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1620 GENERAL PROGRAM LIBRARY

Logging Program

1.6.043

COMPUTER
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1620 USERS GROUP PROGRAM REVIEW AND EVALUATION

Program No. _____

Date _____

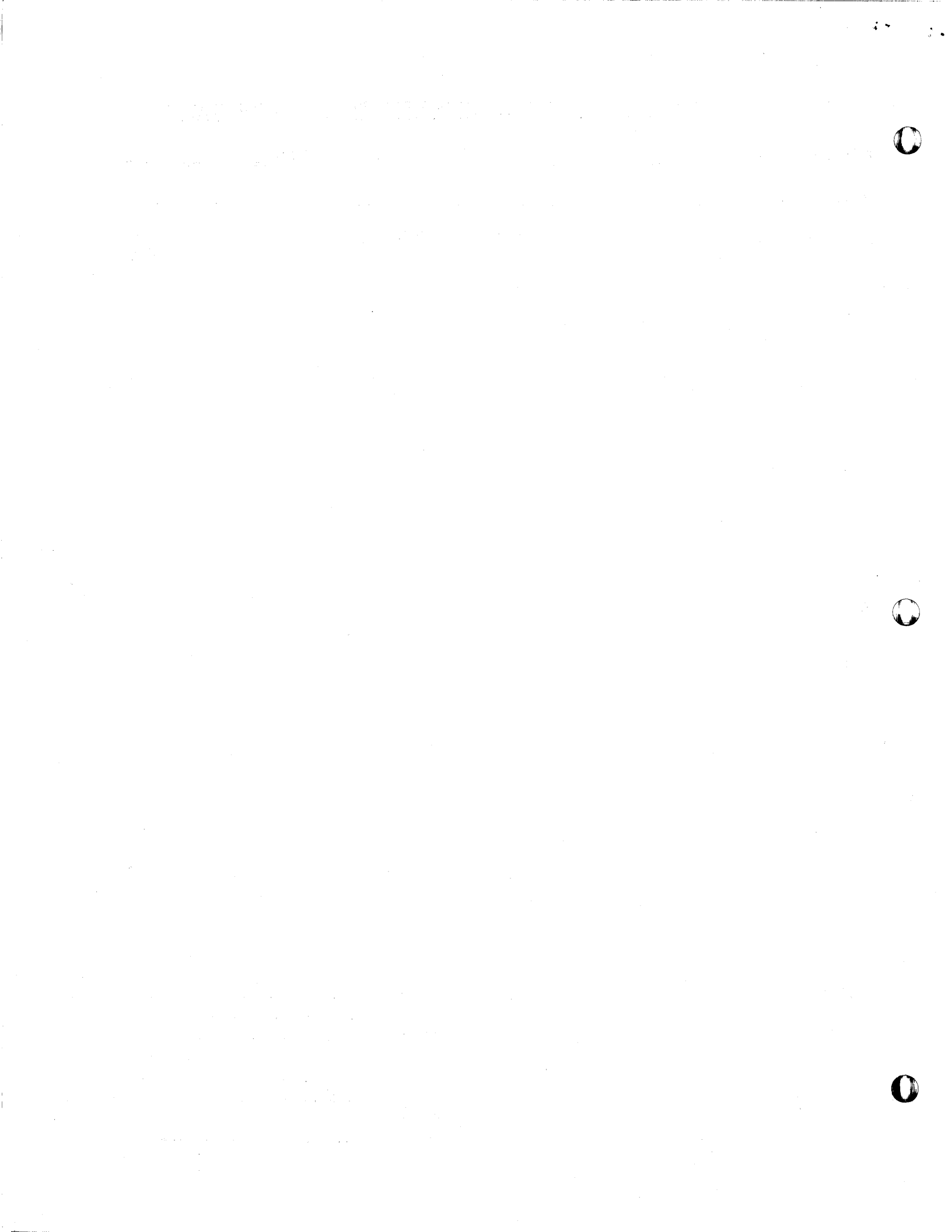
Program Name: _____

1. Does the abstract adequately describe what the program is and what it does? Yes ___ No ___
Comment _____
2. Does the program do what the abstract says? Yes ___ No ___
Comment _____
3. Is the Description clear, understandable, and adequate? Yes ___ No ___
Comment _____
4. Are the Operating Instructions understandable and in sufficient detail? Yes ___ No ___
Comment _____
Are the Sense Switch options adequately described (if applicable)? Yes ___ No ___
Are the mnemonic labels identified or sufficiently understandable? Yes ___ No ___
Comment _____
5. Does the source program compile satisfactorily (if applicable)? Yes ___ No ___
Comment _____
6. Does the object program run satisfactorily? Yes ___ No ___
Comment _____
7. Number of test cases run _____
Are any restrictions as to data, size, range, etc. covered adequately in description? Yes ___ No ___
Comment _____
8. Does the Program meet the minimal standards of the 1620 Users Group? Yes ___ No ___
Comment _____
9. Please list any suggestions to improve the usefulness of the program. These will be passed on to the author for his consideration.
Comment _____

