE 'HEADER'.	
00115	03	FILLER	PIC X(22) VALUE 'EXECUTION'.	
00116	03	FILLER	PIC X(52) VALUE 'LIST'.	
00117				
00118	C1	DETAIL-1.		
00119	03	FIX-NAME1	PIC X(40).	
00120	03	DATE	PIC 99.	
00121	03	FILLER	PIC X VALUE '/'.	
00122	03	MONTH	PIC 99.	
00123	03	FILLER	PIC X VALUE '/'.	
00124	03	YEAR	PIC 99.	
00125	03	FILLER	PIC X(10) VALUE SPACES.	
00126	03	CR-FF	PIC 99.	
00127	03	FILLER	PIC X VALUE '.'.	
00128	03	CR-MM	PIC 99.	
00129	03	FILLER	PIC X VALUE '.'.	
00130	03	CR-SS	PIC 99.	
00131	03	FILLER	PIC X(05) VALUE SPACES.	
00132	03	CP-FF	PIC 99.	
00133	03	FILLER	PIC X VALUE '.'.	
00134	03	CP-MM	PIC 99.	
00135	03	FILLER	PIC X VALUE '.'.	
00136	03	CP-SS	PIC 99.	
00137	03	FILLER	PIC X(15) VALUE SPACES.	
00138	03	CACIDEN	PIC X(16).	
00139	03	CACNAME	PIC X(22).	
00140	C1	DETAIL-2.		
00141	03	FILLER	PIC X(10) VALUE SPACES.	
00142	03	FIX-NAME2	PIC X(31).	
00143	03	CREADER	PIC Z,ZZ9.	
00144	03	FILLER	PIC X(14) VALUE SPACES.	
00145	03	CEXECUTE	PIC Z,ZZ9.	
00146	03	FILLER	PIC X(14) VALUE SPACES.	
00147	03	CLIST	PIC Z,ZZ9.	
00148	03	FILLER	PIC X(48) VALUE SPACES.	
00149	C1	END-PRINT.		
00150	03	FILLER	PIC X(54) VALUE SPACES.	
00151	03	FILLER	PIC X(78) VALUE	
00152		*** END OF REPRGT ***.		
00153	C1	ERRKR-1.		
00154	03	FILLER	PIC X(35) VALUE SPACES.	
00155	03	FILLER	PIC X(22) VALUE 'JA.DAILY.TRANS AS ON'.	
00156	03	CACDATE	PIC X(10).	
00157	03	FILLER	PIC X(65) VALUE 'WAS WRITTEN TC JA.MONTHLY	'TRANS'.
00158				
00159	C1	ERRKR-2.		
00160	03	FILLER	PIC X(032) VALUE SPACES.	
00161	03	FILLER	PIC X(103) VALUE 'JA.LAN.Y.TRANS WAS ENCE	

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00162 -
00163 -
00164 -
00165 01 ERROR-ENCL.
00166 03 FILLER PIC X(29) VALUE SPACES.
00167 03 FILLER PIC X(103) VALUE '***' PROCESSING NO.OF RE
00168 -
00169 -
00170 01 ERROR-END2.
00171 03 FILLER PIC X(29) VALUE SPACES.
00172 03 FILLER PIC X(103) VALUE '***' PLEASE CHECK MEDIA
00173 -
00174 ** DEFINES FIELDS FOR USE IN PROGRAM **
00175
00176 01 NAME-MONTH PIC X(36) VALUE
00177 'JANFEBMARAPR MAYJUNJUL AUGSEPOCTNOVDEC'.
00178 01 MONTH-NAME REDEFINES NAME-MONTH.
00179 03 NAME-MM PIC X(03) OCCURS 12 TIMES.
00180 01 CP-LATE.
00181 03 SYY PIC 99.
00182 03 SMM PIC 99.
00183 03 SDD PIC 99.
00184 01 START-TIME PIC 9(06).
00185 01 TIME-START REDEFINES START-TIME.
00186 03 H-HH PIC 99.
00187 03 M-MM PIC 99.
00188 03 P-SS PIC 99.
00189 01 STOP-TIME PIC 9(06).
00190 01 TIME-STOP REDEFINES STOP-TIME.
00191 03 P-HH PIC 99.
00192 03 P-MM PIC 99.
00193 03 P-SS PIC 99.
00194 77 K-READ PIC 9(04) COMP-4 VALUE 0.
00195 77 L-READ PIC 9(04) COMP-4 VALUE 0.
00196 77 E-READ PIC 9(04) COMP-4 VALUE 0.
00197 77 R-WRITE PIC 9(04) COMP-4 VALUE 0.
00198 77 L-WRITE PIC 9(04) COMP-4 VALUE 0.
00199 77 E-WRITE PIC 9(04) COMP-4 VALUE 0.
00200 77 W-STATUSC PIC XX.
00201 77 W-STATUSL PIC XX.
00202 77 COUNT-NO PIC 9(03) VALUE 0.
00203
00204 PROCEDURE DIVISION.
00205
00206 ** OPEN FILE AND ACCEPT DATE **
00207
00208 BEGIN.
00209 OPEN INPUT DAILY-FILE
00210 I-C MASTER-FILE
00211 OUTPUT PRINT-FILE.
00212 IF W-STATUSC = '00' NEXT SENTENCE ELSE
00213 DISPLAY 'OPEN MASTER CONTROL ERROR IS ...'
00214 DISPLAY W-STATUSC GC TO CLOSE-FILE.
00215 IF W-STATUSL = '00' NEXT SENTENCE ELSE
00216 DISPLAY 'OPEN DAILY ERROR IS ...'
00217 DISPLAY W-STATUSL GC TO CLOSE-FILE.
00218 ACCEPT CP-DATE FROM DATE.
00219 MOVE SDD TO CSDD.
00220 MOVE NAMEMM(SMM) TO CSMM.
00221 MOVE SYY TO CSYY.
00222
00223 READ DAILY-FILE AT END DISPLAY 'NO RECCRD IN DAILY-FILE'
00224 GC TO END-JOB.
00225 IF ACIDEN = 'R' ADD 1 TO R-READ.
00226 IF ACIDEN = 'L' ADD 1 TO L-READ.
00227 IF ACIDEN = 'E' ADD 1 TO E-READ.
00228 GC TO FIRST-STEP.
00229
00230 ** MAIN LOGIC READ DAILY-FILE **
00231
00232 READ-STEP.
00233 READ DAILY-FILE AT END GO TO LAST-STEP.
00234 IF ACIDEN = 'R' ADD 1 TO R-READ.
00235 IF ACIDEN = 'L' ADD 1 TO L-READ.
00236 IF ACIDEN = 'E' ADD 1 TO E-READ.
00237 PERFORM WRITE-STEP.
00238 GC TO READ-STEP.
00239
00240 ** FIRST CYCLE AND READ MASTER FOR MOUNT TAPE **
00241
00242 FIRST-STEP.

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00243 MOVE AC-DD TO CACDD.
00244 MOVE NAME(M(AC-MM)) TL CACMM.
00245 MOVE AC-YY TO CACY.
00246 MOVE SPACES TO PRINT-REC.
00247 WRITE PRINT-REC BEFORE PAGE.
00248 MOVE SPACES TO PRINT-REC.
00249 WRITE PRINT-REC BEFORE 4.
00250 WRITE PRINT-REC FROM HEADER1 BEFORE 1.
00251 WRITE PRINT-REC FROM HEADER2 BEFORE 2.
00252 WRITE PRINT-REC FROM HEADER3 BEFORE 1.
00253 WRITE PRINT-REC FROM HEADER4 BEFORE 4.
00254 MOVE ACCDATE TO CACDATE.
00255 MOVE AC-DD TO MAS-DD CDATE.
00256 MOVE AC-MM TO MAS-MM CMGNTH.
00257 MOVE AC-YY TO MAS-YY CYEAR.
00258 MOVE ACSTNT TO START-TIME.
00259 MOVE ACSTCP TO STOP-TIME.
00260 MOVE R-HH TO CR-HH.
00261 MOVE R-MM TO CR-MM.
00262 MOVE K-SS TO CR-SS.
00263 MOVE P-HH TO CP-HH.
00264 MOVE P-MM TO CP-MM.
00265 MOVE P-SS TO CP-SS.
00266 MOVE ACIDEN TO CACIDEN.
00267 MOVE ACNAME TO CACNAME.
00268 READ MASTER-FILE INVALID KEY
00269 DISPLAY 'INVALID READ MASTER CONTROL FILE ' MAS-KEY
00270 DISPLAY 'NO TLDAY-DATE IN MASTER-CTL-F' GO TO END-JOB.
00271 IF WRITE-FLAG = 'A'
00272 WRITE PRINT-REC FROM ERROR-1 BEFORE 3
00273 GO TO END-JOB.
00274 IF WRITE-FLAG = 'W'
00275 WRITE PRINT-REC FROM ERROR-2 BEFORE 3
00276 GO TO END-JOB.
00277 MOVE ZERO TO MAS-DD.
00278 START MASTER-FILE KEY GREATER MAS-KEY INVALID
00279 DISPLAY 'INVALID MAS-KEY AT START ' MAS-KEY
00280 GO TO END-JOB.
00281
00282 ** MOUNT TAPE FOR WRITE PASS **
00283
00284 FIRST-STEP2.
00285 READ MASTER-FILE NEXT AT END DISPLAY
00286 'ERROR MASTER KEY PLEASE CHECK MASTER-FILE ' MAS-KEY
00287 GO TO END-JOB.
00288 IF MAS-KEY GREATER ACCDATE
00289 DISPLAY 'MAS-KEY GREATER DAILY-KEY MAS-KEY IS ' MAS-KEY
00290 ' DAILY KEY IS ' ACCDATE
00291 GO TO END-JOB.
00292 * IF WRITE-FLAG = ' ' DISPLAY
00293 * 'THIS RECORD NOT UPDATE MAS-KEY IS ' MAS-KEY
00294 * WRITE PRINT-REC BEFORE 1
00295 * WRITE PRINT-REC FROM ERROR-1 BEFORE 2
00296 * GO TO END-JOB.
00297 * IF WRITE-FLAG = 'W' DISPLAY
00298 * 'THIS RECORD UPDATE NOT COMPLETE MAS-KEY IS ' MAS-KEY
00299 * WRITE PRINT-REC BEFORE 1
00300 * WRITE PRINT-REC FROM ERROR-2 BEFORE 2
00301 * GO TO END-JOB.
00302 IF MAS-KEY = ACCDATE GO TO WRITE-FIRST.
00303 OPEN INPUT MONTH-FILE WITH NO REWIND.
00304 PERFORM COUNT-TAPE THRU COUNT-EXIT.
00305 CLOSE MONTH-FILE WITH NO REWIND.
00306 ADD 1 TO COUNT-NO.
00307 GO TO FIRST-STEP2.
00308
00309 ** MOUNT TAPE PASS **
00310
00311 COUNT-TAPE.
00312 READ MONTH-FILE AT END GO TO COUNT-EXIT.
00313 GO TO COUNT-TAPE.
00314 COUNT-EXIT. EXIT.
00315
00316 ** WRITE FIRST RECORD OF DAILY INTL TAPE **
00317
00318 WRITE-FIRST.
00319 MOVE SPACES TO PRINT-REC.
00320 DISPLAY 'NO. OF FILE MOVED IS ' COUNT-NO.
00321 WRITE PRINT-REC BEFORE 4.
00322 WRITE PRINT-REC FROM HEADERS BEFORE 1.
00323 WRITE PRINT-REC FROM HEADERS BEFORE 2.

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00324 OPEN CUPPLT MONTH-FILE WITH NO REWIND.
00325 MOVE 'FIRST RECCRD READ FROM DAILY.TRANS' TO FIX-NAME1.
00326 WRITE PRINT-REC FROM DETAIL-1 BEFORE 3.
00327 MOVE SPACES TO PRINT-REC CACNAME CACIDEN.
00328 MOVE 'RECCRD READ FROM MASTER CONTRL' TO FIX-NAME1.
00329 MOVE MSTART TO START-TIME.
00330 MOVE MSTCP TO STOP-TIME.
00331 MOVE R-HH TO CR-HH.
00332 MOVE R-MM TO CR-MM.
00333 MOVE R-SS TO CR-SS.
00334 MOVE P-HH TO CP-HH.
00335 MOVE P-MM TO CP-MM.
00336 MOVE P-SS TO CP-SS.
00337 MOVE MAS-DC TO CDATE.
00338 MOVE MAS-MM TO CMONTH.
00339 MOVE MAS-YY TO CYEAR.
00340 WRITE PRINT-REC FROM DETAIL-1 BEFORE 3.
00341 MOVE 'h' TO WRITE-FLAG.
00342 PERFORM WRITE-STEP.
00343 REWRITE MASREC INVALID KEY DISPLAY
00344 MAS-KEY ' INVALID KEY AT WRITE FIRST RECCRD ALREADY'
00345 MOVE SPACES TO PRINT-REC WRITE PRINT-REC BEFORE 1
00346 GO TO END-JOB.
00347 MOVE SPACES TO PRINT-REC.
00348 GO TO READ-STEP.
00349
00350 ** WRITE TAPE ROUTINE STEP **
00351
00352 WRITE-STEP.
00353 IF ACIDEN = 'R' WRITE MRREC FROM DRREC
00354 ADD 1 TO R-WRITE.
00355 IF ACIDEN = 'L' WRITE MLREC FROM DLREC
00356 ADD 1 TO L-WRITE.
00357 IF ACIDEN = 'E' WRITE MEREC FROM DEREC
00358 ADD 1 TO E-WRITE.
00359
00360 ** LAST STEP LF PROGRAM **
00361
00362 LAST-STEP.
00363 CLOSE MONTH-FILE.
00364 MOVE AC-DC TO MAS-DC CDATE.
00365 MOVE AC-MM TO MAS-MM CMONTH.
00366 MOVE AC-YY TO MAS-YY CYEAR.
00367 MOVE 'h' TO WRITE-FLAG.
00368 REWRITE MASREC INVALID KEY DISPLAY
00369 MAS-KEY ' INVALID KEY AT WRITE ALL ALREAD'
00370 MOVE SPACES TO PRINT-REC WRITE PRINT-REC BEFORE 1
00371 GO TO END-JOB.
00372 MOVE 'LAST RECCRD READ FROM DAILY.TRANS' TO FIX-NAME1.
00373 MOVE ACSTRT TO START-TIME.
00374 MOVE ACSTCP TO STOP-TIME.
00375 MOVE R-HH TO CR-HH.
00376 MOVE R-MM TO CR-MM.
00377 MOVE R-SS TO CR-SS.
00378 MOVE P-HH TO CP-HH.
00379 MOVE P-MM TO CP-MM.
00380 MOVE P-SS TO CP-SS.
00381 MOVE ACIDEN TO CACIDEN.
00382 MOVE ACNAME TO CACNAME.
00383 WRITE PRINT-REC FROM DETAIL-1 BEFORE 8.
00384 WRITE PRINT-REC FROM HEADERS7 BEFORE 1.
00385 WRITE PRINT-REC FROM HEADERS8 BEFORE 3.
00386 WRITE PRINT-REC FROM HEADERS9 BEFORE 3.
00387 MOVE SPACES TO PRINT-REC.
00388 MOVE 'NO. OF RECORD READ' TO FIX-NAME2.
00389 MOVE R-READ TO CREADER.
00390 MOVE L-READ TO CLIST.
00391 MOVE E-READ TO CEXECUTE.
00392 WRITE PRINT-REC FROM DETAIL-2 BEFORE 3.
00393 MOVE 'NO. OF RECCRD WRITE' TO FIX-NAME2.
00394 MOVE R-WRITE TO GREADER.
00395 MOVE L-WRITE TO CLIST.
00396 MOVE E-WRITE TO CEXECUTE.
00397 WRITE PRINT-REC FROM DETAIL-2 BEFORE 5.
00398 MOVE AC-DC TO MAS-DC.
00399 MOVE AC-MM TO MAS-MM.
00400 MOVE AC-YY TO MAS-YY.
00401 PEAC MASTER-FILE INVALID KEY DISPLAY
00402 MAS-KEY ' INVALID AT PRINT NO. OF RECCRD'
00403 WRITE PRINT-REC BEFORE 1
00404 GO TO END-JOB.

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00405      MOVE NC-R TO CREADER.
00406      MOVE NC-L TO CLIST.
00407      MOVE NC-E TO CEEXECUTE.
00408      MOVE 'VALLE IN MASTER CONTROL' TO FIX-NAME2.
00409      WRITE PRINT-REC FROM DETAIL-2 BEFORE 5.
00410      IF R-READ NOT = R-WRITE OR R-READ NOT = NC-R CF
00411      L-READ NOT = L-WRITE OR L-READ NOT = NC-L OR
00412      E-READ NOT = E-WRITE OR E-READ NOT = NC-E
00413      WRITE PRINT-REC FROM ERROR-END1 BEFORE 2
00414      WRITE PRINT-REC FROM ERROR-END2 BEFORE 3
00415      CC TO END-JOB.
00416
00417      ** END OF JOB STEP **
00418
00419      END-JOB.
00420      MOVE SPACES TO PRINT-REC.
00421      WRITE PRINT-REC BEFORE 1.
00422      WRITE PRINT-REC FROM END-PRINT BEFORE 0.
00423      CLOSE-FILE.
00424      CLOSE DAILY-FILE MASTER-FILE PRINT-FILE.
00425      STOP RUN.
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CPL AFCS1
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ID          DIVISION.
PROGRAM-ID. JASOICA.
*          *
* SUMMARY REPORT OF MONTHLY-DCS/VS-SYSTEM-USAGE*
*          *
ENVIRONMENT DIVISION.
INPUT-OUTPUT SECTION.
FILE-CONTROL.
*
      SELECT JAMASTC ASSIGN TO SYS013-JAMASTC
      ORGANIZATION IS INDEXED
      ACCESS MODE IS DYNAMIC
      FILE STATUS IS *-FSTATUS
      RECLRD KEY IS MACDAT.
*
      SELECT PFILE ASSIGN TO SYS006-UR-3203-S.
*
DATA DIVISION.
FILE SECTION.
FD JAMASTC RECORD CONTAINS 160 CHARACTERS
LABEL RECORD IS STANDARD.
01 JAMCR.
   05 MACDAT.
      10 MACY PIC X(02).
      10 MACM PIC X(02).
      10 MACU PIC X(02).
      05 MUPDAT PIC X(06).
      05 TABMAS OCCURS 3 TIMES.
         10 MNOJES PIC 9(04) COMP-4.
         10 MJSTEP PIC 9(04) COMP-4.
         10 MCANC PIC 9(04) COMP-4.
         10 MELAPT PIC 9(06) COMP-3.
         10 MPRLSS PIC 9(06) COMP-3.
         10 MCVF PIC 9(06) COMP-3.
         10 MWAIT PIC 9(06) COMP-3.
         10 MSICJ PIC 9(06) COMP-4.
         10 MSILD PIC 9(06) COMP-4.
         10 MNCERT PIC 9(06) COMP-4.
         10 MNCPC PIC 9(06) COMP-4.
         10 MPRTT PIC 9(06) COMP-3.
      05 MSTRT PIC 9(06) COMP-3.
      05 MSTCP PIC 9(06) COMP-3.
      05 FILLER PIC X(23).
      05 MNCRDR PIC 9(04) COMP-4.
      05 MNEIST PIC 9(04) COMP-4.
      05 MNCXEX PIC 9(04) COMP-4.
FD PFILE LABEL RECORD IS OMITTED.
01 OUT PIC X(132).
WORKING-STORAGE SECTION.
01 HEAD-1.
   05 FILLER PIC X(55) VALUE 'JOB-ACCOUNTING PROJECT'.
   05 FILLER PIC X(58) VALUE 'COMPUTER SERVICE CENTER'.
   05 FILLER PIC X(16) VALUE 'PAGE'.
   05 P-PAGE PIC X(03).
01 HEAD-2.
   05 FILLER PIC X(50) VALUE 'REPORT CCDE JA5010'.
   05 FILLER PIC X(63) VALUE 'CHULALONGKORN.....UNIVERS
      'ITY'.
   05 FILLER PIC X(10) VALUE 'RUN DATE'.
   05 FDD PIC 9(02).
   05 FILLER PIC X(01) VALUE '-'.
   05 HMM PIC X(03).
   05 FILLER PIC X(01) VALUE '-'.
   05 FYY PIC 9(02).
01 HEAD-3.
   05 FILLER PIC X(47) VALUE SPACE.
   05 FILLER PIC X(64) VALUE 'SUMMARY REPORT OF MONTHLY-DCS/
      'VS SYSTEM'.
01 HEAD-4.
   05 FILLER PIC X(57) VALUE SPACE.
   05 FILLER PIC X(06) VALUE 'FCR'.
   05 F4MM PIC X(11).
   05 FILLER PIC X(02) VALUE '19'.
   05 F4YY PIC 9(02).
01 HEAD-5.
   05 FILLER PIC X(06) VALUE SPACE.
   05 FILLER PIC X(07) VALUE 'NO.OF'.