Please return to:

Mr. Robert J. Robinson (PREP)
Marquette University
Computing Center
1515 W. Wisconsin Avenue
Milwaukee 3, Wisconsin

Your Name _____
Company _____
Address _____
User Group Code _____



STEVENS INSTITUTE OF TECHNOLOGY

DIGITAL COMPUTER LABORATORY

1620 LOGGING PROGRAM

KAREN L. ROOFF



The organization of the use of the 1620 at Stevens is based on a system of problem numbers used in conjunction with a logging book. As a matter of convenience, the problem numbers start at 1,000.

Problem numbers are assigned and recorded in a "Problem Book," and time used is logged in a book provided for that purpose.

The installation is run in a completely open-shop manner, available time being broken into "Test" and "Production" periods.

When one uses the computer, he signs on in the log book, indicating date, time on, problem number and a code letter (see p. 6). At the end of use, one signs off, by indicating the time off the computer.



Logging Program for the 1620

The purpose of this program was to generate monthly reports on the use of the computer for its various purposes. The program can easily be adapted for use by any installation. The code letters and subroutines can be changed to suit various purposes. The following is a general method for adapting this program:

For new code letters:

Add, after READIN (03154) two instructions:

CM LOGLIN-70,XX,10 XX represents the numerical code of the letter

B XXXXXX XXXXXX represents the processing subroutine

Add, in the record area at end of the program:

YYYYYY DC 5,0 YYYYYY accumulates time used for this purpose

Add, after EOJMSG,

XXXXXX TF ADD-5,YYYYYY

BT ADD,SUBT-5

TF YYYYYY,ADD-5

TF TIMOFF,LOGLIN-72

BIC HALTI

B READIN

Add, in the "constant" areas at end of the program:

ZZZZZZ DAC ... ZZZZZZ represents the title, for the report, of this code letter. (e.g. Total test time used).

Add, after NEWREP (17272)

```
TR REP3-1,ZZZZZZ-1
TIM REP3+98,0
TF REP3+140,SEVENS-4
TF REP3+134,SEVENS-2
TD REP3+140,YYYYYY
TD REP3+138,YYYYYY-1
TD REP3+134,YYYYYY-2
TD REP3+132,YYYYYY-3
TD REP3+130,YYYYYY-4
WACDREP3
```

Idle time is automatically added in by the program, and is totaled and given as part of the final report.

Since we use the 24-hr. time system, the time adding routines were simplified. If work runs over past midnight, the time is continued until 1620 is turned off (i.e. 2:00 A.M. becomes 2600).

Time is subtracted (time off-time on = time used) in the Subroutine labeled SUBT, and added in the ADD Subroutine. Time is stored in memory as a 4 digit number - $\bar{X}XY$, where $\bar{X}X$ is the number of hours used and YY is the number of minutes.

Idle time is added through the use of a variable, 'timoff'; which has, after an "A" card, the time 1620 is turned on, and thereafter, the time the last user got off. With each entry, the time in "timoff" is subtracted from the new time on, and the difference goes into the idle time accumulator.

Each problem number has 8 memory spaces assigned to it, starting at 8000, since our problem numbers start at 1000. If a different system of problem numbers is used, the program should be modified accordingly (e.g. at Table 2 (04310), the problem number is multiplied by 8 and increased by 7 to obtain the right address for adding and storing time used). Similarly in Table 1 (04202) the number is multiplied by 8 and increased by 3.

Thus, at Table 1

No. 1102 becomes address 08823

and at table 2

No. 1102 becomes address 08819



OPERATING INSTRUCTIONS

1. Clear memory. (Suggested method: Reset, Insert,
Type 16 00010 00000, Release, Start,
Instant Stop, Reset)
2. Load object deck followed by log book data cards.
3. Press "Load" button.
4. Computer will stop with 48 in Op. Register, push Start.
5. Computer will stop with "Reader no Feed" light on, push
Reader Start.
6. Load Problem book data cards.
7. Push Reader Start and Start.
8. Push Punch Start.
9. Computer will stop with "Reader no Feed" light on.
Push reader start.
10. Computer prints "Total Report Follows" - Push Start.
11. Clear all hoppers.