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00162 03 M-IA PIC 99.
00163 03 Y-IA PIC 99.
00164 01 P PIC 99.
00165 01 SUF-KUM PIC 9(04) VALUE 0.
00166
00167 01 MTH-TAB.
00168 05 FILLER PIC X(09) VALUE 'JANUARY'.
00169 05 FILLER PIC X(09) VALUE 'FEBRUARY'.
00170 05 FILLER PIC X(09) VALUE 'MARCH'.
00171 05 FILLER PIC X(09) VALUE 'APRIL'.
00172 05 FILLER PIC X(09) VALUE 'MAY'.
00173 05 FILLER PIC X(09) VALUE 'JUNE'.
00174 05 FILLER PIC X(09) VALUE 'JULY'.
00175 05 FILLER PIC X(09) VALUE 'AUGUST'.
00176 05 FILLER PIC X(09) VALUE 'SEPTEMBER'.
00177 05 FILLER PIC X(09) VALUE 'OCTOBER'.
00178 05 FILLER PIC X(09) VALUE 'NOVEMBER'.
00179 05 FILLER PIC X(09) VALUE 'DECEMBER'.
00180
00181 01 MTH-TAB REDEFINES MTH-TAB.
00182 05 RMT-TAB1 OCCURS 12 TIMES.
00183 10 AM1 PIC X(03).
00184 10 XM2 PIC X(06).
00185
00186 01 TRAN-AREA.
00187 05 TRC PIC 9(02).
00188 05 TRM PIC 9(02).
00189 05 TRY PIC 9(02).
00190 05 FILLER PIC X(74) VALUE SPACE.
00191
00192 01 DET-1.
00193 05 DET1 PIC X(05).
00194 05 DET2 PIC ZZ.
00195 05 DET3 PIC ZZZZZ9.
00196 05 DET4 PIC ZZZZZ9.
00197 05 DET5 PIC ZZZ,ZZ9.
00198 05 DET6 PIC ZZ,ZZ9.
00199 05 FILLER PIC X VALUE '.'.
00200 05 DET7 PIC 99.
00201 05 DET8 PIC ZZ,ZZ9.
00202 05 FILLER PIC X VALUE '.'.
00203 05 DET9 PIC 99.
00204 05 DET10 PIC Z,ZZ9.99.
00205 05 DET11 PIC Z,Z99.
00206 05 FILLER PIC X VALUE '.'.
00207 05 DET12 PIC 99B.
00208 05 DET13 PIC Z,Z99.
00209 05 FILLER PIC X VALUE '.'.
00210 05 DET14 PIC 99B.
00211 05 DET15 PIC Z,ZZ9.99.
00212 05 DET16 PIC ZZZ9.99.
00213 05 DET17 PIC ZZ,ZZ9.
00214 05 P-REMARK14 PIC X.
00215 05 DET18 PIC ZZ,ZZ9.
00216 05 P-REMARK15 PIC X.
00217 05 DET19 PIC ZZZ,ZZ9.
00218 05 P-REMARK16 PIC X.
00219 05 DET20 PIC ZZZ,ZZ9.
00220 05 P-REMARK17 PIC X.
00221 05 DET21 PIC ZZ99.
00222 05 FILLER PIC X VALUE '.'.
00223 05 DET22 PIC 99.
00224
00225 01 P-LINE.
00226 05 FILLER PIC X(95) VALUE SPACE.
00227 05 FILLER PIC X(07) VALUE '-----'.
00228 05 FILLER PIC X(09) VALUE '-----'.
00229 05 FILLER PIC X(08) VALUE '-----'.
00230 05 FILLER PIC X(06) VALUE '-----'.
00231
00232 01 P-END.
00233 05 FILLER PIC X(50) VALUE
00234 'REMARK ***** UNIT IN THOUSANDS'.
00235 05 FILLER PIC X(30) VALUE
00236 '+ ROUND UP ONE MORE UNIT'.
00237
00238 01 HMMSS-BUFFER PIC 9(06) VALUE 0.
00239 01 HMMSS-CUMMY.
00240 02 HMMSS OCCURS 3 TIMES.
00241 05 WFF PIC 99.
00242 05 WMM PIC 99.
00243 05 WSS PIC 99.
00244
00245 01 SUM-SS.
00246 05 SUMFF. PIC 999 VALUE 0.

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00243 05 SUMM PIC 999 VALUE 0.
00244 05 SUMSS PIC 999 VALUE 0.
00245 01 HMMSS-1.
00246 05 HH-1 PIC 99 VALUE 0.
00247 05 MM-1 PIC 99 VALUE 0.
00248 05 SS-1 PIC 99 VALUE 0.
00249 01 HMMSS-2.
00250 05 HH-2 PIC 99 VALUE 0.
00251 05 MM-2 PIC 99 VALUE 0.
00252 05 SS-2 PIC 99 VALUE 0.
00253 77 W-MNCJOB PIC 9(10) CCMP-3 VALUE 0.
00254 77 W-MNJSTEP PIC 9(10) CCMP-3 VALUE 0.
00255 77 W-MNCANC PIC 9(10) CCMP-3 VALUE 0.
00256 77 W-MNSIDT PIC 9(10) CCMP-3 VALUE 0.
00257 77 W-MNSIGD PIC 9(10) CCMP-3 VALUE 0.
00258 77 W-MNCPRT PIC 9(10) CCMP-3 VALUE 0.
00259 77 W-MNCPAG PIC 9(10) CCMP-3 VALUE 0.
00260 77 ELAPSED-T PIC 9(10) CCMP-3 VALUE 0.
00261 77 W-ELAPSED-T PIC 9(10) CCMP-3 VALUE 0.
00262 77 W-MPROCESS PIC 9(10) CCMP-3 VALUE 0.
00263 77 W-MPROCESS-T PIC 9(10) CCMP-3 VALUE 0.
00264 77 W-MCVH PIC 9(10) CCMP-3 VALUE 0.
00265 77 MESURED-T PIC 9(10) CCMP-3 VALUE 0.
00266 77 TEL PIC 9(02) VALUE 0.
00267 77 HLINE PIC 9(02) VALUE 50.
00268 77 C-M PIC 9(02) VALUE 0.
00269 77 I PIC 9 VALUE 0.
00270 77 J PIC 9 VALUE 0.
00271 77 A PIC 9 VALUE 0.
00272 77 W-SS-1 PIC 999 VALUE 0.
00273 77 W-FSTATUS PIC XX.
00274 77 S-MNCJOB PIC 9(10) CCMP-3 VALUE 0.
00275 77 S-MNJSTEP PIC 9(10) CCMP-3 VALUE 0.
00276 77 S-MNCANC PIC 9(10) CCMP-3 VALUE 0.
00277 77 S-MPROCESS PIC 9(08)V99 CCMP-3 VALUE 0.
00278 77 S-MULT PIC 9(08)V99 CCMP-3 VALUE 0.
00279 77 S-MLVH PIC 9(08)V99 CCMP-3 VALUE 0.
00280 77 S-MSIDT PIC 9(10) CCMP-3 VALUE 0.
00281 77 S-MNSIGD PIC 9(10) CCMP-3 VALUE 0.
00282 77 S-MNCPRT PIC 9(10) CCMP-3 VALUE 0.
00283 77 S-MNCPAG PIC 9(10) CCMP-3 VALUE 0.
00284 77 SSSS PIC 9(08)V99 CCMP-3 VALUE 0.
00285 77 W-REM PIC 9(03) VALUE 0.
00286 77 COUNT-LINE PIC 9(02) VALUE 99.
00287 01 G-GG PIC 9(05)V99 VALUE 0.
00288 01 G-C REDEFINES G-GG.
00289 05 GG PIC 9(05).
00290 05 GGG PIC 99.
00291 01 G-MPROCESS PIC 9(05)V99 CCMP-3 VALUE 0.
00292 01 G-MCVH PIC 9(05)V99 CCMP-3 VALUE 0.
00293 01 G-MWAIT PIC 9(05)V99 CCMP-3 VALUE 0.
00294 01 GRAND-MELAPT.
00295 05 MELAPT-HH PIC 9(05).
00296 05 MELAPT-MM PIC 9(03).
00297 01 GRAND-MPROCESS.
00298 05 MPROCESS-HH PIC 9(05).
00299 05 MPROCESS-MM PIC 9(03).
00300 01 GRAND-MCVH.
00301 05 MOVH-HH PIC 9(05).
00302 05 MOVH-MM PIC 9(03).
00303 01 GRAND-MWAIT.
00304 05 MWAIT-HH PIC 9(05).
00305 05 MWAIT-MM PIC 9(03).
00306 01 GRAND-MPRIT.
00307 05 MPRIT-HH PIC 9(05).
00308 05 MPRIT-MM PIC 9(03).
00309 01 GRAND-MESUR.
00310 05 MESUR-HH PIC 9(05).
00311 05 MESUR-MM PIC 9(03).
00312 01 T-LATE.
00313 05 T-DD PIC XX.
00314 05 T-D REDEFINES T-DD PIC 99.
00315 PROCEDURE DIVISION.
00316 BEGIN-1.
00317 OPEN INPUT JAMASTC OUTPUT PFILE.
00318 IF W-FSTATUS = '00' NEXT SENTENCE ELSE
00319 DISPLAY 'OPEN MASTER-F ERROR F-STATUS IS...'
00320 W-FSTATUS CU TO STCP-1.
00321 MOVE ALL '0' TO GRAND-MELAPT GRAND-MPROCESS GRAND-MOVH
00322 GRAND-MWAIT GRAND-MPRIT GRAND-MESUR.
00323 MOVE ZERO TO WFF(1) WFF(2) WFF(3)

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00324          WMM(1) WMM(2) WMM(3).
00325          WSS(1) WSS(2) WSS(3).
00326      MOVE CURRENT-DATE TO CC-DATE.
00327      MOVE CC-DD TO DD.
00328      MOVE CC-MM TO MM.
00329      MOVE CC-YY TO YY.
00330      PERFORM TF-DATE.
00331      MOVE DD TO FLD.
00332      MOVE XM(MM) TO HMM.
00333      MOVE YY TO FYY.
00334      ST-1.
00335      ACCEPT TRAN-AREA FROM SYSIPT.
00336      MOVE TRM TO C-MM.
00337      MOVE AMTI-TAB1(TRM) TO F4MM.
00338      MOVE TRY TO F4YY.
00339      MOVE TRAN-AREA TO MDATE.
00340      PERFORM TF-DATE.
00341      ST-2.
00342      MOVE 0 TO YY.
00343      MOVE XDATE TO MACDAT.
00344      START JAMASTC KEY IS GREATER THAN MACDAT INVALID KEY
00345      GO TO STEP-1.
00346      ST-3.
00347      READ JAMASTC NEXT RECORD AT END GO TO STEP-1.
00348      IF MACM GREATER THAN C-MM GO TO STOP-1.
00349      IF MACD = '99' GO TO STOP-1.
00350      MOVE MACDAT TO XDATE.
00351      PERFORM TF-DATE.
00352
00353      MOVE MDATE TO DATE-IN.
00354      MOVE Y-IN TO SUM-NUM.
00355      DIVIDE 4 INTO Y-IN GIVING Y-IN REMAINDER P.
00356      IF P = 0 MOVE 0 TO TAB-A1(1)
00357          MOVE 3 TO TAB-A1(2)
00358      ELSE
00359          MOVE 1 TO TAB-A1(1)
00360          MOVE 4 TO TAB-A1(2).
00361      ADD Y-IN 6-IN TAB-A1(M-IN) TO SUM-NUM.
00362      DIVIDE 7 INTO SUM-NUM GIVING SUM-NUM REMAINDER P.
00363      IF P = 0 MOVE 7 TO K.
00364      MOVE TAB-DAY(P) TO DET1.
00365
00366      IF A = 0 MOVE MACD TO T-DD.
00367      IF A = 1 ADD 1 TO T-L.
00368      MOVE MACD TO DET2.
00369      ADD MNCJOB(1) MNCJOB(2) MNCJOB(3) TO W-MNCJOB.
00370      MOVE W-MNCJOB TO DET3.
00371      ADD W-MNCJOB TO S-MNCJOB.
00372      ADD MJSTEP(1) MJSTEP(2) MJSTEP(3) TO W-MJSTEP.
00373      MOVE W-MJSTEP TO DET4.
00374      ADD W-MJSTEP TO S-MJSTEP.
00375      ADD MCANC(1) MCANC(2) MCANC(3) TO W-MCANC.
00376      MOVE W-MCANC TO DET5.
00377      ADD W-MCANC TO S-MCANC.
00378      ADD MSIDT(1) MSIDT(2) MSIDT(3) TO W-MSIDT.
00379      ADD W-MSIDT TO S-MSIDT.
00380      MOVE 0 TO W-REM.
00381      DIVIDE W-MSIDT BY 1000 GIVING W-MSIDT
00382          ROUNDED REMAINDER W-REM.
00383      IF W-REM GREATER 500 OR W-REM = 500 MOVE '+' TO P-REMARK14
00384      ELSE MOVE SPACE TO P-REMARK14.
00385      MOVE W-MSIDT TO DET14.
00386      ADD MSIOD(1) MSIOD(2) MSIOD(3) TO W-MSIOD.
00387      ADD W-MSIOD TO S-MSIOD.
00388      MOVE 0 TO W-REM.
00389      DIVIDE W-MSIOD BY 1000 GIVING W-MSIOD
00390          ROUNDED REMAINDER W-REM.
00391      IF W-REM GREATER 500 OR W-REM = 500 MOVE '+' TO P-REMARK15
00392      ELSE MOVE SPACE TO P-REMARK15.
00393      MOVE W-MSIOD TO DET15.
00394      ADD MNCPR1(1) MNCPR1(2) MNCPR1(3) TO W-MNCPR1.
00395      ADD W-MNCPR1 TO S-MNCPR1.
00396      MOVE 0 TO W-REM.
00397      DIVIDE W-MNCPR1 BY 1000 GIVING W-MNCPR1
00398          ROUNDED REMAINDER W-REM.
00399      IF W-REM GREATER 500 OR W-REM = 500 MOVE '+' TO P-REMARK16
00400      ELSE MOVE SPACE TO P-REMARK16.
00401      MOVE W-MNCPR1 TO DET16.
00402      ADD MNCPR2(1) MNCPR2(2) MNCPR2(3) TO W-MNCPR2.
00403      ADD W-MNCPR2 TO S-MNCPR2.
00404      MOVE 0 TO W-REM.

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00405 DIVIDE W-MNCPAG BY 1000 GIVING W-MNCPAG
00406 ROUNDED REMAINDER W-REM.
00407 IF W-REM GREATER 500 OR W-REM = 500 MOVE W-REM TO W-REMARK17
00408 ELSE MOVE SPACE TO W-REMARK17.
00409 MOVE W-MNCPAG TO DET17.
00410 ELAPSED-TIME.
00411 PERFORM MOVE-MELAPT VARYING I FROM 1 BY 1 UNTIL I GREATER 3.
00412 PERFORM SUM-RTN VARYING I FROM 1 BY 1 UNTIL I GREATER 3.
00413 MOVE SUMHH TO DET6.
00414 MOVE SUMMM TO DET1.
00415 ADD SUMMM TO MELAPT-MM.
00416 IF MELAPT-MM LESS 60 NEXT SENTENCE ELSE
00417 SUBTRACT 60 FROM MELAPT-MM
00418 ADD 1 TO MELAPT-HH.
00419 ADD SUMHH TO MELAPT-HH.
00420 PERFORM ELAPSED-TIME-1.
00421 PERFORM MOVE-ELAPSED-T.
00422 MOVE 0 TO SUMHH SUMMM SUMSS.
00423 MPROSS-TIME.
00424 PERFORM MOVE-MPROSS VARYING I FROM 1 BY 1 UNTIL I GREATER 3.
00425 PERFORM SUM-RTN VARYING I FROM 1 BY 1 UNTIL I GREATER 3.
00426 MOVE SUMHH TO DET5.
00427 MOVE SUMMM TO DET91.
00428 ADD SUMMM TO MPROSS-MM.
00429 IF MPROSS-MM LESS 60 NEXT SENTENCE ELSE
00430 SUBTRACT 60 FROM MPROSS-MM
00431 ADD 1 TO MPROSS-HH.
00432 ADD SUMHH TO MPROSS-HH.
00433 PERFORM ELAPSED-TIME-1.
00434 PERFORM MOVE-MPROSS-T.
00435 MOVE 0 TO SUMHH SUMMM SUMSS.
00436 MCVH-TIME.
00437 PERFORM MOVE-MCVH VARYING I FROM 1 BY 1 UNTIL I GREATER 3.
00438 PERFORM SUM-RTN VARYING I FROM 1 BY 1 UNTIL I GREATER 3.
00439 MOVE SUMHH TO DET10.
00440 MOVE SUMMM TO DET101.
00441 ADD SUMMM TO MCVH-MM.
00442 IF MCVH-MM LESS 60 NEXT SENTENCE ELSE
00443 SUBTRACT 60 FROM MCVH-MM
00444 ADD 1 TO MCVH-HH.
00445 ADD SUMHH TO MCVH-HH.
00446 PERFORM ELAPSED-TIME-1.
00447 PERFORM MOVE-MCVH-T.
00448 MOVE 0 TO SUMHH SUMMM SUMSS.
00449 MWAIT-TIME.
00450 PERFORM MOVE-MWAIT VARYING I FROM 1 BY 1 UNTIL I GREATER 3.
00451 PERFORM SUM-RTN VARYING I FROM 1 BY 1 UNTIL I GREATER 3.
00452 MOVE SUMHH TO DET11.
00453 MOVE SUMMM TO DET111.
00454 ADD SUMMM TO MWAIT-MM.
00455 IF MWAIT-MM LESS 60 NEXT SENTENCE ELSE
00456 SUBTRACT 60 FROM MWAIT-MM
00457 ADD 1 TO MWAIT-HH.
00458 ADD SUMHH TO MWAIT-HH.
00459 PERFORM ELAPSED-TIME-1.
00460 PERFORM MOVE-MWAIT-T.
00461 MOVE 0 TO SUMHH SUMMM SUMSS.
00462 MPRTT-TIME.
00463 PERFORM MOVE-MPRTT VARYING I FROM 1 BY 1 UNTIL I GREATER 3.
00464 PERFORM SUM-RTN VARYING I FROM 1 BY 1 UNTIL I GREATER 3.
00465 MOVE SUMHH TO DET18.
00466 MOVE SUMMM TO DET181.
00467 ADD SUMMM TO MPRTT-MM.
00468 IF MPRTT-MM LESS 60 NEXT SENTENCE ELSE
00469 SUBTRACT 60 FROM MPRTT-MM
00470 ADD 1 TO MPRTT-HH.
00471 ADD SUMHH TO MPRTT-HH.
00472 PERFORM ELAPSED-TIME-1.
00473 MOVE 0 TO SUMHH SUMMM SUMSS.
00474 MESUREC-TIME.
00475 MOVE MSTRT TO HMMSS-BUFFER.
00476 MOVE HMMSS-BUFFER TO HMMSS-2.
00477 MOVE MSTCP TO HMMSS-BUFFER.
00478 MOVE HMMSS-BUFFER TO HMMSS-1.
00479 MOVE SS-1 TO W-SS-1.
00480 IF W-SS-1 GREATER SS-2 OR = SS-2 NEXT SENTENCE ELSE
00481 ADD 60 TO W-SS-1
00482 SUBTRACT 1 FROM MM-1.
00483 MOVE MM-1 TO W-SS-1.
00484 IF W-SS-1 GREATER MM-2 OR = MM-2 NEXT SENTENCE ELSE
00485 ADD 60 TO W-SS-1

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00486 SUBTRACT MM-2 FROM W-SS-1 GIVING MM-1.
00487 SUBTRACT MM-2 FROM W-SS-1 GIVING MM-1.
00488 SUBTRACT HH-2 FROM HH-1.
00489 PERFORM MESUREC-TIME-1.
00490 MOVE HH-1 TO DET7.
00491 MOVE MM-1 TO DET71.
00492 ADD MM-1 TO MESUR-MM.
00493 IF MESUR-MM LESS 60 NEXT SENTENCE ELSE
00494 SUBTRACT 60 FROM MESUR-MM
00495 ADD 1 TO MESUR-HH.
00496 ADD HH-1 TO MESUR-HH.
00497 MULT-PRCC-FAL.
00498 DIVIDE W-ELAFSED-T BY MESURED-T GIVING SSSS.
00499 MOVE SSSS TO DET8.
00500 ADD SSSS TO S-MULT.
00501 PRCC-TIME-PCT.
00502 MULTIPLY 100 BY W-MPRCSS.
00503 DIVIDE W-MPRCSS BY W-MPRCSS-T GIVING SSSS.
00504 MOVE SSSS TO DET12.
00505 ADD SSSS TO S-MPRCSS.
00506 MOVE 0 TO SSSS.
00507 CVH-TIME-PCT.
00508 MULTIPLY 100 BY W-MJVH.
00509 DIVIDE W-MJVH BY W-MPRCSS-T GIVING SSSS.
00510 MOVE SSSS TO DET13.
00511 ADD SSSS TO S-MJVH.
00512 MOVE 0 TO SSSS.
00513 WR-1.
00514 IF MACD GREATER THAN T-D MOVE SPACE TO CUT
00515 WRITE CUT BEFORE 2.
00516 ADD 2 TO COUNT-LINE.
00517 MOVE 1 TO A
00518 MOVE MACD TO T-D.
00519 IF COUNT-LINE GREATER 88 PERFORM P-HEAD.
00520 WRITE CUT FROM DET-1 BEFORE 2.
00521 ADD 2 TO COUNT-LINE.
00522 MOVE 0 TO W-MNCJOB W-MJSTEP W-MCANC W-MSIDT W-MSIOD
00523 W-MNCPKT W-MNOPAG.
00524 GO TO ST-3.
00525 STCP-1.
00526 PERFORM PRINT-SUM.
00527 WRITE CUT FROM DET-1 AFTER 2.
00528 WRITE CUT FROM P-LINE AFTER 1.
00529 WRITE CUT FROM P-END AFTER 2.
00530 WRITE CUT FROM END-LINE AFTER 2.
00531 CLOSE JAMATIC PFILE.
00532 STOP RUN.
00533 P-HEAD.
00534 MOVE SPACE TO CUT.
00535 WRITE CUT BEFORE PAGE.
00536 MOVE SPACE TO CUT.
00537 WRITE CUT BEFORE 3.
00538 IF J = C MOVE '1/1' TO P-PAGE MOVE 1 TO J.
00539 WRITE CUT FROM HEAD-1 BEFORE 2.
00540 WRITE CUT FROM HEAD-2 BEFORE 2.
00541 WRITE CUT FROM HEAD-3 BEFORE 2.
00542 WRITE CUT FROM HEAD-4 BEFORE 2.
00543 WRITE CUT FROM HYPHEN-LINE BEFORE 1.
00544 WRITE CUT FROM HEAD-5 BEFORE 1.
00545 WRITE CUT FROM HEAD-6 BEFORE 1.
00546 WRITE CUT FROM HEAD-7 BEFORE 1.
00547 WRITE CUT FROM HYPHEN-LINE BEFORE 2.
00548 MOVE 0 TO COUNT-LINE.
00549 TF-DATE.
00550 MOVE DD TO DD.
00551 MOVE YY TO DD.
00552 MOVE DD TO YY.
00553 PRINT-SUM.
00554 MOVE 'TOTAL' TO DET1.
00555 MOVE 00 TO DET2.
00556 MOVE S-MNCJOB TO DET3.
00557 MOVE S-MJSTEP TO DET4.
00558 MOVE S-MCANC TO DET5.
00559 MOVE 0 TO W-REM.
00560 DIVIDE S-MSIDT BY 1000 GIVING S-MSICT
00561 ROUNDED REMAINDER W-REM.
00562 IF W-REM GREATER 500 OR W-REM = 500 MOVE '+' TO P-REMARK14
00563 ELSE MOVE SPACE TO P-REMARK14.
00564 MOVE S-MSICT TO DET14.
00565 MOVE 0 TO W-REM.
00566 DIVIDE S-MSIOD BY 1000 GIVING S-MSIOD