NOTES ON OPERATION OF PROGRAM

A. While Running Log Book Data Cards.

1. If "Invalid Code Letter" is typed at the console:

A data card has been entered whose code letter is not in the range of the program. The card can be bypassed by pushing Start, or can be repunched and reentered before pushing Start.

2. If no message is printed after pushing reader start to feed the last two cards into memory:

The last data card was not a "Z" Entry.

Reset, Insert, type 4900402, Release, Start.

B. While Running Problem Book Data Cards

- If "Invalid Code Number" is typed at the console:

A data card has been entered whose code number is not 1, 2 or 3. The card can be bypassed by pushing Start, or can be repunched and reentered before pushing Start.

CODES NOW IN USE IN LOGGING PROGRAM

<u>Code Letter</u>	<u>Code Number</u>	<u>Meaning of Code</u>
A	01	Time 1620 is turned on.
D	04	Demonstration time.
E	05	Educational use time.
M	13	Machine error time.
P	16	Production time.
T	20	Test time.
Z	26	Time 1620 is turned off.

PROBLEM CODES NOW IN USE IN LOGGING PROGRAM

<u>Code Number</u>	<u>Code Letter</u>	<u>Meaning of Code</u>
0	U	Un-sponsored Research
1	S	Sponsored Research
2	O	Outside Use

FORMAT OF LOG BOOK DATA CARDS

Col. 1-4	Time On
Col. 5-8	Time Off
Col. 9-10	Code Number
Col. 11-12	Problem Number

cc13-80 may be used for numbering purposes

FORMAT OF PROBLEM BOOK DATA CARDS

Col. 1-4	Problem Number
Col. 5-43	Name of Problem
Col. 44	Record Mark
Col. 45-53	Contract Number, if any
Col. 54	Record Mark
Col. 55-57	Initials of programmer
Col. 58	Record Mark
Col. 80	Problem code number

cc59-79 may be used for numbering purposes

EXAMPLES OF LOG BOOK DATA CARDS

<u>Card Reads</u>	<u>Meaning</u>
09000000010000	Computer turned on at 0900 (24-Hour Clock)
09051010201000	Problem No. 1000 Testing from 0905-1010
10221105161105	Problem No. 1105 Production from 1022-1105
11101215041004	Problem No. 1004 Demonstration from 1110-1215
12301245130000	Machine error time from 1230-1245
13001317051117	Problem No. 1117 Educational use from 1300-1317
14000000260000	Computer turned off at 1400

EXAMPLES OF PROBLEM BOOK DATA CARDS

1000TEST PROBLEMS--FORTRAN SPS MACHINE LANG#	#AR #	0
1001DATA REDUCTION	#DL22-500#SJL#	1
1002OUTSIDE USER...	# #KLR#	2

OUTPUT FORMAT

General Report

cc 1-4	Problem number	
cc 6-44	Problem name	
cc 46-48	Initials of Programmer	
cc 55-59	Test time	
cc 63-67	Production time	} for problem
cc 71-75	Total time	
col. 80	Code letter	

Sponsored Research Report

cc 1-9	Contract number
cc 47-51	Total time used

Outside use Report

cc 1-38	Name of user
cc 47-51	Total time used

Total Report

cc 1-49	Category of use
cc 66-71	Total time used

SAMPLE PROBLEM -
LOG BOOK DATA CARDS

08450000010000
08500854161035
09000906201034
09070000260000
09210000010000
09210941161021
09410000260000
09570000010000
10001010161030
10101025041000
10250000260000
10300000010000
10321042201030
10441049161033
10521059201034
11070000260000
13080000010000
13111317201007
13221330201007
13341337161035
13370000260000
14300000010000
14301443161021
14430000260000
09210000010000
09260942201020
09420000260000
09550000010000
09561001201020
10040000260000
11080000010000
11081145201037
12001312201018
13121354201034
13541430201000
14301505201034
15091531201020
15311603201037
16031618201000
16181630201034
16481710201028
17151750201028
18001842201028
18420000260000
08480000010000
08480906161021
09061006201034
10101111201018
11111120201000
11221142201034
11421210161036
12101240201020
12451339201028
13391435201018
14351504161018
15061530201034
15301545201000
15451600201037
16001619201020
16191656161018