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00567          ROUNDED REMAINDER W-REM.
00568 IF W-REM GREATER 500 OR W-REM = 500 MOVE '+' TO P-REMARK15
00569 ELSE MOVE SPACE TO P-REMARK15.
00570 MOVE S-MSIDE TO DET15.
00571 MOVE 0 TO W-REM.
00572 DIVIDE S-MNCPRT BY 1000 GIVING S-MNCPRT
00573          ROUNDED REMAINDER W-REM.
00574 IF W-REM GREATER 500 OR W-REM = 500 MOVE '+' TO P-REMARK16
00575 ELSE MOVE SPACE TO P-REMARK16.
00576 MOVE S-MNCPRT TO DET16.
00577 MOVE 0 TO W-REM.
00578 DIVIDE S-MNCPAG BY 1000 GIVING S-MNCPAG
00579          ROUNDED REMAINDER W-REM.
00580 IF W-REM GREATER 500 OR W-REM = 500 MOVE '+' TO P-REMARK17
00581 ELSE MOVE SPACE TO P-REMARK17.
00582 MOVE S-MNCPAG TO DET17.
00583 MOVE MELAPT-HH TO DET16.
00584 MOVE MELAPT-MM TO DET16.
00585 MOVE MPROSS-FH TO GG.
00586 MOVE MPROSS-MM TO GGG.
00587 MOVE G-GG TO G-MPROSS.
00588 MOVE MOVH-FH TO GG.
00589 MOVE MOVH-MM TO GGG.
00590 MOVE G-CG TO G-MCVH.
00591 MOVE MWAIT-HH TO GG.
00592 MOVE MWAIT-MM TO GGG.
00593 MOVE G-GG TO G-MWAIT.
00594 COMPLETE DET12 ROUNDED = G-MPROSS * 100 /
00595          (G-MPROSS + G-MCVH + G-MWAIT).
00596 COMPLETE DET13 ROUNDED = G-MCVH * 100 /
00597          (G-MPROSS + G-MCVH + G-MWAIT).
00598 MOVE MELAPT-FH TO GG.
00599 MOVE MELAPT-MM TO GGG.
00600 MOVE G-GG TO S-MULT.
00601 MOVE MESLR-FH TO CC.
00602 MOVE MESLR-MM TO GGG.
00603 COMPLETE DET6 = S-MULT / G-GG.
00604 MOVE MPROSS-FH TO DET9.
00605 MOVE MPROSS-MM TO DET9.
00606 MOVE MOVH-FH TO DET10.
00607 MOVE MOVH-MM TO DET10.
00608 MOVE MWAIT-FH TO DET11.
00609 MOVE MWAIT-MM TO DET11.
00610 MOVE MPRIT-FH TO DET18.
00611 MOVE MPRIT-MM TO DET18.
00612 MOVE MESLR-FH TO DET7.
00613 MOVE MESLR-MM TO DET7.
00614 MOVE-MELAPT.
00615 MOVE MELAPT(1) TO HHMSS-BUFFER.
00616 MOVE HHMSS-BUFFER TO HHMSS(1).
00617 MOVE-MPROSS.
00618 MOVE MPROSS(1) TO HHMSS-BUFFER.
00619 MOVE HHMSS-BUFFER TO HHMSS(1).
00620 MOVE-MCVH.
00621 MOVE MOVH(1) TO HHMSS-BUFFER.
00622 MOVE HHMSS-BUFFER TO HHMSS(1).
00623 MOVE-MWAIT.
00624 MOVE MWAIT(1) TO HHMSS-BUFFER.
00625 MOVE HHMSS-BUFFER TO HHMSS(1).
00626 MOVE-MPRIT.
00627 MOVE MPRIT(1) TO HHMSS-BUFFER.
00628 MOVE HHMSS-BUFFER TO HHMSS(1).
00629 SUM-RTN.
00630 ADD WSS(1) TO SUMSS.
00631 IF SUMSS GREATER 60 OR = 60 SUBTRACT 60 FROM SUMSS
00632          ADD 1 TO SUMHH.
00633 ADD WMM(1) TO SUMMM.
00634 IF SUMMM GREATER 60 OR = 60 SUBTRACT 60 FROM SUMMM
00635          ADD 1 TO SUMHH.
00636 ADD WHH(1) TO SUMHH.
00637 ELAPSED-TIME-1.
00638 MULTIPLY SUMHH BY 60 GIVING ELAPSED-T.
00639 ADD SUMMM TO ELAPSED-T.
00640 MULTIPLY 60 BY ELAPSED-T.
00641 ADD SUMSS TO ELAPSED-T.
00642 MOVE-ELAPSED-T.
00643 MOVE ELAPSED-T TO W-ELAPSED-T.
00644 MOVE 0 TO ELAPSED-T.
00645 MOVE-MPROSS-T.
00646 MOVE W-ELAPSED-T TO W-MPROSS W-MPROSS-T.
00647 MOVE 0 TO ELAPSED-T.

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00648 MOVE-MOVH-T.  
00649 MOVE ELAPSED-T TO W-MOVH.  
00650 ADD ELAPSED-T TO W-MPRCSS-T.  
00651 MOVE 0 TO ELAPSED-T.  
00652 MOVE-MWAIT-T.  
00653 ADD ELAPSED-T TO W-MPRCSS-T.  
00654 MOVE 0 TO ELAPSED-T.  
00655 MESUREL-TIME-1.  
00656 MULTIPLY FH-1 BY 60 GIVING MESURED-T.  
00657 ADD M-1 TO MESURED-T.  
00658 MULTIPLY 60 BY MESURED-T.  
00659 ADD SS-1 TO MESURED-T.
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CBL APLST,NJADV
00001 ID DIVISION.
00002 PROGRAM-ID. JA5030.
00003 *-----*
00004 *
00005 * PURPOSE... TO PRINT REPORT
00006 * 1) DAILY SYSTEM UTILIZATION SUMMARY BY USER-ID
00007 * 2) MONTHLY SYSTEM UTILIZATION SUMMARY BY USER-ID
00008 * 3) MONTHLY SYSTEM UTILIZATION SUMMARY BY PARTICULAR PROGRAM
00009 *
00010 *-----*
00011 ENVIRONMENT DIVISION.
00012 SPECIAL-NAMES. CO1 IS NEWPAGE.
00013 INPUT-OUTPUT SECTION.
00014 FILE-CONTROL.
00015 *
00016 SELECT POWERAC ASSIGN TO SYS011-UT-3420-S-POWERAC.
00017
00018 SELECT JATRANS ASSIGN TO SYS012-DA-3340-S-JATRANS.
00019
00020 SELECT JASORT ASSIGN TO SYS001-DA-3340-SCRTHK1,
00021 SYS002-DA-3340-SCRTHK2,
00022 SYS003-DA-3340-SCRTHK3,
00023 SYS004-DA-3340-SCRTHK4.
00024
00025 SELECT JASCRT ASSIGN TO SYS001-DA-3340-SCRTHK1,
00026 SYS002-DA-3340-SCRTHK2,
00027 SYS003-DA-3340-SCRTHK3,
00028 SYS004-DA-3340-SCRTHK4.
00029
00030 SELECT PFILE ASSIGN TO SYS006-UR-3203-S.
00031 *
00032 DATA DIVISION.
00033 FILE SECTION.
00034
00035 FD POWERAC LABEL RECORD IS OMITTED
00036 RECORDING MODE IS V
00037 RECORD CONTAINS 34 TO 232 CHARACTERS
00038 DATA RECORDS IS TAPEREC.
00039
00040 CI TAPEREC.
00041 03 FILLER PIC X(42).
00042 03 ITYPE PIC X(21).
00043 03 FILLER PIC X(189).
00044
00045 FD JATRANS RECORD CONTAINS 46 CHARACTERS
00046 LABEL RECORD IS STANDARD
00047 DATA RECORDS IS TRAN-REC.
00048
00049 CI TRAN-REC.
00050 03 TRDATE PIC 9(06).
00051 03 TRDUCH PIC X(34).
00052 03 TRJCB PIC 9(05) COMP.
00053 03 TRSTEP PIC 9(09) COMP.
00054 03 TRABEN PIC 9(09) COMP.
00055 03 TRCPU PIC 9(09) COMP.
00056 03 TRTASS PIC 9(09) COMP.
00057 03 TRSACT PIC 9(09) COMP.
00058 03 TRDASS PIC 9(09) COMP.
00059 03 TRSICC PIC 9(09) COMP.
00060 03 TRDLRA PIC 9(09) COMP.
00061
00062 SD JASCRT LABEL RECORD IS STANDARD.
00063 01 S-REC.
00064 03 ACCDATE PIC X(06).
00065 03 CRCDATE PIC X(6).
00066 03 ACSIRT PIC 9(06) COMP-3.
00067 03 ACSTCP PIC 9(06) COMP-3.
00068 03 ACUSER.
00069 05 FILLER PIC X(06).
00070 05 USTYPER PIC X(02).
00071 05 US-1Y VALUE 10 THRU 99.
00072 05 US-PY VALUE 00 THRU 09.
00073 05 FILLER PIC X(06).
00074 03 ACNAME PIC X(08).
00075 03 ACNUMB PIC 9(04) CLMP-4.
00076 03 ACIDEN PIC X(011).
00077 03 ACCANC PIC X(011).
00078 03 FILLER PIC X(011).
00079 03 FILLER PIC X(03).
00080 03 EXIN PIC X(011).
00081 03 EXLC PIC X(011).
00082 03 EXLCL PIC X(011).

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00081 03 EXIPR PIC X(01).
00082 03 EXINLN PIC 9(06) COMP-4.
00083 03 EXNCDN PIC 9(06) COMP-4.
00084 03 EXNFCG PIC 9(04) COMP-4.
00085 03 EXSTIC PIC 9(04) COMP-4.
* * *
00087 03 FILLER PIC X(06).
00088 03 EXDJCB PIC X(08).
00089 03 EXDUSEK PIC X(16).
00090 03 EXPID PIC X(02).
00091 03 EXDCANC PIC X(01).
00092 03 EXTYP PIC X(01).
* * *
00093 03 FILLER PIC X(04).
00094 03 EXPHASE PIC X(08).
00095 03 EXENDAD PIC 9(06) COMP-4.
00096 03 EXCPJTM PIC 9(06) COMP-4.
00097 03 EXCVHM PIC 9(06) COMP-4.
00098 03 EXALLTM PIC 9(06) COMP-4.
00099 03 EXSICTE OCCURS 20 TIMES.
00100 03 EXAALD PIC 9(04) COMP-4.
*****
00101 * DEVICE ADDRESS *****
00102 * - X'1C0' THRU X'1F7' = 443 THRU 503 *
00103 * - X'280' THRU X'283' = 640 THRU 643 *
00104 *****
00105 EB EDEV-DADD VALUE 448 THRU 503.
00106 68 EDEV-TADD VALUE 540 THRU 643.
00107 05 EXJCB PIC 9(06) COMP-4.
* * *
00108 03 EXSICTEM PIC X(01).
SC JASURTH LABEL RECORD IS STANDARD.
00110 01 S-TRAN.
00111 03 SRDATE PIC 9(06).
00112 03 SRCJCE PIC X(04).
00113 03 SRJLEF PIC 9(09) COMP.
00114 03 SRSTEF PIC 9(09) COMP.
00115 03 SRASEN PIC 9(09) COMP.
00116 03 SRCPUS PIC 9(09) COMP.
00117 03 SRKASS PIC 9(09) COMP.
00118 03 SRSTCT PIC 9(09) COMP.
00119 03 SRDASS PIC 9(09) COMP.
00120 03 SRSLCD PIC 9(09) COMP.
00121 03 SRDLRA PIC 9(09) COMP.
00122
00123
00124
00125 FD PHILE LABEL RECORD IS OMITTED.
00126 01 P-CUT.
00127 03 FILLER PIC X(01).
00128 03 CUT.
00129 05 FILLER PIC X(82).
00130 05 P1 PIC X(23).
00131 05 P2 PIC X(27).
* * *
00132 WORKING-STORAGE SECTION.
00133 77 I PIC 9(02) VALUE 0.
00134 77 XX PIC 9(02) VALUE 0.
00135 77 ZZ PIC 9(03) VALUE 0.
00136 77 W-MAX PIC 9(06) VALUE +0.
00137 77 FG PIC 9(01) VALUE 0.
00138 77 W-STRT PIC 9(06) COMP-3 VALUE 0.
00139 77 W-STCP PIC 9(06) COMP-3 VALUE 0.
00140 77 CT-PAGE PIC 9(04) VALUE 0.
00141 77 CT-LINE PIC 9(02) VALUE 60.
00142 77 CT-FILE PIC 9(02) VALUE 0.
00143 77 AC-TAPE PIC 9(02) VALUE 0.
00144 77 AC-NM PIC X(08).
00145 77 W-SUM PIC 9(09) COMP VALUE 0.
00146 77 W-SUM1 PIC 9(09) COMP VALUE 0.
00147 77 SUM-CPU PIC 9(09) COMP VALUE 0.
00148 77 SUM-CURA PIC 9(09) COMP VALUE 0.
00149 77 STAKT-TM PIC 9(09) COMP VALUE 0.
00150 77 STCP-TM PIC 9(09) COMP VALUE 0.
00151 77 W-PHASE PIC X(08).
00152 77 P-R1 PIC X(35) VALUE
00153 ' + ROUND UP (LINE MAKE UNIT)'.
00154 77 P-R2 PIC X(35) VALUE
00155 ' PCT. PERCENTAGE IN MONTH'.
00156 77 P-K3 PIC X(35) VALUE
00157 ' AVR. AVERAGE PER RUN'.
00158
00159
00160 01 W-CODE.
00161 03 W-CANC PIC 9(04) COMP-4.

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00162      03 RE-CANC REDEFINES W-CANC.
00163      05 W-C1      PIC X(01).
00164      05 W-C2      PIC X(01).
00165
00166      01 W-STIME      PIC 9(06).
00167      01 RE-STIME REDEFINES W-STIME.
00168      03 S-HH      PIC 9(02).
00169      03 S-MM      PIC 9(02).
00170      03 S-SS      PIC 9(02).
00171
00172      01 W-ETIME      PIC 9(06).
00173      01 RE-ETIME REDEFINES W-ETIME.
00174      03 E-HH      PIC 9(02).
00175      03 E-MM      PIC 9(02).
00176      03 E-SS      PIC 9(02).
00177
00178      01 W-TIME      PIC 9(07).
00179      01 RE-WTIME REDEFINES W-TIME.
00180      03 W-HH      PIC 9(03).
00181      03 W-MM      PIC 9(02).
00182      03 W-SS      PIC 9(02).
00183
00184      01 AC-DATE.
00185      03 YY      PIC 9(02).
00186      * 03 FILLER      PIC X(01).
00187      03 MM      PIC 9(02).
00188      * 03 FILLER      PIC X(01).
00189      03 DD      PIC 9(02).
00190      01 KL      PIC 9(02).
00191
00192      01 CUATE.
00193      03 CU      PIC 9(02).
00194      03 CM      PIC 9(02).
00195      03 CY      PIC 9(02).
00196
00197      01 WUSER.
00198      03 W-US      PIC X(04).
00199      03 RE-WUS REDEFINES W-US.
00200      05 W-US1      PIC X(01).
00201      05 W-US2      PIC X(03).
00202      03 W-USER      PIC X(04).
00203
00204      01 CUSER.
00205      03 C-US      PIC X(04).
00206      03 RE-CUS REDEFINES C-US.
00207      05 C-US1      PIC X(01).
00208      05 C-US2      PIC X(03).
00209      03 C-USER      PIC X(04).
00210
00211      01 TBL-M020.
00212      03 TAB-M020      OCCURS 12 TIMES.
00213      05 P-PHASE      PIC X(08).
00214      05 NUMSTEP      PIC 9(09) COMP.
00215      05 NUMABEND      PIC 9(09) COMP.
00216      05 CPUTIME      PIC 9(09) COMP.
00217      05 TPASSGN      PIC 9(09) COMP.
00218      05 TPSICCNT      PIC 9(09) COMP.
00219      05 DKASSGN      PIC 9(09) COMP.
00220      05 DKSICCNT      PIC 9(09) COMP.
00221      05 DURATION      PIC 9(09) COMP.
00222
00223      01 SUM-DET.
00224      03 SUM1      PIC 9(09) COMP VALUE 0.
00225      03 SUM2      PIC 9(09) COMP VALUE 0.
00226      03 SUM3      PIC 9(09) COMP VALUE 0.
00227      03 SUM4      PIC 9(09) COMP VALUE 0.
00228      03 SUM5      PIC 9(09) COMP VALUE 0.
00229      03 SUM6      PIC 9(09) COMP VALUE 0.
00230      03 SUM7      PIC 9(09) COMP VALUE 0.
00231      03 SUM8      PIC 9(09) COMP VALUE 0.
00232
00233      01 SUM-EY-PRCG.
00234      03 SUM2-PRCG      PIC 9(09) COMP VALUE 0.
00235      03 SUM3-PRCG      PIC 9(09) COMP VALUE 0.
00236      03 SUM4-PRCG      PIC 9(09) COMP VALUE 0.
00237      03 SUM5-PRCG      PIC 9(09) COMP VALUE 0.
00238      03 SUM6-PRCG      PIC 9(09) COMP VALUE 0.
00239      03 SUM7-PRCG      PIC 9(09) COMP VALUE 0.
00240      03 SUM8-PRCG      PIC 9(09) COMP VALUE 0.
00241      03 DURA-PRCG      PIC 9(09) COMP VALUE 0.
00242

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00243 C1 SUM-TCT.
00244 03 GSUM1 PIC 9(09) COMP VALUE C.
00245 03 GSUM2 PIC 9(09) COMP VALUE C.
00246 03 GSUM3 PIC 9(09) COMP VALUE C.
00247 03 GSUM4 PIC 9(09) COMP VALUE C.
00248 03 GSUM5 PIC 9(09) COMP VALUE C.
00249 03 GSUM6 PIC 9(09) COMP VALUE C.
00250 03 GSUM7 PIC 9(09) COMP VALUE C.
00251 03 GSUM8 PIC 9(09) COMP VALUE C.
00252
00253 C1 SUM-CTCT.
00254 03 CTSUM1 PIC 9(09) COMP VALUE C.
00255 03 CTSUM2 PIC 9(09) COMP VALUE C.
00256 03 CTSUM3 PIC 9(09) COMP VALUE C.
00257 03 CTSUM4 PIC 9(09) COMP VALUE C.
00258 03 CTSUM5 PIC 9(09) COMP VALUE C.
00259 03 CTSUM6 PIC 9(09) COMP VALUE C.
00260 03 CTSUM7 PIC 9(09) COMP VALUE C.
00261 03 CTSUM8 PIC 9(09) COMP VALUE C.
00262
00263 C1 SUM-EET3.
00264 03 SUM-1 PIC 9(06) COMP-3 VALUE C.
00265 03 SUM-2 PIC 9(03)V9 COMP-3 VALUE C.
00266 03 SUM-3 PIC 9(05) COMP-3 VALUE C.
00267 03 SUM-4 PIC 9(09) COMP VALUE C.
00268 03 SUM-5 PIC 9(03)V9 COMP-3 VALUE C.
00269 03 SUM-6 PIC 9(09) COMP VALUE C.
00270 03 SUM-7 PIC 9(09) COMP VALUE C.
00271 03 SUM-8 PIC 9(03)V9 COMP-3 VALUE C.
00272 03 SUM-9 PIC 9(09) COMP VALUE C.
00273 03 SUM-10 PIC 9(09) COMP VALUE C.
00274 03 SUM-11 PIC 9(03)V9 COMP-3 VALUE C.
00275 03 SUM-12 PIC 9(09) COMP VALUE C.
00276 03 SUM-13 PIC 9(09) COMP VALUE C.
00277 03 SUM-14 PIC 9(03)V9 COMP-3 VALUE C.
00278 03 SUM-15 PIC 9(09) COMP VALUE C.
00279
00280 C1 SUM-TCT3.
00281 03 CSUM-1 PIC 9(06) COMP-3 VALUE C.
00282 03 CSUM-2 PIC 9(03)V9 COMP-3 VALUE C.
00283 03 CSUM-3 PIC 9(05) COMP-3 VALUE C.
00284 03 CSUM-4 PIC 9(09) COMP VALUE C.
00285 03 CSUM-5 PIC 9(03)V9 COMP-3 VALUE C.
00286 03 CSUM-6 PIC 9(09) COMP VALUE C.
00287 03 CSUM-7 PIC 9(09) COMP VALUE C.
00288 03 CSUM-8 PIC 9(03)V9 COMP-3 VALUE C.
00289 03 CSUM-9 PIC 9(09) COMP VALUE C.
00290 03 CSUM-10 PIC 9(09) COMP VALUE C.
00291 03 CSUM-11 PIC 9(03)V9 COMP-3 VALUE C.
00292 03 CSUM-12 PIC 9(09) COMP VALUE C.
00293 03 CSUM-13 PIC 9(09) COMP VALUE C.
00294 03 CSUM-14 PIC 9(03)V9 COMP-3 VALUE C.
00295 03 CSUM-15 PIC 9(09) COMP VALUE C.
00296
00297 C1 H1.
00298 03 FILLER PIC X(01) VALUE SPACE.
00299 03 FILLER PIC X(56) VALUE 'JOB-ACCOUNTING SYSTEM'.
00300 03 FILLER PIC X(56) VALUE 'COMPUTER SERVICE CENTER'.
00301 03 FILLER PIC X(14) VALUE 'PAGE'.
00302 03 P-PAGE PIC ZZZ9.
00303
00304 C1 H32.
00305 03 FILLER PIC X(47) VALUE SPACE.
00306 03 FILLER PIC X(35) VALUE
00307 'MONTHLY SYSTEM UTILIZATION SUMMARY BY USER GROUP'
00308
00309
00310 C1 H33.
00311 03 FILLER PIC X(37) VALUE SPACE.
00312 03 FILLER PIC X(57) VALUE
00313 'MONTHLY SYSTEM UTILIZATION SUMMARY BY PARTICULAR PROGR'
00314 'AM'.
00315
00316 C1 H2.
00317 03 FILLER PIC X(01) VALUE SPACE.
00318 03 FILLER PIC X(15) VALUE 'REPORT CODE'.
00319 03 P-CODE PIC X(35).
00320 03 FILLER PIC X(33) VALUE
00321 'CHU-LUNG-KURN.....UNIVERSITY'.
00322 03 FILLER PIC X(31) VALUE SPACE.
00323 03 FILLER PIC X(09) VALUE 'RUN DATE'.