16561702201000
17081810201028
18101825201037
18250000260000
08150000010000
08190850201034
08500908201020
09080920201000
09251021201018
10301055201000
10551111201037
11271141161032
11451210201034
12101234201037
12340000260000
13100000010000
13101345201034
13451415201000
14151430201018
14301450161021
14501508201018
15101522201034
15221545201037
15451613201018
16181632201034
16321640201037
16401725201018
17251805201037
18050000260000
20450000010000
20452130201037
21302207201000
22172236201037
22360000260000
15050000010000
15251550201003
16000000260000
17550000010000
18101900201000
19450000260000
08450000010000
08500900201003
09020908201034
09120000260000
09550000010000
10001017201038
10221058201028
11001119201038
11191226201018
12260000260000
13000000010000
13021315201038
13151331201000
13311354161021
14051415201038
14151527201018
15301552131000
15520000260000
13030000010000
13031325201034

13251350201021
13511355201034
13561410201000
14111426201038
14301505201039
15151531201039
15311551201000
15511607201021
16071617201000
16171711201018
17111745161032
17491857161021
19001921161021
19452010201000
20522200201000
22000000260000
08300000010000
08370912201039
09120944131039
09440950201034
09511029161030
10291106161021
11271137131039
11370000260000
13230000010000
13280000260000
08450000010000
08450850201000
08501100131000
11001115201000
11151130201023
11331149201039
11491200201000
12000000260000
12420000010000
12421332201023
13321348201000
13481453201018
14531500201000
15001540201039
15401548201030
15581621161036
16211637201000
16371745161018
17450000260000
19210000010000
19252030201000
20302047201037
20472200201000
22000000260000
08400000010000
08450919161030
09200935201038
09400948161035
09501001161038
10011018201000
10181022201000
10221033201000
10331115201000
12001220201000

12300000260000
13100000010000
13201347201037
14231510201034
15101521161037
15211545161021
16000000260000
16050000010000
16081624201038
16270000260000
16400000010000
16421656161036
16570000260000
10300000010000
10351125201034
11450000260000
12050000010000
12151230201034
12301250201034
12501315161034
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09581106161018
11131142201000
11421252161018
12561324201000
14001415201040
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15451619161018
16191652201038
16521710201040
17101739201013
17400000260000
08450000010000
08500917161021
09170955201000
09550959161040
09591010201000
10131024201000
10511120201013
11231145201000
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15210000010000
15211525201000
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17081840161018
18400000260000
21250000010000
21302135161040
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08590906201000
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13250000010000
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13481410201023
14101445201000
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16111646201028
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17330000010000
17421851161013
18540000260000
21000000010000
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09370000010000
09421002201023
10021018201041
10181027201042
10371108201041
11251200201028
12070000260000
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12241240201028
12481330201028
13320000260000
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15431600161021
16151646201043
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09581034161043
10341142201028
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13260000010000
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15071512161040
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16550000010000
17011743161013
17430000260000
21450000010000
21542216201013
22162323161013
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10331046201028
10551108201028
11151141201013
11411146161040
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12480000260000
13010000010000
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17151834161013
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10301054161038
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14201435201000
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20170000010000
20172021201000
20210000260000
13320000010000
13321510201054
15100000260000