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00324      03 P-DD      PIC 99.
00325      03 FILLER   PIC X(31) VALUE '-'.
00326      03 P-HHMM    PIC X(03).
00327      03 FILLER   PIC X(01) VALUE '-'.
00328      03 P-YY      PIC 99.
00329
00330      C1 H3.
00331      03 FILLER   PIC X(47) VALUE SPACE.
00332      03 FILLER   PIC X(53) VALUE
00333      'DAILY SYSTEM UTILIZATION SUMMARY BY USER GROUP'.
00334
00335      C1 H42.
00336      03 FILLER   PIC X(57) VALUE SPACE.
00337      03 FILLER   PIC X(05) VALUE 'FCR'.
00338      03 P-MONTH   PIC X(10).
00339      03 FILLER   PIC X(02) VALUE '19'.
00340      03 P-YEAR   PIC 9(02).
00341
00342      C1 H41.
00343      03 FILLER   PIC X(54) VALUE SPACE.
00344      03 FILLER   PIC X(06) VALUE 'AS ON'.
00345      03 P-DI      PIC 99.
00346      03 FILLER   PIC X(01) VALUE '-'.
00347      03 P-MF      PIC X(33).
00348      03 FILLER   PIC X(01) VALUE '-'.
00349      03 P-YF      PIC 99.
00350
00351      C1 H4.
00352      03 FILLER   PIC X(26) VALUE SPACE.
00353      03 FILLER   PIC X(47) VALUE
00354      'NO. OF NO. OF CPU'.
00355      03 FILLER   PIC X(39) VALUE
00356      '# OF TAPE # OF DISC'.
00357
00358      C1 H43.
00359      03 FILLER   PIC X(01) VALUE SPACE.
00360      03 FILLER   PIC X(91) VALUE
00361      'PROGRAM NO. OF RUN DURATION TIME'
00362      'CPU TIME'.
00363      03 FILLER   PIC X(35) VALUE
00364      'TAPE SIG COUNT DISC SIG COUNT'.
00365
00366      C1 H-1.
00367      03 FILLER   PIC X(15) VALUE SPACE.
00368      03 FILLER   PIC X(174) VALUE
00369      '-----'
00370      '-----'
00371      03 FILLER   PIC X(43) VALUE
00372      '-----'.
00373
00374      C1 H5.
00375      05 FILLER   PIC X(01) VALUE SPACE.
00376      05 FILLER   PIC X(71) VALUE
00377      'USER GROUP CODE DSS/VSS JOB ABEND'
00378      'TIME'.
00379      05 FILLER   PIC X(40) VALUE
00380      'TAPE SIG DISC SIG'.
00381
00382      C1 H53.
00383      05 FILLER   PIC X(01) VALUE SPACE.
00384      05 FILLER   PIC X(69) VALUE
00385      'NAME TOTAL PCT. #ABEND TOTAL PCT. AVR'
00386      'TCTAL'.
00387      05 FILLER   PIC X(62) VALUE
00388      'PCT. AVR. TCTAL PCT. AVR. TOTAL PCT.'
00389      'AVR.'.
00390
00391      C1 H6.
00392      05 FILLER   PIC X(26) VALUE SPACE.
00393      05 FILLER   PIC X(45) VALUE
00394      'JOBS STEPS JOBS (HH.MM.SS)'.
00395      05 FILLER   PIC X(41) VALUE
00396      'ASSON. COUNT ASSON. COUNT'.
00397
00398      C1 H63.
00399      05 FILLER   PIC X(23) VALUE SPACE.
00400      05 FILLER   PIC X(46) VALUE
00401      '(HH.MM) (HH.MM.SS) (HH.MM)'.
00402      05 FILLER   PIC X(61) VALUE
00403      '(HH.MM.SS) (1000) (1000)'.
00404
00405      C1 H-END.

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00405 05 FILLER PIC X(34) VALUE SPACE.
00406 05 FILLER PIC X(23) VALUE '*****'.
00407
00408
00409 C1 DET1.
00410 03 FILLER PIC X(31) VALUE SPACE.
00411 03 P-DET PIC BX(23).
00412 03 RE-DET REDEFINES P-DET.
00413 05 P-01 PIC BX(12).
00414 05 P-02 PIC X(11).
00415 03 P-SUM1 PIC Z,ZZ9B(05).
00416 03 P-SUM2 PIC ZZ,ZZ9B(05).
00417 03 P-SUM3 PIC Z,ZZ9B(04).
00418 05 P-FF PIC ZZ9.
00419 05 FILLER PIC X(01) VALUE '..'.
00420 05 P-MM PIC 9(02).
00421 05 FILLER PIC X(01) VALUE '..'.
00422 05 P-SS PIC 9(02).
00423 03 FILLER PIC X(05) VALUE SPACE.
00424 03 P-SUM5 PIC ZZ9B(03).
00425 03 P-SUM6 PIC ZZ,ZZZ,ZZ9B(07).
00426 03 P-SUM7 PIC ZZ9B(03).
00427 03 P-SUM8 PIC ZZ,ZZZ,ZZ9.
00428
00429 C1 DET3.
00430 03 FILLER PIC X(01) VALUE SPACE.
00431 03 P3-DET PIC BX(03)BBB.
00432 03 P3-SUM1 PIC ZZ,ZZ9BB.
00433 03 P3-SUM2 PIC ZZ9.95.
00434 03 P3-SUM3 PIC ZZ,ZZ9BB.
00435 03 P3-FF4 PIC ZZZ9.
00436 03 FILLER PIC X(01) VALUE '..'.
00437 03 P3-MM4 PIC 99.
00438 03 P3-SIGN1 PIC X(02).
00439 03 P3-SUM5 PIC ZZ9.93.
00440 03 P3-FF5 PIC Z9.
00441 03 FILLER PIC X(01) VALUE '..'.
00442 03 P3-MM6 PIC 99.
00443 03 FILLER PIC X(01) VALUE '..'.
00444 03 P3-SUM6 PIC 99BB.
00445 03 P3-FF7 PIC ZZZZ9.
00446 03 FILLER PIC X(01) VALUE '..'.
00447 03 P3-MM7 PIC 99.
00448 03 P3-SIGN2 PIC X(01).
00449 03 P3-SUM8 PIC ZZ9.9BB.
00450 03 P3-FF8 PIC Z9.
00451 03 FILLER PIC X(01) VALUE '..'.
00452 03 P3-MM9 PIC 99.
00453 03 FILLER PIC X(01) VALUE '..'.
00454 03 P3-SS9 PIC 99B.
00455 03 P3-SUM10 PIC ZZ,ZZ9.
00456 03 P3-SIGN3 PIC X(01).
00457 03 P3-SUM11 PIC ZZ9.9B.
00458 03 P3-SUM12 PIC ZZ,ZZ9.
00459 03 P3-SUM13 PIC ZZ,ZZ9.
00460 03 P3-SIGN4 PIC X(02).
00461 03 P3-SUM14 PIC ZZ9.9BB.
00462 03 P3-SUM15 PIC ZZ,ZZ9.
00463
00464 01 TAB-DATE.
00465 03 TAB-D.
00466 05 M1 PIC X(03) VALUE 'JAN.'.
00467 05 M2 PIC X(03) VALUE 'FEB.'.
00468 05 M3 PIC X(03) VALUE 'MAR.'.
00469 05 M4 PIC X(03) VALUE 'APR.'.
00470 05 M5 PIC X(03) VALUE 'MAY.'.
00471 05 M6 PIC X(03) VALUE 'JUN.'.
00472 05 M7 PIC X(03) VALUE 'JUL.'.
00473 05 M8 PIC X(03) VALUE 'AUG.'.
00474 05 M9 PIC X(03) VALUE 'SEP.'.
00475 05 M10 PIC X(03) VALUE 'OCT.'.
00476 05 M11 PIC X(03) VALUE 'NOV.'.
00477 05 M12 PIC X(03) VALUE 'DEC.'.
00478 03 L-TAB REDEFINES TAB-D PIC X(03) OCCURS 12 TIMES.
00479
00480 C1 TAB-MONTH.
00481 03 TAB-M.
00482 05 MM1 PIC X(09) VALUE 'JANUARY'.
00483 05 MM2 PIC X(09) VALUE 'FEBRUARY'.
00484 05 MM3 PIC X(09) VALUE 'MARCH'.
00485 05 MM4 PIC X(09) VALUE 'APRIL'.

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10.15.02

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05 MM5 PIC X(05) VALUE 'MAY'.
06 MM6 PIC X(05) VALUE 'JUNE'.
07 MM7 PIC X(05) VALUE 'JULY'.
08 MM8 PIC X(05) VALUE 'AUGUST'.
09 MM9 PIC X(05) VALUE 'SEPTEMBER'.
10 MM10 PIC X(05) VALUE 'OCTOBER'.
11 MM11 PIC X(05) VALUE 'NOVEMBER'.
12 MM12 PIC X(05) VALUE 'DECEMBER'.
03 *TAB REDEFINES TAB-Y PIC X(09) OCCURS 12 TIMES.

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00495 /
00496 *****
00497 PROCEDURE DIVISION.
00498 BEGIN-SEC SECTION.
00499 BEGIN.
00500 MOVE CURRENT-DATE TO AC-DATE.
00501 MOVE DD TO P-DD.
00502 MOVE MM TO I.
00503 MOVE D-TAS(1) TO P-HMM.
00504 MOVE YY TO P-YY.
00505 ACCEPT AC-TAPE FROM SYSIPT.
00506 MOVE I TO I.
00507 AC-SYSIPT.
00508 IF I = 11 GO TO PHASE-11-12.
00509 ACCEPT AC-NM FROM SYSIPT.
00510 MOVE AC-NM TO P-PHASE(1).
00511 ADD 1 TO I.
00512 GO TO AC-SYSIPT.
00513 PHASE-11-12.
00514 MOVE 'EXECUTE ' TO P-PHASE(11).
00515 MOVE 'OTHERS' TO P-PHASE(12).
00516 PERFORM MOVE-ZERO VARYING I FROM 1 BY 1 UNTIL I GREATER 12.
00517 MOVE SPACE TO P-SIGN1 P-SIGN2 P-SIGN3 P-SIGN4.
00518 MOVE 0 TO I.
00519 LPER-F.
00520 OPEN OUTPUT JATRANS PFILE.
00521 MOVE-ZERO.
00522 MOVE 0 TO NUMSTEP(1) NUMABEND(1) CPUTIME(1) TPASSGN(1)
00523 TPSSICNT(1) DKASSGN(1) DKSICNT(1) DURATION(1).
00524 * FOR REPORT JACC10 *
00525 *-----*
00526 BEGIN1.
00527 OPEN INPUT POWERAC WITH NO REWIND.
00528 SORT JASCT1 ASCENDING KEY EXDJCB.
00529 INPUT PROCEDURE IN-1 THRU END-IN1.
00530 OUTPUT PROCEDURE OUT-1 THRU END-OUT1.
00531 IF CT-FILE = AC-TAPE CLOSE POWERAC JATRANS
00532 GO TO BEGIN2
00533 ELSE CLOSE POWERAC WITH NO REWIND
00534 GO TO BEGIN1.
00535 * FOR REPORT JACC10 *
00536 *-----*
00537 BEGIN2.
00538 OPEN INPUT JATRANS
00539 SORT JASCT1 ASCENDING KEY SROJCB.
00540 INPUT PROCEDURE IN-2 THRU END-IN2.
00541 OUTPUT PROCEDURE OUT-2 THRU END-OUT2.
00542 * FOR REPORT JACC20 *
00543 *-----*
00544 BEGIN3.
00545 MOVE I TO I.
00546 MOVE-PRINT-NO.
00547 IF CT-LINE GREATER 42 PERFORM PRINT-HEAD-R3.
00548 IF I = 13 PERFORM MOVE-MONTH-TOT
00549 GO TO CLOSE-F.
00550 MOVE P-PHASE(1) TO P3-DET.
00551 MOVE NUMSTEP(1) TO P3-SUM1. ADD NUMSTEP(1) TO GSUM-1.
00552 COMPUTE SUM-2 = NUMSTEP(1) * 100 / GSUM2.
00553 MOVE SUM-2 TO P3-SUM2. ADD SUM-2 TO GSUM-2.
00554 MOVE NUMABEND(1) TO P3-SUM3. ADD NUMABEND(1) TO GSUM-3.
00555 MOVE DURATION(1) TO W-SUM. ADD DURATION(1) TO GSUM-4.
00556 DIVIDE W-SUM BY 60 GIVING W-MAX REMAINDER XX.
00557 IF XX GREATER 5 ADD 1 TO W-MAX MOVE '+' TO P-SIGN1.
00558 DIVIDE W-MAX BY 60 GIVING P3-HH4 REMAINDER P3-MM4.
00559 COMPUTE SUM-5 = DURATION(1) * 100 / SUM-DURA.
00560 ADD SUM-5 TO GSUM-5. MOVE SUM-5 TO P3-SUM5.
00561 IF NUMSTEP(1) = 0 MOVE 0 TO SUM-6 ELSE
00562 COMPUTE SUM-6 = DURATION(1) / NUMSTEP(1).
00563 DIVIDE SUM-6 BY 60 GIVING W-MAX REMAINDER W-SS.
00564 DIVIDE W-MAX BY 60 GIVING W-HH REMAINDER W-MM.
00565 IF W-SS = 00 MOVE 1 TO P3-SS6 ADD 1 TO W-MM
00566 ELSE MOVE W-SS TO P3-SS6.
00567 IF W-MM = 00 MOVE 1 TO P3-MM6 ADD 1 TO W-HH
00568 ELSE MOVE W-MM TO P3-MM6.
00569 MOVE W-HH TO P3-HH6.
00570 MOVE CPUTIME(1) TO W-SUM. ADD CPUTIME(1) TO GSUM-7.
00571 COMPUTE W-SUM = W-SUM / 300.
00572 DIVIDE W-SUM BY 60 GIVING W-MAX REMAINDER XX.
00573 IF XX GREATER 5 ADD 1 TO W-MAX MOVE '+' TO P-SIGN2.
00574 DIVIDE W-MAX BY 60 GIVING P3-HH7 REMAINDER P3-MM7.
00575 COMPUTE SUM-8 = CPUTIME(1) * 100 / GSUM4.

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00576      ADD SUM-8 TO CSUM-8. MOVE SUM-8 TO P3-SUM8.
00577      IF NUMSTEP(1) = 0 MOVE 0 TO SUM-9 ELSE
00578      COMPUTE SUM-9 = (CFTIME(1)) / NUMSTEP(1).
00579      COMPUTE SUM-9 = SUM-9 / 300.
00580      DIVIDE SUM-9 BY 60 GIVING W-MAX REMAINDER W-SS.
00581      DIVIDE W-MAX BY 60 GIVING W-HH REMAINDER W-MM.
00582      IF W-SS = 60 MOVE 1 TO P2-SS9 ADD 1 TO W-MM
00583      ELSE MOVE W-SS TO P3-SS9.
00584      IF W-MM = 60 MOVE 1 TO P3-MM9 ADD 1 TO W-HH
00585      ELSE MOVE W-MM TO P3-MM9.
00586      MOVE W-HH TO P3-HH9.
00587      MOVE (PSIGCNT(1)) TO W-SUM. ADD W-SUM TO GSUM-10.
00588      DIVIDE W-SUM BY 1000 GIVING W-SUM1 REMAINDER ZZ.
00589      IF ZZ GREATER 500 ADD 1 TO W-SUM1 MOVE '+' TO P-SIGN3.
00590      MOVE W-SUM1 TO P3-SUM10.
00591      COMPUTE SUM-11 = W-SUM1 * 100 / GTSUM6.
00592      ADD SUM-11 TO CSUM-11. MOVE SUM-11 TO P3-SUM11.
00593      IF NUMSTEP(1) = 0 MOVE 0 TO SUM-12 ELSE
00594      COMPUTE SUM-12 = (PSIGCNT(1)) / NUMSTEP(1).
00595      ADD SUM-12 TO CSUM-12.
00596      MOVE SUM-12 TO P3-SUM12.
00597      MOVE (KSIGCNT(1)) TO W-SUM. ADD W-SUM TO GSUM-13.
00598      DIVIDE W-SUM BY 1000 GIVING W-SUM1 REMAINDER ZZ.
00599      IF ZZ GREATER 500 ADD 1 TO W-SUM1 MOVE '+' TO P-SIGN4.
00600      MOVE W-SUM1 TO P3-SUM13.
00601      COMPUTE SUM-14 = W-SUM1 * 100 / GTSUM8.
00602      ADD SUM-14 TO CSUM-14. MOVE SUM-14 TO P3-SUM14.
00603      IF NUMSTEP(1) = 0 MOVE 0 TO SUM-15 ELSE
00604      COMPUTE SUM-15 = (KSIGCNT(1)) / NUMSTEP(1).
00605      ADD SUM-15 TO CSUM-15.
00606      MOVE SUM-15 TO P3-SUM15.
00607
00608      *      WRITE P-CUT FROM DET3 BEFORE 2.
00609      ADD 2 TO CT-LINE.
00610      MOVE SPACE TO P-SIGN1 P-SIGN2 P-SIGN3 P-SIGN4. ADD 1 TO I.
00611      GO TO MOVE-PRINT-R3.
00612
00613      *      CLOSE-F.
00614      CLOSE JATRANS PFILE.
00615      STOP RUN.

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00616 /
00617 *-----DAILY SYSTEM UTILIZATION REPORT SUMMARY BY USER-ID-----*
00618
00619 * INPUT PROCEDURE *
00620 *-----*
00621 IN-1 SECTION.
00622 STEP1.
00623 READ PWERAC AT END ADD 1 TO CT-FILE
00624 MOVE 0 TO FG
00625 CG TO END-IN1.
00626 MOVE TAFEREC TO S-REC.
00627 IF ITYPE = 'F' NEXT SENTENCE
00628 ELSE GO TO STEP1.
00629 RELEASE S-REC.
00630 GO TO STEP1.
00631 END-IN1 SECTION.
00632 IN1-EXIT. EXIT.
00633
00634 * OUTPUT PROCEDURE *
00635 *-----*
00636 OUT-1 SECTION.
00637 STEP2.
00638 RETURN JASUM1 AT END PERFORM PRINT-JET
00639 PERFORM PRINT-TCT
00640 PERFORM PRINT-GTGT
00641 GO TO END-OUT1.
00642 MOVE ACDATE TO AC-DATE.
00643 MOVE EXDJOB TO WUSER.
00644 MOVE EXPHASE TO W-PHASE.
00645 IF FG = 0 MOVE 1 TO FG
00646 MOVE WUSER TO CUSER
00647 MOVE DD TO P-DF
00648 MOVE MM TO I
00649 MOVE D-TAB(1) TO P-MF
00650 MOVE YY TO P-YF
00651 MOVE YY TO CD MOVE MM TO CF
00652 MOVE DD TO CY.
00653 IF W-US1 GREATER C-US1 PERFORM PRINT-DET
00654 PERFORM PRINT-TCT
00655 MOVE WUSER TO CUSER.
00656 IF W-US GREATER C-US PERFORM PRINT-DET
00657 MOVE WUSER TO CUSER.
00658 PERFORM SUM-JA0010.
00659 MOVE 1 TO I.
00660 PERFORM SUM-JAM020 THRU JAM020-EXIT.
00661 GO TO STEP2.
00662 SUM-JA0010.
00663 IF EXTYPE = 'L' ADD 1 TO SUM1.
00664 ADD 1 TO SUM2 SUM2-PRCG.
00665 MOVE EXDCANC TO W-C2.
00666 MOVE LGH-VALUE TO W-C1.
00667 IF W-CANC NOT = 16 AND EXTYPE = 'L' ADD 1 TO SUM3 SUM3-PRCG.
00668 ADD EXCPLTM EXCVHIM EXALLTM TO SUM4 SUM4-PRCG.
00669 MOVE ACSINT TO W-S-TIME.
00670 MOVE ACSTOP TO W-E-TIME.
00671 IF W-E-TIME LESS W-S-TIME ADD 24 TO E-HH.
00672 COMPUTE START-TM = (S-HH * 60 + S-MM) * 60 + S-SS.
00673 COMPUTE STOP-TM = (E-HH * 60 + E-MM) * 60 + E-SS.
00674 COMPUTE DURA-PRCG = STOP-TM - START-TM.
00675 ADD DURA-PRCG TO SUM-DURA.
00676 PERFORM COUNT-DT VARYING I FROM 1 BY 1 UNTIL I GREATER 20.
00677 MOVE 0 TO I.
00678 PRINT-DET.
00679 IF CT-LINE GREATER 42 PERFORM PRINT-HEAD-R1.
00680 MOVE CDATE TO TRDATE.
00681 MOVE C-US TO P-DET TRDJOB.
00682 MOVE SUM1 TO P-SUM1 TRJCB.
00683 MOVE SUM2 TO P-SUM2 TRSTEP.
00684 MOVE SUM3 TO P-SUM3 TRABEN.
00685 MOVE SUM4 TO TRCPU.
00686 DIVIDE SUM4 BY 300 GIVING SUM-CPU.
00687 DIVIDE SUM-CPU BY 60 GIVING W-MAX REMAINDER W-SS.
00688 DIVIDE W-MAX BY 60 GIVING W-HH REMAINDER W-MM.
00689 IF W-SS = 60 MOVE 1 TO P-SS ADD 1 TO W-MM
00690 ELSE MOVE W-SS TO P-SS.
00691 IF W-MM = 60 MOVE 1 TO P-MM ADD 1 TO W-HH
00692 ELSE MOVE W-MM TO P-MM.
00693 MOVE W-HH TO P-HH.
00694 MOVE SUM5 TO P-SUM5 TRTASS.
00695 MOVE SUM6 TO P-SUM6 TRSIGI.
00696 MOVE SUM7 TO P-SUM7 TRDASS.
00697 MOVE SUM8 TO P-SUM8 TRSICD.
00698 WRITE P-CUT.FROM DET1 BEFORE 1.

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00697          ADD 1 TO CT-LINE.
00698          MOVE SUM-CURA TO TRCURA.
00699          * WRITE JA.TRANS.SAM *
00700          *-----*
00701          WRITE TRAN-REC.
00702          * ADD TOTAL CRCLUP *
00703          *-----*
00704          ADD SUM1 TO GSUM1. ADD SUM2 TO GSUM2.
00705          ADD SUM3 TO GSUM3. ADD SUM4 TO GSUM4.
00706          ADD SUM5 TO GSUM5. ADD SUM6 TO GSUM6.
00707          ADD SUM7 TO GSUM7. ADD SUM8 TO GSUM8.
00708          MOVE 0 TO SUM1 SUM2 SUM3 SUM4 SUM5 SUM6 SUM7 SUM8.
00709          *
00710          PRINT-TLT.
00711          IF CT-LINE GREATER 42 PERFORM PRINT-HEAD-R1.
00712          MOVE 'TOTAL CRCLUP' TO P-D1.
00713          MOVE C-SS1 TO P-D2.
00714          MOVE GSUM1 TO P-SUM1.
00715          MOVE GSUM2 TO P-SUM2.
00716          MOVE GSUM3 TO P-SUM3.
00717          DIVIDE GSUM4 BY 300 GIVING SUM-CPU.
00718          DIVIDE SUM-CPU BY 60 GIVING W-MAX REMAINDER W-SS.
00719          DIVIDE W-MAX BY 60 GIVING W-HH REMAINDER W-MM.
00720          IF W-SS = 60 MOVE 1 TO P-SS ADD 1 TO W-MM
00721          ELSE MOVE W-SS TO P-SS.
00722          IF W-MM = 60 MOVE 1 TO P-MM ADD 1 TO W-HH
00723          ELSE MOVE W-MM TO P-MM.
00724          MOVE W-HH TO P-HH.
00725          MOVE GSUM5 TO P-SUM5.
00726          MOVE GSUM6 TO P-SUM6.
00727          MOVE GSUM7 TO P-SUM7.
00728          MOVE GSUM8 TO P-SUM8.
00729          MOVE SPACE TO P-OUT. WRITE P-OUT BEFORE 2.
00730          WRITE P-OUT FROM DET1 BEFORE 3.
00731          ADD 5 TO CT-LINE.
00732          * ADD TOTAL CRCLUP *
00733          *-----*
00734          ADD GSUM1 TO GTSUM1. ADD GSUM2 TO GTSUM2.
00735          ADD GSUM3 TO GTSUM3. ADD GSUM4 TO GTSUM4.
00736          ADD GSUM5 TO GTSUM5. ADD GSUM6 TO GTSUM6.
00737          ADD GSUM7 TO GTSUM7. ADD GSUM8 TO GTSUM8.
00738          MOVE 0 TO GSUM1 GSUM2 GSUM3 GSUM4
00739          GSUM5 GSUM6 GSUM7 GSUM8.
00740          *
00741          PRINT-GTL.
00742          IF CT-LINE GREATER 42 PERFORM PRINT-HEAD-R1.
00743          MOVE 'TOTAL CRCLUP' TO P-D1.
00744          MOVE GTSUM1 TO P-SUM1.
00745          MOVE GTSUM2 TO P-SUM2.
00746          MOVE GTSUM3 TO P-SUM3.
00747          DIVIDE GTSUM4 BY 300 GIVING SUM-CPU.
00748          DIVIDE SUM-CPU BY 60 GIVING W-MAX REMAINDER W-SS.
00749          DIVIDE W-MAX BY 60 GIVING W-HH REMAINDER W-MM.
00750          IF W-SS = 60 MOVE 1 TO P-SS ADD 1 TO W-MM
00751          ELSE MOVE W-SS TO P-SS.
00752          IF W-MM = 60 MOVE 1 TO P-MM ADD 1 TO W-HH
00753          ELSE MOVE W-MM TO P-MM.
00754          MOVE W-HH TO P-HH.
00755          MOVE GTSUM5 TO P-SUM5.
00756          MOVE GTSUM6 TO P-SUM6.
00757          MOVE GTSUM7 TO P-SUM7.
00758          MOVE GTSUM8 TO P-SUM8.
00759          WRITE P-OUT FROM DET1 BEFORE 2.
00760          WRITE P-OUT FROM H-END BEFORE 1.
00761          MOVE 0 TO GTSUM1 GTSUM2 GTSUM3 GTSUM4
00762          GTSUM5 GTSUM6 GTSUM7 GTSUM8.
00763          MOVE 80 TO CT-LINE. MOVE 0 TO CT-PAGE.
00764          *
00765          * PRINT HEAD *
00766          *-----*
00767          PRINT-HEAD-R1.
00768          MOVE SPACE TO OUT.
00769          WRITE P-OUT BEFORE NEWPAGE.
00770          MOVE SPACE TO P-OUT.
00771          WRITE P-OUT BEFORE 3.
00772          ADD 1 TO CT-PAGE.
00773          MOVE CT-PAGE TO P-PAGE.
00774          WRITE P-OUT FROM H1 BEFORE 2.
00775          MOVE 'JACOIC' TO P-CLDE.
00776          WRITE P-OUT FROM H2 BEFORE 2.
00777          WRITE P-OUT FROM H3 BEFORE 2.
00778          WRITE P-OUT FROM H41 BEFORE 2.

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00776      MOVE ALL '-' TO OUT.
00777      WRITE P-CUT BEFORE 1.
00778      WRITE P-CUT FROM H4 BEFORE 1.
00779      WRITE P-CUT FROM H5 BEFORE 1.
00780      WRITE P-CUT FROM H6 BEFORE 1.
00781      MOVE ALL '-' TO OUT.
00782      WRITE P-CUT BEFORE 2.
00783      MOVE 0 TO C1-LINE.
00784      COUNT=C1.
00785      IF LEV-V-ADD(I) ADD EXJCB(I) TO SUM6 SUM6-PRCG
00786      ADD 1 TO SUM5 SUM5-PRCG.
00787      IF LEV-U-ADD(I) ADD EXJCB(I) TO SUM8 SUM8-PRCG
00788      ADD 1 TO SUM7 SUM7-PRCG.
00789      SUM-JAM020.
00790      IF I GREATER 12 DISPLAY 'I GREATER 12 , I = ' I UPON SYSLST.
00791      IF I = 12 GO TO SUM-TAE.
00792      IF W-PHASE = SPACE MOVE 11 TO I
00793      GO TO SUM-TAE.
00794      IF W-PHASE = P-PHASE(I) NEXT SENTENCE
00795      ELSE ADD 1 TO I GO TO SUM-JAM020.
00796      SUM-TAE.
00797      ADD SUM2-PRCG TO NUMSTEP(I).
00798      ADD SUM3-PRCG TO NUMABEND(I).
00799      ADD SUM4-PRCG TO CPUTIME(I).
00800      ADD SUM5-PRCG TO IPASSON(I).
00801      ADD SUM6-PRCG TO IPSICCT(I).
00802      ADD SUM7-PRCG TO DKASSGN(I).
00803      ADD SUM8-PRCG TO DKSIICNT(I).
00804      ADD DURA-PRCG TO DURATION(I).
00805      MOVE 0 TO SUM2-PRCG SUM3-PRCG SUM4-PRCG SUM5-PRCG.
00806      MOVE 0 TO SUM6-PRCG SUM7-PRCG SUM8-PRCG DURA-PRCG.
00807      JAM020-EXIT. EXIT.
00808      *
00809      * (YYYYMMDD) *
00810      * ***** *
00811      TF-LATE.
00812      MOVE DD TO KD.
00813      MOVE YY TO ED.
00814      MOVE KD TO YY.
00815      END-OUT1
00816      CUT1-EXIT. SECTION.
00817      EXIT.

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/-----MONTHLY SYSTEM UTILIZATION REPORT SUMMARY BY USEF-ID-----*
* INPUT PROCEDURE *
*-----*
IN-2 SECTION.
ST-SURT.
  MOVE 0 TO FC.
  READ JATRANS AT END GO TO END-IN2.
  MOVE TRAN-REC TO S-TRAN.
  RELEASE S-TRAN.
  GO TO ST-SURT.
END-IN2 SECTION.
IN2-EXIT. EXIT.
* CPUPUT PROCEDURE *
*-----*
CUT-2 SECTION.
ST-PRCC.
  RETURN JASCRIF AT END PERFORM PRINT-DET-R2
  PERFORM PRINT-ICT-R2
  PERFORM PRINT-GICT-R2
  GO TO END-CUT2.

  MOVE SREJLB TO W-US.
  IF FC = 0 MOVE 1 TO FC
  MOVE W-US TO C-US
  MOVE SDATE TO CDATE
  MOVE CD TO P-YEAR
  MOVE C* TO I
  MOVE M-TAB(1) TO P-MONTH.

  IF W-US1 GREATER C-US1 PERFORM PRINT-DET-R2
  PERFORM PRINT-ICT-R2
  MOVE W-US TO C-US.
  IF W-US GREATER C-US PERFORM PRINT-DET-R2
  MOVE W-US TO C-US.

  PERFORM SUM-JAMC10.
  GO TO ST-PRCC.
SUM-JAMC10.
  ADD SBJOB TO SUM1.
  ADD SRSTEP TO SUM2.
  ADD SRABEN TO SUM3.
  ADD SRCPU TO SUM4.
  ADD SRCRTASS TO SUM5.
  ADD SRKSILT TO SUM6.
  ADD SRKCSS TO SUM7.
  ADD SRKSIOE TO SUM8.
PRINT-DET-R2.
  IF CT-LINE GREATER 42 PERFORM PRINT-HEAD-R2.
  MOVE C-US TO P-DET.
  MOVE SUM1 TO P-SUM1.
  MOVE SUM2 TO P-SUM2.
  MOVE SUM3 TO P-SUM3.
  DIVIDE SUM4 BY 300 GIVING SUM-CPU.
  DIVIDE SUM-LFC BY 60 GIVING W-MAX REMAINDER W-SS.
  DIVIDE W-MAX BY 60 GIVING W-HH REMAINDER W-MM.
  IF W-SS = 60 MOVE 1 TO P-SS ADD 1 TO W-MM
  ELSE MOVE W-SS TO P-SS.
  IF W-MM = 60 MOVE 1 TO P-MM ADD 1 TO W-HH
  ELSE MOVE W-MM TO P-MM.
  MOVE W-HH TO P-HH.
  MOVE SUM5 TO P-SUM5.
  ADD SUM6 TO GSUM6. COMPUTE SUM6 = SUM6 / 1000.
  MOVE SUM6 TO P-SUM6.
  ADD SUM7 TO GSUM7. COMPUTE SUM7 = SUM7 / 1000.
  MOVE SUM7 TO P-SUM7.
  WRITE P-CUT FROM DET1 BEFORE 1.
  ADD 1 TO CT-LINE.
* ADD TOTAL GROUP *
*-----*
  ADD SUM1 TO GSUM1. ADD SUM2 TO GSUM2.
  ADD SUM3 TO GSUM3. ADD SUM4 TO GSUM4.
  ADD SUM5 TO GSUM5.
  ADD SUM7 TO GSUM7.
  MOVE 0 TO SUM1 SUM2 SUM3 SUM4 SUM5 SUM6 SUM7 SUM8.
* PRINT-ICT-R2.
  IF CT-LINE GREATER 42 PERFORM PRINT-HEAD-R2.
  MOVE 'TOTAL GROUP' TO P-D1.
  MOVE C-US1 TO P-D2.
  MOVE GSUM1 TO P-SUM1.
  MOVE GSUM2 TO P-SUM2.
  MOVE GSUM3 TO P-SUM3.

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00900 DIVIDE GSUM4 BY 300 GIVING SUM-CPU.
00901 DIVIDE SUM-CPU BY 60 GIVING W-MAX REMAINDER W-SS.
00902 DIVIDE W-MAX BY 60 GIVING W-HH REMAINDER W-MM.
00903 IF W-SS = 60 MOVE 1 TO P-SS ADD 1 TO W-MM
00904 IF ELSE MOVE W-SS TO P-SS.
00905 IF W-MM = 60 MOVE 1 TO P-MM ADD 1 TO W-HH
00906 IF ELSE MOVE W-MM TO P-MM.
00907 MOVE W-HH TO P-HH.
00908 MOVE GSUM5 TO P-SUM5.
00909 ADD GSUM6 TO GTSUM5. COMPUTE GSUM6 = GSUM6 / 1000.
00910 MOVE GSUM6 TO P-SUM6.
00911 MOVE GSUM7 TO P-SUM7.
00912 ADD GSUM8 TO GTSUM8. COMPUTE GSUM8 = GSUM8 / 1000.
00913 MOVE GSUM8 TO P-SUM8.
00914 MOVE SPACE TO P-OUT. WRITE P-OUT BEFORE 2.
00915 WRITE P-OUT FROM DET1 BEFORE 3.
00916 ADD 5 TO CT-LINE.
00917 * ADD MONTHLY TOTAL *
00918 *-----*
00919 ADD GSUM1 TO GTSUM1. ADD GSUM2 TO GTSUM2.
00920 ADD GSUM3 TO GTSUM3. ADD GSUM4 TO GTSUM4.
00921 ADD GSUM5 TO GTSUM5.
00922 ADD GSUM7 TO GTSUM7.
00923 MOVE 0 TO GSUM1 GSUM2 GSUM3 GSUM4
00924 GSUM5 GSUM6 GSUM7 GSUM8.
00925 PRINT-CTCT-R2.
00926 IF CT-LINE GREATER 42 PERFORM PRINT-HEAD-R2.
00927 MOVE 'MONTHLY TOTAL' TO P-DET.
00928 MOVE GTSUM1 TO P-SUM1.
00929 MOVE GTSUM2 TO P-SUM2.
00930 MOVE GTSUM3 TO P-SUM3.
00931 DIVIDE GTSUM4 BY 300 GIVING SUM-CPU.
00932 DIVIDE SUM-CPU BY 60 GIVING W-MAX REMAINDER W-SS.
00933 DIVIDE W-MAX BY 60 GIVING W-HH REMAINDER W-MM.
00934 IF W-SS = 60 MOVE 1 TO P-SS ADD 1 TO W-MM
00935 IF ELSE MOVE W-SS TO P-SS.
00936 IF W-MM = 60 MOVE 1 TO P-MM ADD 1 TO W-HH
00937 IF ELSE MOVE W-MM TO P-MM.
00938 MOVE W-HH TO P-HH.
00939 MOVE GTSUM5 TO P-SUM5.
00940 COMPUTE GTSUM6 = GTSUM6 / 1000.
00941 MOVE GTSUM6 TO P-SUM6.
00942 MOVE GTSUM7 TO P-SUM7.
00943 COMPUTE GTSUM8 = GTSUM8 / 1000.
00944 MOVE GTSUM8 TO P-SUM8.
00945 WRITE P-OUT FROM DET1 BEFORE 2.
00946 WRITE P-OUT FROM H-END BEFORE 1.
00947 MOVE 0 TO CT-LINE. MOVE 0 TO CT-PAGE.
00948 *
00949 * PRINT HEAD *
00950 *****
00951 PRINT-HEAD-R2.
00952 MOVE SPACE TO P-OUT.
00953 WRITE P-OUT BEFORE NEWPAGE.
00954 MOVE SPACE TO P-OUT.
00955 WRITE P-OUT BEFORE 3.
00956 ADD 1 TO CT-PAGE.
00957 MOVE CT-PAGE TO P-PAGE.
00958 WRITE P-OUT FROM H1 BEFORE 2.
00959 MOVE 'JAM010' TO P-CODE.
00960 WRITE P-OUT FROM H2 BEFORE 2.
00961 WRITE P-OUT FROM H32 BEFORE 2.
00962 WRITE P-OUT FROM H42 BEFORE 2.
00963 MOVE ALL '-' TO P-OUT.
00964 WRITE P-OUT BEFORE 1.
00965 WRITE P-OUT FROM H4 BEFORE 1.
00966 WRITE P-OUT FROM H5 BEFORE 1.
00967 WRITE P-OUT FROM H6 BEFORE 1.
00968 MOVE SPACE TO P-OUT.
00969 MOVE '(10000)' TO P1 P2.
00970 WRITE P-OUT BEFORE 1.
00971 MOVE ALL '-' TO P-OUT.
00972 WRITE P-OUT BEFORE 2.
00973 MOVE 0 TO CT-LINE.
00974 END-OUT2 SECTION.
00975 CUTI-EX EXIT.

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/*---MONTHLY SYSTEM UTILIZATION SUMMARY BY PARTICULAR PROGRAM---*/

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IN-3 SECTION.
MOVE-MONTH-TOT.
MOVE 'MONTHLY TOTAL' TO P3-DET.
MOVE CSUM-1 TO P3-SUM1.
MOVE CSUM-2 TO P3-SUM2.
MOVE CSUM-3 TO P3-SUM3.
MOVE CSUM-4 TO W-SUM.
DIVIDE W-SUM BY 60 GIVING W-MAX REMAINDER XX.
IF XX GREATER 5 ADD 1 TO W-MAX.
DIVIDE W-MAX BY 60 GIVING P3-HH4 REMAINDER P3-MM4.
MOVE CSUM-5 TO P3-SUM5.
COMPUTE CSUM-6 = CSUM-4 / CSUM-1.
MOVE CSUM-6 TO W-SUM.
DIVIDE W-SUM BY 60 GIVING W-MAX REMAINDER W-SS.
DIVIDE W-MAX BY 60 GIVING W-HH REMAINDER W-MM.
IF W-SS = 60 MOVE 1 TO P3-SS6 ADD 1 TO W-MM.
ELSE MOVE W-SS TO P3-SS6.
IF W-HH = 60 MOVE 1 TO P3-MM6 ADD 1 TO W-HH.
ELSE MOVE W-HH TO P3-MM6.
MOVE W-HH TO P3-HH6.
MOVE CSUM-7 TO W-SUM.
COMPUTE W-SUM = W-SUM / 300.
DIVIDE W-SUM BY 60 GIVING W-MAX REMAINDER XX.
IF XX GREATER 5 ADD 1 TO W-MAX.
DIVIDE W-MAX BY 60 GIVING P3-HH7 REMAINDER P3-MM7.
MOVE CSUM-8 TO P3-SUM8.
COMPUTE CSUM-9 = CSUM-7 / CSUM-1.
MOVE CSUM-9 TO W-SUM.
COMPUTE W-SUM = W-SUM / 300.
DIVIDE W-SUM BY 60 GIVING W-MAX REMAINDER W-SS.
DIVIDE W-MAX BY 60 GIVING W-HH REMAINDER W-MM.
IF W-SS = 60 MOVE 1 TO P3-SS9 ADD 1 TO W-MM.
ELSE MOVE W-SS TO P3-SS9.
IF W-HH = 60 MOVE 1 TO P3-MM9 ADD 1 TO W-HH.
ELSE MOVE W-HH TO P3-MM9.
MOVE W-HH TO P3-HH9.
MOVE CSUM-10 TO W-SUM.
DIVIDE W-SUM BY 1000 GIVING W-SUM1 REMAINDER ZZ.
IF ZZ GREATER 500 ADD 1 TO W-SUM1.
MOVE W-SUM1 TO P3-SUM10.
MOVE CSUM-11 TO P3-SUM11.
COMPUTE CSUM-12 = CSUM-10 / CSUM-1.
MOVE CSUM-12 TO P3-SUM12.
MOVE CSUM-13 TO W-SUM.
DIVIDE W-SUM BY 1000 GIVING W-SUM1 REMAINDER ZZ.
IF ZZ GREATER 500 ADD 1 TO W-SUM1.
MOVE W-SUM1 TO P3-SUM13.
MOVE CSUM-14 TO P3-SUM14.
COMPUTE CSUM-15 = CSUM-13 / CSUM-1.
MOVE CSUM-15 TO P3-SUM15.
MOVE SPACE TO P-CUT. WRITE P-CUT BEFORE 2.
WRITE P-CUT FROM DET3 BEFORE 3.
WRITE P-CUT FROM H-END BEFORE 2.
MOVE 'ACTE' TO P-CUT. WRITE P-CUT BEFORE 1.
MOVE '-----' TO P-CUT. WRITE P-CUT BEFORE 1.
MOVE P-K1 TO P-CUT. WRITE P-CUT BEFORE 1.
MOVE P-K2 TO P-CUT. WRITE P-CUT BEFORE 1.
MOVE P-K3 TO P-CUT. WRITE P-CUT BEFORE 1.
PRINT-HEAD-R3.
MOVE SPACE TO CUT.
WRITE P-CUT BEFORE NEWPAGE.
MOVE SPACE TO P-CUT.
WRITE P-CUT BEFORE 3.
ADD 1 TO CT-PAGE.
MOVE CT-PAGE TO P-PAGE.
WRITE P-CUT FROM H1 BEFORE 2.
MOVE 'JAN020' TO P-CODE.
WRITE P-CUT FROM H2 BEFORE 2.
WRITE P-CUT FROM H33 BEFORE 2.
WRITE P-CUT FROM H42 BEFORE 2.
MOVE ALL '-' TO P-CUT.
WRITE P-CUT BEFORE 1.
WRITE P-CUT FROM H43 BEFORE 1.
WRITE P-CUT FROM H-L BEFORE 1.
WRITE P-CUT FROM H53 BEFORE 1.
WRITE P-CUT FROM H63 BEFORE 1.
MOVE ALL '-' TO P-CUT.
WRITE P-CUT BEFORE 2.
MOVE 0 TO CT-LINE.

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ID DIVISION.
 PROGRAM-ID. JACO10A.
 * MONTHLY CONTROL REPORT OF GRAPHIC RECORD GENERATES *
 * ENVIRONMENT DIVISION.
 INPUT-OUTPUT SECTION.
 FILE-CONTROL.
 *
 SELECT MASTERC ASSIGN TO SYS013-MASTERC
 ORGANIZATION IS INDEXED
 ACCESS MODE IS DYNAMIC
 RECORD KEY IS MACDAT
 FILE STATUS IS AA.
 SELECT JAGPCPU ASSIGN TO SYS015-DA-3340-S-JAGPCPU.
 SELECT JAGPTPD ASSIGN TO SYS016-DA-3340-S-JAGPTPD.
 SELECT PFILE ASSIGN TO SYS006-UR-3203-S.
 *
 DATA DIVISION.
 FILE SECTION.
 FD MASTERC RECORD CONTAINS 180 CHARACTERS
 LABEL RECORD IS STANDARD
 DATA RECORD IS MASREC.
 01 MASREC.
 03 MACDAT PIC X(06).
 03 MACDAT PIC X(06).
 03 THOMAS OCCURS 3 TIMES.
 03 MJOJCH PIC 9(04) COMP-4.
 03 MJSTEP PIC 9(04) COMP-4.
 03 MCARE PIC 9(04) COMP-4.
 03 MELAPT PIC 9(08) COMP-3.
 03 MPELSS PIC 9(08) COMP-3.
 03 MIVH PIC 9(08) COMP-3.
 03 MWAIT PIC 9(06) COMP-3.
 03 MSICT PIC 9(09) COMP-4.
 03 MSICD PIC 9(09) COMP-4.
 03 MNCFRT PIC 9(09) COMP-4.
 03 MNCPAG PIC 9(09) COMP-4.
 03 MFRIT PIC 9(06) COMP-3.
 03 MSTRT PIC 9(06) COMP-3.
 03 MSTOP PIC 9(06) COMP-3.
 03 SPACEMAS PIC X(26).
 03 MASFC PIC X(02).
 03 MNCRDH PIC 9(04) COMP-4.
 03 MNCLST PIC 9(04) COMP-4.
 03 MNCEAK PIC 9(04) COMP-4.
 FD JAGPCPU RECORD CONTAINS 12 CHARACTERS
 LABEL RECORD IS STANDARD
 DATA RECORD IS CPU-REC.
 01 CPU-REC.
 03 CDATE PIC 9(06).
 03 CTYFE PIC X(01).
 03 GVALUE PIC 9(05).
 FD JAGPTPD RECORD CONTAINS 12 CHARACTERS
 LABEL RECORD IS STANDARD
 DATA RECORD IS TPDS-REC.
 01 TPDS-REC.
 03 CDATE PIC 9(06).
 03 CTYFE PIC X(01).
 03 GVALUE PIC 9(05).
 FD PFILE LABEL RECORD IS OMITTED.
 01 OUT PIC X(132).
 01 RE-CUT REDEFINES OUT.
 03 FILLER PIC X(05).
 03 P-CUT PIC X(129).
 *
 WORKING-STORAGE SECTION.
 77 WA PIC X(02).
 77 I PIC 9(02) VALUE 0.
 77 XX PIC 9(02) VALUE 0.
 77 W-MAX PIC 9(03) VALUE +0.
 77 W-AX PIC 9(03) VALUE 0.

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00081 77 CT-PAGE PIC 9(04) VALUE 0.
00082 77 CT-LINE PIC 9(02) VALUE 80.
00083 77 P1 PIC X(15) VALUE 'TOTAL READ FROM'.
00084 77 P2 PIC X(19) VALUE 'MASTER CONFIG FILE'.
00085 77 P3 PIC X(14) VALUE 'TOTAL COUNT BY'.
00086 77 P4 PIC X(12) VALUE 'THIS PROGRAM'.
00087 77 W-DT PIC 9(05) VALUE 0.
00088
00089 01 LINK-AREA.
00090 03 DATE-IN PIC 9(06).
00091 03 YEAR-TY PIC 9(02).
00092 03 DAY-WK PIC 9(09).
00093
00094 01 MDATE PIC 9(06).
00095 01 MDATE REDEFINES MDATE.
00096 03 DD PIC 9(02).
00097 03 MM PIC 9(02).
00098 03 YY PIC 9(02).
00099 01 XL PIC 9(02).
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00101 01 CDATE PIC 9(06).
00102 01 CDATE REDEFINES CDATE.
00103 03 CD PIC 9(02).
00104 03 CM PIC 9(02).
00105 03 CY PIC 9(02).
00106
00107 01 SUM-TIME PIC 9(07).
00108 01 SUM-TIME REDEFINES SUM-TIME.
00109 03 T-HH PIC 9(03).
00110 03 T-MM PIC 9(02).
00111 03 T-SS PIC 9(02).
00112
00113 01 W-HHMM PIC 9(05).
00114 01 W-HHMM REDEFINES W-HHMM.
00115 03 W-HH PIC 9(03).
00116 03 W-MM PIC 9(02).
00117
00118 01 SUM-OFT.
00119 03 SUM1 PIC 9(04) COMP-4 VALUE 0.
00120 03 SUM2 PIC 9(04) COMP-4 VALUE 0.
00121 03 SUM3 PIC 9(04) COMP-4 VALUE 0.
00122 03 SUM4 PIC 9(09).
00123 03 RE-SUM4 REDEFINES SUM4.
00124 05 S-T4 PIC 9(03).
00125 05 S-M4 PIC 9(03).
00126 05 S-S4 PIC 9(03).
00127 03 SUM5 PIC 9(09).
00128 03 RE-SUM5 REDEFINES SUM5.
00129 05 S-H5 PIC 9(03).
00130 05 S-M5 PIC 9(03).
00131 05 S-S5 PIC 9(03).
00132 03 SUM6 PIC 9(09).
00133 03 RE-SUM6 REDEFINES SUM6.
00134 05 S-H6 PIC 9(03).
00135 05 S-M6 PIC 9(03).
00136 05 S-S6 PIC 9(03).
00137 03 SUM7 PIC 9(09) COMP-4 VALUE 0.
00138 03 SUM8 PIC 9(09) COMP-4 VALUE 0.
00139
00140 03 SUM4A PIC 9(09).
00141 03 RE-SUM4A REDEFINES SUM4A.
00142 05 S-T4A PIC 9(03).
00143 05 S-M4A PIC 9(03).
00144 05 S-S4A PIC 9(03).
00145 03 SUM5A PIC 9(09).
00146 03 RE-SUM5A REDEFINES SUM5A.
00147 05 S-H5A PIC 9(03).
00148 05 S-M5A PIC 9(03).
00149 05 S-S5A PIC 9(03).
00150 03 SUM6A PIC 9(09).
00151 03 RE-SUM6A REDEFINES SUM6A.
00152 05 S-H6A PIC 9(03).
00153 05 S-M6A PIC 9(03).
00154 05 S-S6A PIC 9(03).
00155
00156 01 GSUM1 PIC 9(05) COMP-4 VALUE 0.
00157 01 GSUM2 PIC 9(05) COMP-4 VALUE 0.
00158 01 GSUM3 PIC 9(05) COMP-4 VALUE 0.
00159
00160 01 H1
00161 03 FILLER PIC X(56) VALUE

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00162          *JOB-ACCOUNTING SYSTEM*.
00163          03 FILLER          PIC X(58) VALUE 'COMPUTER SERVICE CENTER'.
00164          03 FILLER          PIC X(14) VALUE 'PAGE'.
00165          03 P-PAGE          PIC ZZZ9.
00166
00167          C1 H2.
00168          03 FILLER          PIC X(50) VALUE
00169          'REPORT CODE JA6010'.
00170          03 FILLER          PIC X(64) VALUE
00171          'CHULALONGKORN.....UNIVERSITY'.
00172          03 FILLER          PIC X(09) VALUE 'RUN DATE'.
00173          03 P-DD          PIC 99.
00174          03 FILLER          PIC X(01) VALUE '-'.
00175          03 P-MM          PIC X(03).
00176          03 FILLER          PIC X(01) VALUE '-'.
00177          03 P-YY          PIC 99.
00178
00179          C1 H3.
00180          03 FILLER          PIC X(40) VALUE SPACE.
00181          03 FILLER          PIC X(51) VALUE
00182          'MONTHLY CONTROL REPORT OF GRAPHIC RECORD GENERATION'.
00183
00184          C1 H4.
00185          03 FILLER          PIC X(55) VALUE SPACE.
00186          03 FILLER          PIC X(05) VALUE 'FLR'.
00187          03 P-MONTH          PIC X(11).
00188          03 FILLER          PIC X(02) VALUE '19'.
00189          03 P-KYY          PIC X(02).
00190
00191          C1 H5.
00192          03 FILLER          PIC X(40) VALUE ' DATE'.
00193          03 FILLER          PIC X(30) VALUE
00194          ' NO. OF NO. OF NO. OF PROCESSES'.
00195          03 FILLER          PIC X(62) VALUE
00196          ' OVERHEAD WAIT TAPE DISC'.
00197
00198          C1 H6.
00199          03 FILLER          PIC X(42) VALUE SPACE.
00200          05 FILLER          PIC X(52) VALUE
00201          'JOBS JOB AGENS TIME TIME TIME'.
00202          05 FILLER          PIC X(35) VALUE
00203          'SIC-COUNT SIC-COUNT'.
00204
00205          C1 H7.
00206          05 FILLER          PIC X(49) VALUE SPACE.
00207          05 FILLER          PIC X(70) VALUE
00208          'STEPS JOBS (HH.MM) (HH.MM) (HH.MM) (1,000S)
00209          '(1,000S)'.
00210
00211          C1 DET1.
00212          03 FILLER          PIC X(05) VALUE SPACE.
00213          03 P-DATE          PIC 99/99/99(31).
00214          03 P-DET REDEFINES P-DATE PIC X(59).
00215          03 P-SUM1          PIC ZZ,ZZ9B.
00216          03 P-SUM2          PIC ZZ,ZZ9B.
00217          03 P-SUM3          PIC ZZ,ZZ9BBB.
00218          03 P-SUM4.
00219          05 P-H4          PIC ZZ9.
00220          05 FILLER          PIC X(01) VALUE '..'.
00221          05 P-M4          PIC 9(02)BBB.
00222          03 P-SUM5.
00223          05 P-H5          PIC ZZ9.
00224          05 FILLER          PIC X(01) VALUE '..'.
00225          05 P-M5          PIC 9(02)BBB.
00226          03 P-SUM6.
00227          05 P-H6          PIC ZZ9.
00228          05 FILLER          PIC X(01) VALUE '..'.
00229          05 P-M6          PIC 9(02)BBB.
00230          03 P-SUM7          PIC ZZ,ZZZ,ZZ9BB.
00231          03 P-SUM8          PIC ZZ,ZZZ,ZZ9.
00232
00233          C1 H-END.
00234          03 FILLER          PIC X(58) VALUE SPACE.
00235          03 FILLER          PIC X(23) VALUE '*****'.
00236
00237          C1 TAB-DATE.
00238          03 TAB-C.
00239          05 M1          PIC X(03) VALUE 'JAN'.
00240          05 M2          PIC X(03) VALUE 'FEB'.
00241          05 M3          PIC X(03) VALUE 'MAR'.
00242          05 M4          PIC X(03) VALUE 'APR'.

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00324      MOVE MOVH(1)    TO SUM-TIME PERFORM SUM-CVERH.
00325      MOVE MOVH(2)    TO SUM-TIME PERFORM SUM-CVERH.
00326      MOVE MOVH(3)    TO SUM-TIME PERFORM SUM-CVERH.
00327
00328      MOVE WAIT(1)     TO SUM-TIME PERFORM SUM-WAIT.
00329      MOVE WAIT(2)     TO SUM-TIME PERFORM SUM-WAIT.
00330      MOVE WAIT(3)     TO SUM-TIME PERFORM SUM-WAIT.
00331
00332      ADD MSID(1) MSID(2) MSID(3) TO SUM7.
00333      ADD MSID(1) MSID(2) MSID(3) TO SUM8.
00334
00335      SET-REC.
00336
00337      *-----*
00338      * GENERATE JAGGRAPHIC.CPU *
00339      *-----*
00340      MOVE 'C' TO GTYPE IN CPU-REC.
00341      IF S-S4 GREATER 30 OR S-S4 = 30 ADD 1 TO S-M4.
00342      IF S-M4 = 60 MOVE 0 TO S-M4 ADD 1 TO S-H4.
00343      MOVE S-M4 TO W-MM P-M4. MOVE S-H4 TO W-HH P-H4.
00344      MOVE W-HHMM TO GVALUE IN CPU-REC.
00345      WRITE CPU-REC.
00346
00347      MOVE 'N' TO GTYPE IN CPU-REC.
00348      IF S-S5 GREATER 30 OR S-S5 = 30 ADD 1 TO S-M5.
00349      IF S-M5 = 60 MOVE 0 TO S-M5 ADD 1 TO S-H5.
00350      MOVE S-M5 TO W-MM P-M5. MOVE S-H5 TO W-HH P-H5.
00351      MOVE W-HHMM TO GVALUE IN CPU-REC.
00352      WRITE CPU-REC.
00353
00354      MOVE 'P' TO GTYPE IN CPU-REC.
00355      IF S-S6 GREATER 30 OR S-S6 = 30 ADD 1 TO S-M6.
00356      IF S-M6 = 60 MOVE 0 TO S-M6 ADD 1 TO S-H6.
00357      MOVE S-M6 TO W-MM P-M6. MOVE S-H6 TO W-HH P-H6.
00358      MOVE W-HHMM TO GVALUE IN CPU-REC.
00359      WRITE CPU-REC.
00360
00361      *-----GRAPHIC.CPU-----*
00362      MOVE 'C' TO GTYPE IN TPASC-REC.
00363      IF S-S4 GREATER 30 OR S-S4 = 30 ADD 1 TO S-M4.
00364      IF S-M4 = 60 MOVE 0 TO S-M4 ADD 1 TO S-H4.
00365      MOVE S-M4 TO W-MM P-M4. MOVE S-H4 TO W-HH P-H4.
00366      MOVE W-HHMM TO GVALUE IN TPASC-REC.
00367      WRITE TPASC-REC.
00368
00369      MOVE 'N' TO GTYPE IN TPASC-REC.
00370      IF S-S5 GREATER 30 OR S-S5 = 30 ADD 1 TO S-M5.
00371      IF S-M5 = 60 MOVE 0 TO S-M5 ADD 1 TO S-H5.
00372      MOVE S-M5 TO W-MM P-M5. MOVE S-H5 TO W-HH P-H5.
00373      MOVE W-HHMM TO GVALUE IN TPASC-REC.
00374      WRITE TPASC-REC.
00375
00376      MOVE 'W' TO GTYPE IN TPASC-REC.
00377      IF S-S6 GREATER 30 OR S-S6 = 30 ADD 1 TO S-M6.
00378      IF S-M6 = 60 MOVE 0 TO S-M6 ADD 1 TO S-H6.
00379      MOVE S-M6 TO W-MM P-M6. MOVE S-H6 TO W-HH P-H6.
00380      MOVE W-HHMM TO GVALUE IN TPASC-REC.
00381      WRITE TPASC-REC.
00382
00383      *-----*
00384      DIVIDE SUM8 BY 1000 GIVING W-DT REMAINDER W-XX.
00385      IF W-XX GREATER 500 OR W-XX = 500
00386      ADD 1 TO W-DT.
00387      MOVE W-DT TO P-SUM8.
00388      DIVIDE SUM7 BY 1000 GIVING W-DT REMAINDER W-XX.
00389      IF W-XX GREATER 500 OR W-XX = 500
00390      ADD 1 TO W-DT.
00391      MOVE W-DT TO P-SUM7.
00392      P-DETAIL.
00393      PERFORM PRINT-DET THRU DET-EXIT.
00394      ADD SUM1 TO GSUM1. ADD SUM2 TO GSUM2. ADD SUM3 TO GSUM3.
00395      MOVE 0 TO SUM1 SUM2 SUM3 SUM4 SUM5 SUM6 SUM7 SUM8 SUM4A
00396      SUM5A SUM6A.
00397
00398      *
00399      END-RUN.
00400      CLOSE MASTERC JAGCPU JAGTPD PFILE.
00401      STOP RUN.
00402
00403      ***** SUPROUTINE *****
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* SUMMARY H-H-M-M-SS *
*****
SUM-C.
ADD T-SS TO S-S4.
IF S-S4 LESS 60 ADD T-MM TO S-M4
ELSE MOVE S-S4 TO W-MAX
DIVIDE W-MAX BY 60 GIVING XX REMAINDER S-S4
ADD XX TO S-M4 ADD T-MM TO S-M4.
IF S-M4 LESS 60 ADD T-HH TO S-H4
ELSE MOVE S-M4 TO W-MAX
DIVIDE W-MAX BY 60 GIVING XX REMAINDER S-M4
ADD XX TO S-H4 ADD T-HH TO S-H4.

SUM-N.
ADD T-SS TO S-S5.
IF S-S5 LESS 60 ADD T-MM TO S-M5
ELSE MOVE S-S5 TO W-MAX
DIVIDE W-MAX BY 60 GIVING XX REMAINDER S-S5
ADD XX TO S-M5 ADD T-MM TO S-M5.
IF S-M5 LESS 60 ADD T-HH TO S-H5
ELSE MOVE S-M5 TO W-MAX
DIVIDE W-MAX BY 60 GIVING XX REMAINDER S-M5
ADD XX TO S-H5 ADD T-HH TO S-H5.

SUM-P.
ADD T-SS TO S-S6.
IF S-S6 LESS 60 ADD T-MM TO S-M6
ELSE MOVE S-S6 TO W-MAX
DIVIDE W-MAX BY 60 GIVING XX REMAINDER S-S6
ADD XX TO S-M6 ADD T-MM TO S-M6.
IF S-M6 LESS 60 ADD T-HH TO S-H6
ELSE MOVE S-M6 TO W-MAX
DIVIDE W-MAX BY 60 GIVING XX REMAINDER S-M6
ADD XX TO S-H6 ADD T-HH TO S-H6.

SUM-PRCESS.
ADD T-SS TO S-S4A.
IF S-S4A LESS 60 ADD T-MM TO S-M4A
ELSE MOVE S-S4A TO W-MAX
DIVIDE W-MAX BY 60 GIVING XX REMAINDER S-S4A
ADD XX TO S-M4A ADD T-MM TO S-M4A.
IF S-M4A LESS 60 ADD T-HH TO S-H4A
ELSE MOVE S-M4A TO W-MAX
DIVIDE W-MAX BY 60 GIVING XX REMAINDER S-M4A
ADD XX TO S-H4A ADD T-HH TO S-H4A.

SUM-OVERH.
ADD T-SS TO S-S5A.
IF S-S5A LESS 60 ADD T-MM TO S-M5A
ELSE MOVE S-S5A TO W-MAX
DIVIDE W-MAX BY 60 GIVING XX REMAINDER S-S5A
ADD XX TO S-M5A ADD T-MM TO S-M5A.
IF S-M5A LESS 60 ADD T-HH TO S-H5A
ELSE MOVE S-M5A TO W-MAX
DIVIDE W-MAX BY 60 GIVING XX REMAINDER S-M5A
ADD XX TO S-H5A ADD T-HH TO S-H5A.

SUM-WAIT.
ADD T-SS TO S-S6A.
IF S-S6A LESS 60 ADD T-MM TO S-M6A
ELSE MOVE S-S6A TO W-MAX
DIVIDE W-MAX BY 60 GIVING XX REMAINDER S-S6A
ADD XX TO S-M6A ADD T-MM TO S-M6A.
IF S-M6A LESS 60 ADD T-HH TO S-H6A
ELSE MOVE S-M6A TO W-MAX
DIVIDE W-MAX BY 60 GIVING XX REMAINDER S-M6A
ADD XX TO S-H6A ADD T-HH TO S-H6A.

* PRINT DETAIL ROUTINE *
*****
PRINT-DET.
IF CT-LINE GREATER 36 PERFORM PRINT-HEAD.
MOVE MACDAT TO CDATE. PERFORM IF-DATE1. MOVE CDATE TO P-DATE.
WRITE CUT FROM DET1 BEFORE 2.
ADD 1 TO CT-LINE.
DET-EXIT. EXIT.

* PRINT HEAD *
*****
PRINT-HEAD
MOVE SPACE TO CUT.

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00486 WRITE OUT BEFORE PAGE.
00487 MOVE SPACE TO OUT.
00488 WRITE OUT BEFORE 3.
00489 ADD 1 TO CT-PAGE.
00490 MOVE CT-PAGE TO P-PAGE.
00491 WRITE OUT FROM H1 BEFORE 2.
00492 WRITE OUT FROM H2 BEFORE 2.
00493 WRITE OUT FROM H3 BEFORE 2.
00494 WRITE OUT FROM H4 BEFORE 2.
00495 MOVE ALL '-' TO OUT.
00496 WRITE OUT BEFORE 1.
00497 WRITE OUT FROM H5 BEFORE 1.
00498 WRITE OUT FROM H6 BEFORE 1.
00499 WRITE OUT FROM H7 BEFORE 1.
00500 MOVE ALL '-' TO OUT.
00501 WRITE OUT BEFORE 2.
00502 MOVE 0 TO CT-LINE.
00503 *
00504 * PRINT-END.
00505 IF CT-LINE GREATER 50 PERFORM PRINT-HEAD.
00506 MOVE SPACE TO OUT. WRITE OUT BEFORE 1.
00507 MOVE P1 TO P-OUT. WRITE OUT BEFORE 1.
00508 MOVE P2 TO P-DET.
00509 WRITE OUT FROM DET1 BEFORE 2.
00510 MOVE P3 TO P-OUT. WRITE OUT BEFORE 1.
00511 MOVE SPACE TO DET1.
00512 MOVE P4 TO P-DET.
00513 MOVE GSUM1 TO P-SUM1.
00514 MOVE GSUM2 TO P-SUM.
00515 MOVE GSUM3 TO P-SUM3.
00516 WRITE OUT FROM SET1 BEFORE 2.
00517 IF SUM1 NOT = GSUM1 OR SUM2 NOT = GSUM2 OR SUM3 NOT = GSUM3
00518 MOVE '*** GROUP OF NO. OF JOB WAS COUNTED BY THIS PROGRAM NOT
- EQUAL AS TOTAL FROM MASTER CONTROL FILE ***' TO OUT
00519 WRITE OUT BEFORE 1.
00520 MOVE '*** PLEASE CAREFULLY CHECK ***' TO OUT
00521 WRITE OUT BEFORE 1.
00522 WRITE OUT FROM H-END BEFORE 1.
00523 *
00524 *
00525 * (YYMMDD) *
00526 *****
00527 TF-DATE.
00528 MOVE DD TO KD.
00529 MOVE YY TO DD.
00530 MOVE KD TO YY.
00531 *
00532 * (YYMMDD) *
00533 *****
00534 TF-DATE1.
00535 MOVE CD TO KD.
00536 MOVE CY TO CD.
00537 MOVE KC TO CY.

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CBL APCST
00001 ID DIVISION-
00002 PROGRAM-ID. JA6011A.
00003 *
00004 * CPU'S UTILIZATION BY THREE MAJOR GROUPS DURING THE MONTH *
00005 *
00006 ENVIRONMENT DIVISION-
00007 INPUT-OUTPUT SECTION.
00008 FILE-CONTROL.
00009 *
00010 SELECT JAGRPH1 ASSIGN TO SYS015-DA-3340-S-JAGRPH1.
00011 SELECT JASURTG ASSIGN TO SYS017-DA-3340-S-JASURTG.
00012 SELECT WKSURTF ASSIGN TO SYS001-DA-3340-S-SURTRK1.
00013 SELECT PFILE ASSIGN TO SYS006-UR-3203-S.
00014
00015 *
00016 DATA DIVISION-
00017 FILE SECTION.
00018
00019 FD JAGRPH1 RECORD CONTAINS 12 CHARACTERS
00020 LABEL RECORD IS STANDARD
00021 DATA RECORD IS CPU-REC.
00022
00023 DI CPU-REC PIC X(12).
00024
00025 FD JASURTG RECORD CONTAINS 12 CHARACTERS
00026 LABEL RECORD IS STANDARD
00027 DATA RECORD IS SUPTG-REC.
00028
00029 DI SUPTG-REC.
00030 03 CCATE PIC 9(05).
00031 03 CTYPE PIC X(01).
00032 03 SVALUE PIC 9(05).
00033
00034 SD WKSURTF LABEL RECORD IS STANDARD.
00035 CI S-REC.
00036 03 CCATE PIC 9(05).
00037 03 CTYPE PIC X(01).
00038 03 SVALUE PIC 9(05).
00039
00040 FD PFILE LABEL RECORD IS LIMITED.
00041 CI CUT PIC X(132).
00042 01 RE-OUT REDEFINES CUT.
00043 03 P-SPACE PIC X(05).
00044 03 P-CUT PIC X(126).
00045
00046 *
00047 WORKING-STORAGE SECTION.
00048 77 I PIC 9(02) VALUE 0.
00049 77 K PIC 9(02) VALUE 0.
00050 77 A PIC 9(02) VALUE 0.
00051 77 B PIC 9(02) VALUE 0.
00052 77 XX PIC 9(02) VALUE 0.
00053 77 ER PIC 9(03) VALUE 0.
00054 77 FG2 PIC 9(01) VALUE 0.
00055 77 CT-DAY PIC 9(02) VALUE 0.
00056 77 CT-P PIC 9(06) VALUE 0.
00057 77 CT-C PIC 9(06) VALUE 0.
00058 77 CT-W PIC 9(06) VALUE 0.
00059 77 W-MAX PIC 99(05) VALUE +0.
00060 77 W-RANGE PIC 9(02) VALUE 0.
00061 77 W-CE PIC 9(04) VALUE 0.
00062 77 W-PRINT PIC 9(01) VALUE 0.
00063 77 W-XCE PIC 9(03) VALUE 0.
00064 77 P1 PIC X(30) VALUE
00065 'C = CHULALONGKORN'S JOB'.
00066 77 P2 PIC X(30) VALUE
00067 'N = NONCHULALONGKORN'S JOB'.
00068 77 P3 PIC X(30) VALUE
00069 'P = PAYMENT'S JOB'.
00070 77 P4 PIC X(16) VALUE
00071 'TOTAL THIS MONTH'.
00072 77 P5 PIC X(12) VALUE
00073 'AVERAGE/DAY'.
00074
00075 CI TAB-ADD PIC 9(12) VALUE 144025036146.
00076 01 R-TAB40 REDEFINES TAB-ADD.
00077 05 TAB-A1 PIC 9(01) OCCURS 12 TIMES.
00078
00079 01 TAB-DY1.
00080 03 FILLER PIC X(02) VALUE 'SU'.
00081 03 FILLER PIC X(02) VALUE 'MC'.
00082 03 FILLER PIC X(02) VALUE 'TU'.

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00081 05 FILLER PIC X(02) VALUE 'WD'.
00082 03 FILLER PIC X(02) VALUE 'TH'.
00083 05 FILLER PIC X(02) VALUE 'FR'.
00084 03 FILLER PIC X(02) VALUE 'ST'.
00085 01 TAB-DY2 REDEFINES TAB-DY1.
00086 03 TAB-DAY PIC X(02) OCCURS 7 TIMES.
00087 01 DATE-IN.
00088 03 D-IN PIC 99.
00089 03 M-IN PIC 99.
00090 03 Y-IN PIC 99.
00091 01 P-IN PIC 99.
00092 01 SUM-NUM PIC 9(04) VALUE 0.
00093
00094 01 K-VALUE PIC 9(04).
00095 01 RE-VALUE REDEFINES K-VALUE.
00096 03 K-FF PIC 9(02).
00097 03 K-MM PIC 9(02).
00098
00099 01 X-VALUE PIC 9(05).
00100 01 RE-VALUE REDEFINES X-VALUE.
00101 03 X-HH PIC 9(03).
00102 03 X-MM PIC 9(02).
00103
00104 01 K-VALUE PIC X(05).
00105 01 RE-KVALUE REDEFINES K-VALUE.
00106 03 K1 PIC X(02).
00107 03 P-DST PIC X(01).
00108 03 K2 PIC X(02).
00109
00110 01 MDATE PIC 9(06).
00111 01 MDATE REDEFINES MDATE.
00112 03 DD PIC 9(02).
00113 03 PM PIC 9(02).
00114 03 YY PIC 9(02).
00115 01 CC-LATE.
00116 03 CC-YY PIC 9(02).
00117 03 CC-MM PIC 9(02).
00118 03 CC-DD PIC 9(02).
00119 01 KC PIC 9(02).
00120
00121 01 H1.
00122 03 FILLER PIC X(56) VALUE
00123 'JOB-ACCOUNTING SYSTEM'.
00124 03 FILLER PIC X(58) VALUE 'COMPUTING SERVICE CENTER'.
00125 03 FILLER PIC X(18) VALUE 'PAGE 1/1'.
00126
00127 01 H2.
00128 03 FILLER PIC X(50) VALUE
00129 'REPORT CODE JA6011'.
00130 03 FILLER PIC X(54) VALUE
00131 'CHULALANGKERN.....UNIVERSITY'.
00132 03 FILLER PIC X(09) VALUE 'RUN DATE'.
00133 03 P-DD PIC 99.
00134 03 FILLER PIC X(01) VALUE '-'.
00135 03 P-MM PIC X(03).
00136 03 FILLER PIC X(01) VALUE '-'.
00137 03 P-YY PIC 99.
00138
00139 01 H3.
00140 03 FILLER PIC X(29) VALUE SPACE.
00141 03 FILLER PIC X(58) VALUE
00142 'CPU'S UTILIZATION BY THREE MAJOR GROUPS DURING THE MONTH'.
00143 03 H.
00144 03 P-MONTH PIC X(11).
00145 03 FILLER PIC X(02) VALUE '19'.
00146 03 P-KYY PIC X(02).
00147
00148 01 H-END.
00149 03 FILLER PIC X(47) VALUE SPACE.
00150 03 HL1 PIC X(16).
00151 03 FILLER PIC X(10) VALUE SPACE.
00152 03 HL2 PIC X(12).
00153
00154 01 DET-END.
00155 03 FILLER PIC X(20) VALUE SPACE.
00156 03 P-END PIC X(31).
00157 03 P-D1 PIC Z99.
00158 03 FILLER PIC X(01) VALUE '.'.
00159 03 P-D2 PIC 999(17).
00160 03 P-A1 PIC Z99.
00161 03 FILLER PIC X(01) VALUE '.'.

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MOVE YY TO P-YY.
MOVE I TO P-DCT.
PERFORM MOVE-ZERO-SPACE VARYING I FROM 1 BY 1
UNTIL I GREATER 31.
*
RD-FIRST-REC.
READ JASCRIG AT END GO TO END-RTN.
MOVE SDATE TO MDATE.
PERFORM IF-DATE.
MOVE AM TO I.
MOVE M-TAB(I) TO P-MONTH.
MOVE YY TO P-KYY.
IF GTYPE = 'C' AND DD = 99 MOVE GVALUE TO CT-P
PERFORM PRINT-HEAD
GO TO RD-JASCRIG.
IF GTYPE = 'N' AND DD = 99 MOVE GVALUE TO CT-C
PERFORM PRINT-HEAD
GO TO RD-JASCRIG.
IF GTYPE = 'P' AND DD = 99 MOVE GVALUE TO CT-W
PERFORM PRINT-HEAD
GO TO RD-JASCRIG.
*
RD-JASCRIG.
READ JASCRIG AT END PERFORM PR-END-RTN.
PERFORM PRINT-END GO TO END-RTN.
MOVE SDATE TO MDATE. PERFORM IF-DATE.
IF GTYPE = 'C' AND DD = 99 MOVE GVALUE TO CT-P
GO TO RD-JASCRIG.
IF GTYPE = 'N' AND DD = 99 MOVE GVALUE TO CT-C
GO TO RD-JASCRIG.
IF GTYPE = 'P' AND DD = 99 MOVE GVALUE TO CT-W
GO TO RD-JASCRIG.
IF FG2 = 1 GO TO COMPARE-DATA.
IF FG2 = 0 MOVE 1 TO FG2
PERFORM CHECK-DAY MOVE 1 TO DD
SUBTRACT 1 FROM XX
PERFORM FIND-DAY VARYING I FROM 1 BY 1
UNTIL I GREATER XX.
*****
* ** FOR CALCULATE ESTIMATED RANGE **
*****
* W-MAX = HIGH VALUE OF THIS MONTH
* ER = ESTIMATED RANGE
* ER = MAXIMUM SIC / 52
* A = ER / 10 REMAINDER B
* IF B LESS 5 OR B = 5 B = 5
* IF B GREATER 5 B = 10
* RANGE = A * 10 + B
* W-MAX = 54 * RANGE
*****
FIND-ESTIMATED-RANGE.
MOVE GVALUE TO W-VALUE.
COMPUTE W-VALUE = W-HH * 60 + W-MM.
DIVIDE W-VALUE BY 52 GIVING ER.
DIVIDE ER BY 10 GIVING A REMAINDER B.
IF B LESS 5 OR B = 5 MOVE 5 TO B
ELSE MOVE 10 TO B.
COMPUTE W-RANGE = A * 10 + B.
COMPUTE W-MAX = 54 * W-RANGE.
DIVIDE W-MAX BY 60 GIVING W-HH REMAINDER W-MM.
MOVE W-VALUE TO RUN-TAB(I).
MOVE W-HH TO K1. MOVE W-MM TO K2.
MOVE K-VALUE TO ROW-SCALE(I).
PERFORM MOVE-ROW-SCALE VARYING I FROM 2 BY 1
UNTIL I GREATER 56.
MOVE SDATE TO MDATE. PERFORM IF-DATE.
MOVE 2 TO I.
*
COMPARE-DATA.
IF I GREATER 56 GO TO RD-COUNT.
IF GVALUE LESS WUN-TAB(I) OR GVALUE = RUN-TAB(I)
PERFORM PRINT-DET ADD 1 TO I
GO TO COMPARE-DATA
ELSE MOVE GTYPE TO ROW-VALUE(DD)
MOVE I TO ROW-FLAG(DD).
RD-COUNT.
IF GTYPE = 'C' ADD 1 TO CT-DAY.
GO TO RD-JASCRIG.
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00324 END-RTN.
00325 CLOSE JASORTG PFILE.
00326 STOP RUN.
00327 ***** SUB ROUTINE *****
00328 CHECK-DAY.
00330 IF MM = 2 COMPUTE W-CE = 1900 + YY
00331 DIVIDE W-CE BY 4 GIVING W-XCE REMAINDER B
00332 IF B = 0 PERFORM MOVE-DAY VARYING I FROM 1 BY 1
00333 UNTIL I GREATER 29 MOVE I TO XX
00334 ELSE PERFORM MOVE-DAY VARYING I FROM 1 BY 1
00335 UNTIL I GREATER 28 MOVE I TO XX.
00336 IF MM = 1 OR 3 OR 5 OR 7 OR 8 OR 10 OR 12
00337 PERFORM MOVE-DAY VARYING I FROM 1 BY 1
00338 UNTIL I GREATER 31 MOVE I TO XX.
00339 IF MM = 4 OR 6 OR 9 OR 11
00340 PERFORM MOVE-DAY VARYING I FROM 1 BY 1
00341 UNTIL I GREATER 30 MOVE I TO XX.
00342 FIND-DAY.
00343 MOVE MDATE TO DATE-IN.
00344 MOVE Y-IN TO SUM-NUM.
00345 DIVIDE 4 INTO Y-IN GIVING Y-IN REMAINDER P.
00346 IF P = 0 MOVE 0 TO TAB-A1(1)
00347 MOVE 3 TO TAB-A1(2)
00348 ELSE
00349 MOVE 1 TO TAB-A1(1)
00350 MOVE 4 TO TAB-A1(2).
00351 ADD Y-IN * 7 IN TAB-A1(M-IN) TO SUM-NUM.
00352 DIVIDE 7 INTO SUM-NUM GIVING SUM-NUM REMAINDER P.
00353 IF P = 0 MOVE 7 TO P.
00354 MOVE TAB-DAY(P) TO DAY-PR(1).
00355 IF TAB-DAY(P) = 'SU' MOVE 'SU' TO SUNDAY-PR(1).
00356 ADD 1 TO DD.
00357 * *
00358 * PRINT DETAIL *
00359 *****
00360 PRINT-DET.
00361 SUBTRACT 1 FROM 1.
00362 MOVE ROW-SCALE(1) TO ROW-SCALE-C.
00363 IF W-PRINT = 1 OR 2 OR 3 OR 4
00364 MOVE SPACE TO ROW-SCALE-C.
00365 IF W-PRINT = 5 MOVE 0 TO W-PRINT.
00366 IF I = 55 MOVE ' ' TO ROW-SCALE-C.
00367 WRITE OUT FROM PR-DTAL-LN BEFORE 1.
00368 PERFORM WRITE-OUT VARYING K FROM 1 BY 1 UNTIL K GREATER 31.
00369 ADD 1 TO W-PRINT 1.
00370 * *
00371 * PRINT HEAD *
00372 *****
00373 PRINT-HEAD.
00374 MOVE SPACE TO CUT.
00375 WRITE CUT BEFORE PAGE.
00376 MOVE SPACE TO CUT.
00377 WRITE CUT BEFORE 3.
00378 WRITE CUT FROM H1 BEFORE 2.
00379 WRITE CUT FROM H2 BEFORE 2.
00380 WRITE CUT FROM H3 BEFORE 2.
00381 MOVE 'HOURS' TO OUT. WRITE OUT BEFORE 1.
00382 MOVE '(HH.MM)' TO OUT. WRITE OUT BEFORE 2.
00383 *
00384 PR-END-RTN.
00385 PERFORM PRINT-DET VARYING I FROM 1 BY 1 UNTIL I GREATER 56.
00386 MOVE-ROW-SCALE.
00387 IF W-MM LESS W-RANGE ADD 60 TO W-MM
00388 SUBTRACT 1 FROM W-FH.
00389 IF W-MM = 0 MOVE 60 TO W-MM
00390 SUBTRACT 1 FROM W-HH.
00391 SUBTRACT W-RANGE FROM W-MM.
00392 MOVE W-VALUE TO ROW-TAB(1).
00393 MOVE W-HH TO K1. MOVE W-MM TO K2.
00394 MOVE K-VALUE TO ROW-SCALE(1).
00395 MOVE-ZERO-SPACE.
00396 MOVE ZERO TO ROW-FLAG(1).
00397 MOVE SPACE TO ROW-VALUE(1) SUNDAY-PR(1)
00398 DAY-PR(1) DATE-PR(1).
00399 MOVE-DAY.
00400 MOVE 1 TO DATE-PR(1).
00401 WRITE-OUT.
00402 IF ROW-FLAG(K) = 1 MOVE '.' TO ROW-VALUE(K).
00403 * *
00404 * PRINT END RTN. *

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00405 *****
00406 PRINT-END.
00407 MOVE ALL '-' TO P-DJT. MOVE SPACE TO P-SPACE.
00408 WRITE OUT BEFORE 1.
00409 WRITE OUT FROM PR-DATE-LN BEFORE 1.
00410 WRITE OUT FROM PR-SUNDAY-LN BEFORE 0.
00411 WRITE OUT FROM PR-SUNDAY-LN BEFORE 0.
00412 WRITE OUT FROM PR-DAY-LN BEFORE 3.
00413 MOVE P3 TO P11. MOVE P4 TO HL2.
00414 WRITE OUT FROM H-IND BEFORE 1.
00415 MOVE ALL '-' TO HL1 HL2.
00416 WRITE OUT FROM H-END BEFORE 2.
00417 MOVE P1 TO P-END.
00418 MOVE CT-P TO X-VALUE.
00419 MOVE X-HH TO P-D1. MOVE X-MM TO P-D2.
00420 COMPUTE X-VALUE = X-HH * 60 + X-MM.
00421 DIVIDE X-VALUE BY CT-DAY GIVING W-VALUE ROUNDED.
00422 *
00423 DIVIDE W-VALUE BY 60 GIVING W-HH REMAINDER W-MM.
00424 MOVE W-HH TO P-A1. MOVE W-MM TO P-A2.
00425 WRITE OUT FROM DET-END BEFORE 2.
00426 MOVE P2 TO P-END.
00427 MOVE CT-L TO X-VALUE.
00428 MOVE X-HH TO P-D1. MOVE X-MM TO P-D2.
00429 COMPUTE X-VALUE = X-HH * 60 + X-MM.
00430 DIVIDE X-VALUE BY CT-DAY GIVING W-VALUE ROUNDED.
00431 *
00432 DIVIDE W-VALUE BY 60 GIVING W-HH REMAINDER W-MM.
00433 MOVE W-HH TO P-A1. MOVE W-MM TO P-A2.
00434 WRITE OUT FROM DET-END BEFORE 2.
00435 MOVE P5 TO P-END.
00436 MOVE CT-W TO X-VALUE.
00437 MOVE X-HH TO P-D1. MOVE X-MM TO P-D2.
00438 COMPUTE X-VALUE = X-HH * 60 + X-MM.
00439 DIVIDE X-VALUE BY CT-DAY GIVING W-VALUE ROUNDED.
00440 *
00441 DIVIDE W-VALUE BY 60 GIVING W-HH REMAINDER W-MM.
00442 MOVE W-HH TO P-A1. MOVE W-MM TO P-A2.
00443 WRITE OUT FROM DET-END BEFORE 2.
00444 *
00445 * (YYMMDD) *
00446 *****
00447 IF-DATE.
00448 MOVE DD TO KD.
00449 MOVE YY TO DD.
00450 MOVE KD TO YY.

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CPL APOST
00001 ID DIVISION.
00002 PROGRAM-ID. JA6012A.
00003 *
00004 * GRAPHICAL RECORD OF CPU UTILIZATION FOR THE MONTH *
00005 *
00006 ENVIRONMENT DIVISION.
00007 INPUT-OUTPUT SECTION.
00008 FILE-CONTROL.
00009 *
00010 SELECT JAGRPH2 ASSIGN TO SYS016-DA-3340-S-JAGRPH2.
00011 SELECT JASORTG ASSIGN TO SYS017-JA-3340-S-JASORTG.
00012 SELECT WKSORTF ASSIGN TO SYS001-DA-3340-S-SORTWK1.
00013 *
00014 SELECT PFILE ASSIGN TO SYS006-UR-3203-S.
00015 *
00016 DATA DIVISION.
00017 FILE SECTION.
00018 FD JAGRPH2 RECORD CONTAINS 12 CHARACTERS
00019 LABEL RECORD IS STANDARD
00020 DATA RECORD IS CPU-REC.
00021 01 CPU-REC PIC X(12).
00022 *
00023 FD JASORTG RECORD CONTAINS 12 CHARACTERS
00024 LABEL RECORD IS STANDARD
00025 DATA RECORD IS SORTG-REC.
00026 01 SORTG-REC.
00027 03 DATE PIC 9(08).
00028 03 STYPE PIC X(01).
00029 03 CVALUE PIC 9(05).
00030 *
00031 SD WKSORTF LABEL RECORD IS STANDARD.
00032 01 S-REC.
00033 03 DATE PIC 9(08).
00034 03 STYPE PIC X(01).
00035 03 SVALUE PIC 9(05).
00036 *
00037 FD PFILE LABEL RECORD IS OMITTED.
00038 01 CUT PIC X(152).
00039 01 RE-CUT REDEFINES CUT.
00040 03 P-SPACE PIC X(06).
00041 03 P-CUT PIC X(126).
00042 *
00043 WORKING-STORAGE SECTION.
00044 77 I PIC 9(02) VALUE 0.
00045 77 K PIC 9(02) VALUE 0.
00046 77 A PIC 9(02) VALUE 0.
00047 77 B PIC 9(02) VALUE 0.
00048 77 XX PIC 9(02) VALUE 0.
00049 77 ER PIC 9(03) VALUE 0.
00050 77 FG2 PIC 9(01) VALUE 0.
00051 77 CI-LAY PIC 9(02) VALUE 0.
00052 77 CI-P PIC 9(06) VALUE 0.
00053 77 CI-C PIC 9(06) VALUE 0.
00054 77 CT-W PIC 9(06) VALUE 0.
00055 77 W-MAX PIC 9(05) VALUE +0.
00056 77 W-RANGE PIC 9(02) VALUE 0.
00057 77 W-CE PIC 9(04) VALUE 0.
00058 77 W-PRINT PIC 9(01) VALUE 0.
00059 77 W-XCE PIC 9(03) VALUE 0.
00060 77 P1 PIC X(30) VALUE
00061 'P = PROBLEM PROGRAM CPU TIME'.
00062 77 P2 PIC X(30) VALUE
00063 'C = OVERHEAD TIME'.
00064 77 P5 PIC X(30) VALUE
00065 'W = WAIT TIME'.
00066 77 P3 PIC X(16) VALUE
00067 'TOTAL THIS MONTH'.
00068 77 P4 PIC X(12) VALUE
00069 'AVERAGE/DAY'.
00070 *
00071 01 TAB-ADD PIC 9(12) VALUE 144025036146.
00072 01 K-TAB-ADD REDEFINES TAB-ADD.
00073 05 TAB-A1 PIC 9(01) OCCURS 12 TIMES.
00074 *
00075 01 TAB-DY1.
00076 03 FILLER PIC X(02) VALUE 'SU'.
00077 03 FILLER PIC X(02) VALUE 'MC'.
00078 03 FILLER PIC X(02) VALUE 'TU'.

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00081 03 FILLER PIC X(02) VALUE 'ND'.
00082 03 FILLER PIC X(02) VALUE 'TH'.
00083 03 FILLER PIC X(02) VALUE 'FR'.
00084 03 FILLER PIC X(02) VALUE 'ST'.
00085 01 TAB-JYZ REDEFINES TAB-DY1.
00086 03 TAB-DAY PIC X(02) OCCURS 7 TIMES.
00087 01 DATE-IN.
00088 03 C-IN PIC 99.
00089 03 M-IN PIC 99.
00090 03 Y-IN PIC 99.
00091 01 P PIC 99.
00092 01 SUM-NUM PIC 9(04) VALUE 0.
00093
00094 01 W-VALUE PIC 9(04).
00095 01 RE-VALUE REDEFINES W-VALUE.
00096 03 W-FF PIC 9(02).
00097 03 W-PM PIC 9(02).
00098
00099 01 X-VALUE PIC 9(05).
00100 01 RE-VALUE REDEFINES X-VALUE.
00101 03 X-FF PIC 9(02).
00102 03 X-PM PIC 9(02).
00103
00104 01 K-VALUE PIC X(05).
00105 01 RE-KVALUE REDEFINES K-VALUE.
00106 03 K1 PIC X(02).
00107 03 P-DST PIC X(01).
00108 03 K2 PIC X(02).
00109
00110 01 MDATE PIC 9(06).
00111 01 MDATE REDEFINES MDATE.
00112 03 DD PIC 9(02).
00113 03 MM PIC 9(02).
00114 03 YY PIC 9(02).
00115 01 CC-DATE.
00116 03 CC-YY PIC 9(02).
00117 03 CC-MM PIC 9(02).
00118 03 CC-DD PIC 9(02).
00119 01 KD PIC 9(02).
00120
00121 01 H1.
00122 03 FILLER PIC X(56) VALUE
00123 'JOB-ACCOUNTING PROJECT'.
00124 03 FILLER PIC X(58) VALUE 'COMPUTER SERVICE CENTER'.
00125 03 FILLER PIC X(18) VALUE 'PAGE 1/1'.
00126
00127 01 H2.
00128 03 FILLER PIC X(50) VALUE
00129 'REPORT CODE JA6012'.
00130 03 FILLER PIC X(64) VALUE
00131 'CHULALANGKORN.....UNIVERSITY'.
00132 03 FILLER PIC X(09) VALUE 'RUN DATE'.
00133 03 P-DD PIC 99.
00134 03 FILLER PIC X(01) VALUE '-'.
00135 03 P-MM PIC X(03).
00136 03 FILLER PIC X(01) VALUE '-'.
00137 03 P-YY PIC 99.
00138
00139 01 H3.
00140 03 FILLER PIC X(33) VALUE SPACE.
00141 03 FILLER PIC X(51) VALUE
00142 'GRAPHICAL RECORD OF CPU UTILIZATION FOR THE MONTH'.
00143 03 P-MONTH PIC X(11).
00144 03 FILLER PIC X(02) VALUE '19'.
00145 03 P-KYY PIC X(02).
00146
00147 01 H-END.
00148 03 FILLER PIC X(47) VALUE SPACE.
00149 03 HL1 PIC X(16).
00150 03 FILLER PIC X(10) VALUE SPACE.
00151 03 HL2 PIC X(12).
00152
00153 01 DET-END.
00154 03 FILLER PIC X(20) VALUE SPACE.
00155 03 P-END PIC X(31).
00156 03 P-D1 PIC Z99.
00157 03 FILLER PIC X(01) VALUE '..'.
00158 03 P-D2 PIC 998(17).
00159 03 P-A1 PIC Z99.
00160 03 FILLER PIC X(01) VALUE '..'.
00161 03 P-A2 PIC 99.

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01 RANGE-TBL.
03 RUN-TAB PIC S9(05) OCCURS 56 TIMES.

01 SCALE-TBL.
03 RUN-SCALE PIC X(05) OCCURS 56 TIMES.

01 PR-DIAL-LN.
03 RUN-SCALE-L PIC X(05).
03 FILLER PIC X(01) VALUE '1'.
03 FILLER PIC X(02) VALUE SPACE.
03 ROW-BUFFER.
05 RUN-VALUE PIC X(04) OCCURS 31 TIMES.

01 FLAG-TBL.
03 ROW-FLAG PIC 9(01) OCCURS 31 TIMES.

01 PR-DAY-LN.
03 FILLER PIC X(08) VALUE ' DAY'.
03 DAY-PR PIC X(04) OCCURS 31 TIMES.

01 PR-SUNDAY-LN.
03 FILLER PIC X(08) VALUE SPACE.
03 SUNDAY-PR PIC X(04) OCCURS 31 TIMES.

01 PR-DATE-LN.
03 FILLER PIC X(08) VALUE SPACE.
03 DATE-PR PIC X(04) OCCURS 31 TIMES.

01 TAB-DATE.
03 TAB-D.
05 M1 PIC X(03) VALUE 'JAN.'.
05 M2 PIC X(03) VALUE 'FEB.'.
05 M3 PIC X(03) VALUE 'MAR.'.
05 M4 PIC X(03) VALUE 'APR.'.
05 M5 PIC X(03) VALUE 'MAY.'.
05 M6 PIC X(03) VALUE 'JUN.'.
05 M7 PIC X(03) VALUE 'JUL.'.
05 M8 PIC X(03) VALUE 'AUG.'.
05 M9 PIC X(03) VALUE 'SEP.'.
05 M10 PIC X(03) VALUE 'OCT.'.
05 M11 PIC X(03) VALUE 'NOV.'.
05 M12 PIC X(03) VALUE 'DEC.'.
03 D-TAB REDEFINES TAB-D PIC X(03) OCCURS 12 TIMES.

01 TAB-MONTH.
03 TAB-M.
05 MM1 PIC X(09) VALUE 'JANUARY'.
05 MM2 PIC X(09) VALUE 'FEBRUARY'.
05 MM3 PIC X(09) VALUE 'MARCH'.
05 MM4 PIC X(09) VALUE 'APRIL'.
05 MM5 PIC X(09) VALUE 'MAY'.
05 MM6 PIC X(09) VALUE 'JUNE'.
05 MM7 PIC X(09) VALUE 'JULY'.
05 MM8 PIC X(09) VALUE 'AUGUST'.
05 MM9 PIC X(09) VALUE 'SEPTEMBER'.
05 MM10 PIC X(09) VALUE 'OCTOBER'.
05 MM11 PIC X(09) VALUE 'NOVEMBER'.
05 MM12 PIC X(09) VALUE 'DECEMBER'.
03 M-TAB REDEFINES TAB-M PIC X(09) OCCURS 12 TIMES.
*
*****
*
PROCEDURE DIVISION.
BEGIN-SEC SECTION.
BEGIN.
SORT WKSRTF DESCENDING KEY SVALUE USING JASGRPH2
GIVING JASRTG.
*
BEGIN1.
OPEN INPUT JASRTG OUTPUT PFILE.
MOVE CURRENT-DATE TO CC-DATE.
MOVE CC-DD TO DD.
MOVE CC-MM TO MM.
MOVE CC-YY TO YY.
PERFORM IF-DATE.
MOVE DD TO P-DD.
MOVE MM TO P-MM.
MOVE D-TAB(I) TO P-MM.
MOVE YY TO P-YY.

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00243 MOVE ' ' TO P-DGT.
00244 PERFORM MOVE-ZERO-SPACE VARYING I FROM 1 BY 1
00245 UNTIL I GREATER 31.
00246 *
00247 RD-FIRST-REC.
00248 READ JASRTG AT END GO TO END-RTN.
00249 MOVE GDATE TO MDATE.
00250 PERFORM IF-DATE.
00251 MOVE MM TO I.
00252 MOVE M-TAB(I) TO P-MONTH.
00253 MOVE YY TO P-KYY.
00254 IF GTYPE = 'P' AND DD = 99 MOVE GVALUE TO CT-P
00255 PERFORM PRINT-HEAD
00256 GO TO RD-JASRTG.
00257 IF GTYPE = 'C' AND DD = 99 MOVE GVALUE TO CT-C
00258 PERFORM PRINT-HEAD
00259 GO TO RD-JASRTG.
00260 IF GTYPE = 'W' AND DD = 99 MOVE GVALUE TO CT-W
00261 PERFORM PRINT-HEAD
00262 GO TO RD-JASRTG.
00263 *
00264 RD-JASRTG.
00265 READ JASRTG AT END PERFORM PR-END-RTN
00266 PERFORM PRINT-END GO TO END-RTN.
00267 MOVE GDATE TO MDATE. PERFORM IF-DATE.
00268 IF GTYPE = 'P' AND DD = 99 MOVE GVALUE TO CT-P
00269 GO TO RD-JASRTG.
00270 IF GTYPE = 'C' AND DD = 99 MOVE GVALUE TO CT-C
00271 GO TO RD-JASRTG.
00272 IF GTYPE = 'W' AND DD = 99 MOVE GVALUE TO CT-W
00273 GO TO RD-JASRTG.
00274 IF F02 = 1 GO TO COMPARE-DATA.
00275 IF F02 = 0 MOVE 1 TO F02
00276 PERFORM CHECK-DAY MOVE 1 TO DD
00277 SUBTRACT 1 FROM XX
00278 PERFORM FIND-DAY VARYING I FROM 1 BY 1
00279 UNTIL I GREATER XX.
00280 *****
00281 ** FOR CALCULATE ESTIMATED RANGE **
00282 *****
00283 K-MAX = HIGH VALUE OF THIS MONTH
00284 DD = ESTIMATED RANGE
00285 ER = MAXIMUM SIC / 52
00286 A = ER / 10 REMAINDER B
00287 IF B LESS 5 OR B = 5 B = 5
00288 IF B GREATER 5 B = 10
00289 RANGE = A * 10 + B
00290 W-MAX = 54 * RANGE
00291 *****
00292
00293 FIND-ESTIMATED-RANGE.
00294 MOVE GVALUE TO W-VALUE.
00295 COMPUTE W-VALUE = W-HH * 60 + W-MM.
00296 DIVIDE W-VALUE BY 52 GIVING ER.
00297 DIVIDE ER BY 10 GIVING A REMAINDER B.
00298 IF B LESS 5 OR B = 5 MOVE 5 TO B
00299 ELSE MOVE 10 TO B.
00300 COMPUTE W-RANGE = A * 10 + B.
00301 COMPUTE W-MAX = 54 * W-RANGE.
00302 DIVIDE W-MAX BY 60 GIVING W-HH REMAINDER W-MM.
00303 MOVE W-VALUE TO RUN-TAB(1).
00304 MOVE W-HH TO K1. MOVE W-MM TO K2.
00305 MOVE K-VALUE TO ROW-SCALE(1).
00306 PERFORM MOVE-ROW-SCALE VARYING I FROM 2 BY 1
00307 UNTIL I GREATER 56.
00308 MOVE GDATE TO MDATE. PERFORM IF-DATE.
00309 MOVE 2 TO I.
00310 *
00311 COMPARE-DATA.
00312 IF I GREATER 56 GO TO RD-COUNT.
00313 IF GVALUE LESS RUN-TAB(I) OR GVALUE = RUN-TAB(I)
00314 PERFORM PRINT-DET ADD 1 TO I
00315 GO TO COMPARE-DATA
00316 ELSE MOVE STYPE TO RCW-VALUE(DD)
00317 MOVE 1 TO RCW-FLAG(DD).
00318
00319 RD-COUNT.
00320 IF GTYPE = 'P' ADD 1 TO CT-DAY.
00321 GO TO RD-JASRTG.
00322 *
00323 END-RTN.

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00324      CLOSE JASRTG PFILE.
00325      STOP RUN.
00326
00327      ***** SUB ROUTINE *****
00328      CHECK-DAY.
00329      IF MM = 2 COMPUTE W-CE = 1900 + YY
00330      DIVIDE W-CE BY 4 GIVING W-XCE REMAINDER B
00331      IF B = 0 PERFORM MOVE-DAY VARYING I FROM 1 BY 1
00332      UNTIL I GREATER 29 MOVE I TO XX
00333      ELSE PERFORM MOVE-DAY VARYING I FROM 1 BY 1
00334      UNTIL I GREATER 28 MOVE I TO XX.
00335      IF MM = 1 OR 3 OR 5 OR 7 OR 8 OR 10 OR 12
00336      PERFORM MOVE-DAY VARYING I FROM 1 BY 1
00337      UNTIL I GREATER 31 MOVE I TO XX.
00338      IF MM = 4 OR 6 OR 9 OR 11
00339      PERFORM MOVE-DAY VARYING I FROM 1 BY 1
00340      UNTIL I GREATER 30 MOVE I TO XX.
00341
00342      FIND-DAY.
00343      MOVE MDATE TO DATE-IN.
00344      MOVE Y-IN TO SUM-NUM.
00345      DIVIDE 4 INTO Y-IN GIVING Y-IN REMAINDER P.
00346      IF P = 0 MOVE 0 TO TAB-A1(1)
00347      MOVE 3 TO TAB-A1(2)
00348      ELSE
00349      MOVE 1 TO TAB-A1(1)
00350      MOVE 4 TO TAB-A1(2).
00351      ADD Y-IN D-IN TAB-A1(M-IN) TO SUM-NUM.
00352      DIVIDE 7 INTO SUM-NUM GIVING SUM-NUM REMAINDER P.
00353      IF P = 0 MOVE 7 TO P.
00354      MOVE TAB-DAY(P) TO DAY-PR(1).
00355      IF TAB-DAY(P) = 'SU' MOVE 'SU' TO SUNDAY-PR(1).
00356      ADD 1 TO DD.
00357      *
00358      * PRINT DETAIL *
00359      *
00360      PRINT-DET.
00361      SUBTRACT 1 FROM I.
00362      MOVE ROW-SCALE(I) TO ROW-SCALE-D.
00363      IF W-PRINT = 1 OR 2 OR 3 OR 4
00364      MOVE SPACE TO ROW-SCALE-G.
00365      IF W-PRINT = 5 MOVE 0 TO W-PRINT.
00366      IF I = 55 MOVE 0 TO ROW-SCALE-G.
00367      WRITE OUT FROM PR-DIG-LEN BEFORE I.
00368      PERFORM WRITE-OUT VARYING K FROM 1 BY 1 UNTIL K GREATER 31.
00369      ADD 1 TO W-PRINT I.
00370      *
00371      * PRINT HEAD *
00372      *
00373      PRINT-HEAD.
00374      MOVE SPACE TO CUT.
00375      WRITE OUT BEFORE PAGE.
00376      MOVE SPACE TO CUT.
00377      WRITE OUT BEFORE 3.
00378      WRITE OUT FROM F1 BEFORE 1.
00379      WRITE OUT FROM F2 BEFORE 2.
00380      WRITE OUT FROM H3 BEFORE 2.
00381      MOVE 'HOURS' TO CUT. WRITE OUT BEFORE 1.
00382      MOVE '(HH.MM)' TO CUT. WRITE OUT BEFORE 2.
00383      *
00384      PR-END-RTN.
00385      PERFORM PRINT-DET VARYING I FROM 1 BY 1 UNTIL I GREATER 56.
00386      MOVE ROW-SCALE.
00387      IF W-MM LESS W-RANGE ADD 60 TO W-MM
00388      SUBTRACT 1 FROM W-HH.
00389      IF W-MM = 0 MOVE 60 TO W-MM
00390      SUBTRACT 1 FROM W-HH.
00391      MOVE W-VALUE TO RUN-TAB(I).
00392      MOVE W-HH TO K1. MOVE W-MM TO K2.
00393      MOVE K-VALUE TO ROW-SCALE(I).
00394      MOVE-ZERO-SPACE.
00395      MOVE ZERO TO ROW-FLAG(I).
00396      MOVE SPACE TO ROW-VALUE(I) SUNDAY-PR(1)
00397      DAY-PR(1) DATE-PR(1).
00398      MOVE-DAY.
00399      MOVE I TO DATE-PR(I).
00400      WRITE-OUT.
00401      IF ROW-FLAG(K) = 1 MOVE '.' TO ROW-VALUE(K).
00402      *
00403      * PRINT END RTN *
00404      *

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00405 PRINT-END.
00406 MOVE ALL '-' TO P-OUT. MOVE SPACE TO P-SPACE.
00407 WRITE OUT BEFORE 1.
00408 WRITE OUT FROM PR-DATE-LN BEFORE 1.
00409 WRITE OUT FROM PR-SUNDAY-LN BEFORE 0.
00410 WRITE OUT FROM PR-SUNDAY-LN BEFORE 0.
00411 WRITE OUT FROM PR-DAY-LN BEFORE 3.
00412 MOVE P3 TO HL1. MOVE P4 TO HL2.
00413 WRITE OUT FROM H-END BEFORE 1.
00414 MOVE ALL '-' TO HL1 HL2.
00415 WRITE OUT FROM H-END BEFORE 2.
00416 MOVE P1 TO P-END.
00417 MOVE CT-P TO X-VALUE.
00418 MOVE X-HH TO P-D1. MOVE X-MM TO P-D2.
00419 COMPUTE X-VALUE = X-HH * 60 + X-MM.
00420 DIVIDE X-VALUE BY CT-DAY GIVING W-VALUE ROUNDED.
00421 DIVIDE W-VALUE BY 60 GIVING W-HH REMAINDER W-MM.
00422 MOVE W-HH TO P-A1. MOVE W-MM TO P-A2.
00423 WRITE OUT FROM DET-END BEFORE 2.
00424 MOVE P2 TO P-END.
00425 MOVE CT-S TO X-VALUE.
00426 MOVE X-HH TO P-D1. MOVE X-MM TO P-D2.
00427 COMPUTE X-VALUE = X-HH * 60 + X-MM.
00428 DIVIDE X-VALUE BY CT-DAY GIVING W-VALUE ROUNDED.
00429 DIVIDE W-VALUE BY 60 GIVING W-HH REMAINDER W-MM.
00430 MOVE W-HH TO P-A1. MOVE W-MM TO P-A2.
00431 WRITE OUT FROM DET-END BEFORE 2.
00432 MOVE P5 TO P-END.
00433 MOVE CT-W TO X-VALUE.
00434 MOVE X-HH TO P-D1. MOVE X-MM TO P-D2.
00435 COMPUTE X-VALUE = X-HH * 60 + X-MM.
00436 DIVIDE X-VALUE BY CT-DAY GIVING W-VALUE ROUNDED.
00437 DIVIDE W-VALUE BY 60 GIVING W-HH REMAINDER W-MM.
00438 MOVE W-HH TO P-A1. MOVE W-MM TO P-A2.
00439 WRITE OUT FROM DET-END BEFORE 2.
00440 *
00441 * (YYMMDD)
00442 * *****
00443 TF-DATE.
00444 MOVE DD TO KD.
00445 MOVE YY TO DD.
00446 MOVE KD TO YY.

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ประวัติการศึกษา

นายชาญชัย เขาวนรัตน์ ได้รับปริญญาตรีศึกษาศาสตร์บัณฑิต จากคณะพาณิชยศาสตร์และการบัญชี จุฬาลงกรณ์มหาวิทยาลัย ปี พ.ศ. 2517 เข้าศึกษาระดับปริญญาโทศึกษาศาสตร์มหาบัณฑิต สาขาวิชาคอมพิวเตอร์ศึกษาศาสตร์ ภาควิชาวิศวกรรมคอมพิวเตอร์ ปี พ.ศ. 2521