SAMPLE PROBLEM-
PROBLEM BOOK DATA CARDS

1000TEST PROBLEMS--FORTRAN,SPS,MACH,LANG.	Z	ZAR Z	0
1001PROGRAM TESTING--FORTRAN	Z	ZSJLZ	0
1002PROGRAM TESTING--FORTRAN	Z	ZGWZZ	0
1003HARMONIC ANALYSIS	ZDL	LK2321ZGWZZ	1
1005FORTRAN TEST PROBLEM	Z	ZPGSZ	0
1006FLOW CHART TRANSLATOR	Z	ZAR Z	0
1007FLOAT SUBROUTINE	Z	ZRLCZ	0
1008E.H.P. PROGRAM	Z	ZPGSZ	0
1009CALCULATIONS FOR HYDROFOIL	ZDL	MH2440ZRLCZ	1
1010TRIPLE INTEGRAL OF HU	ZDL	LF2246ZPGSZ	1
1011CONDUCTIVITY PROBE CALIBRATION	ZDL	LB2221ZGWZZ	1
1013UNSTEADY BOUNDARY LAYER	ZDL	LK2321ZCEGZ	1
1014MEGATRON TRAJECTORY	ZPHYS	5649ZSJLZ	1
1015MEGATRON VECTOR POTENTIAL CALCS.	ZPHYS	5649ZGWZZ	1
1016I.B.M. CARD DUMP ROUTINE	Z	ZRLCZ	0
1017TABLE MANIPULATION	Z	ZAR ZO	0
1018PI ZERO LIFETIME	Z	ZK+TZ	0
1019TESTING-MACHINE LANGUAGE	Z	ZGWZZ	0
1020FLOATING POINT EDITOR	Z	ZRLCZ	0
1021EQUATIONS OF MOTION FOR SUB. BODIES	ZDL	LM2328ZTM Z	1
1022TESTING OF COURSE PROBLEMS	Z	ZAR Z	0
1023FORTRAN MODIFICATIONS OF SUBROUTINES	Z	ZGWZZ	0
1024OPTIMUM FLUIDIZED BED CONTROL	Z	ZPMBZ	0
1025FLUTTER STUDIES	ZDL	MH2440ZCJHZ	1
1026RUNGE-KUTTA METHODS	Z	ZAR Z	0
1027STATISTICAL WAVE STUDY	ZDL	LH2251ZRLCZ	1
1028EXPERIMENTAL FLUTTER ANALYSIS	ZDL	M12447ZMRAZ	1
1029EVALUATE ZFACT FUNCTION	ZDL	KH2080ZPGSZ	1
1030TEST REGRESSION ANALYSIS PROGRAM	Z	ZRLCZ	0
1031LEAST SQUARE FIT	ZDL	HC2023ZTM Z	1
1032LIFTING LINE SUMS	ZDL	GY2169ZCEGZ	1
1033MACHINE LANG. DECK REPRODUCTION	Z	ZGWZZ	0
1034TIME SHEET ANALYSIS	ZDL	22-900ZPGSZ	1
1035EVALUATION OF POWER SERIES	ZNORS	78211ZJD Z	1
1036PT.BYPT. EVALUATION/SIN-COS SERIES	ZDL	S1253 ZWEKZ	1
1037MATRIX ITERATION-JACOBI METHOD	Z	ZPTFZ	0
1038DATA REDUCTION-SUMM. + CURVE FITTING	ZNORS	78211ZWEKZ	1
1039STATISANII 631/SPECT.ANAL. COV. SECT.	ZDL	T2506 ZRLCZ	1
1040MATRIX INVERSION	Z	ZPTFZ	0
1041DATA REDUCTION + CURVE FITTING	ZDL	GY1766ZCEGZ	1
1042STANDING WAVE DATA REDUCTION	ZDL	LK2321ZGWZZ	1
1043CONVOY--MK1	ZDL	GY1766ZCEGZ	1
1044KEUFFEL AND ESSER	Z	ZAR Z	2
1045HYATT	Z	ZLJ Z	2
1046MONTHLY REPORT	Z	ZKLRZ	0
1047H DIFFUSION	Z	ZPMBZ	0
1048PLAYING GAMES	Z	ZGWZZ	0
1049COS-SIN EVALUATION-II	ZS1253	ZWEKZ	0
1050NIM	Z	ZKLRZ	0
1051FORTRAN TO SPS FLOAT CONVERTER	Z	ZRLCZ	0
1052BELL TELEPHONE LABS-WHIPPIANY	Z	Z Z	2
1053BELL TELEPHONE LABS - MURRAY HILL	Z	Z Z	2
1054KEUFFEL AND ESSER	Z	ZAR Z	2
1055WORTHINGTON	Z	Z Z	2
1056VITRO	Z	ZSJLZ	2
1057E H P VARIATIONI	ZDL	2458 ZWEKZ	1

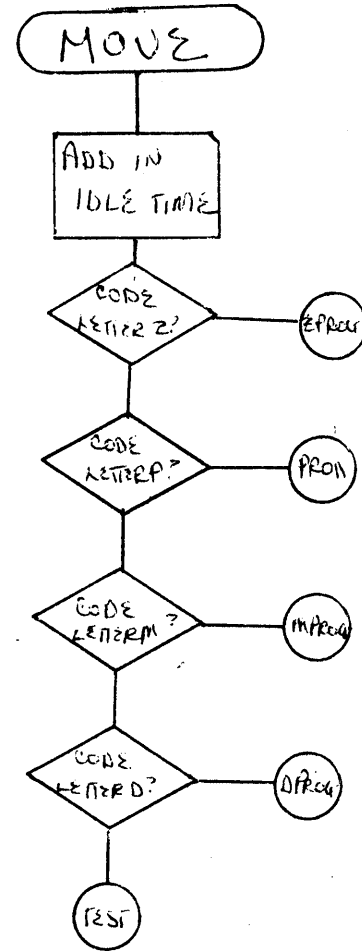
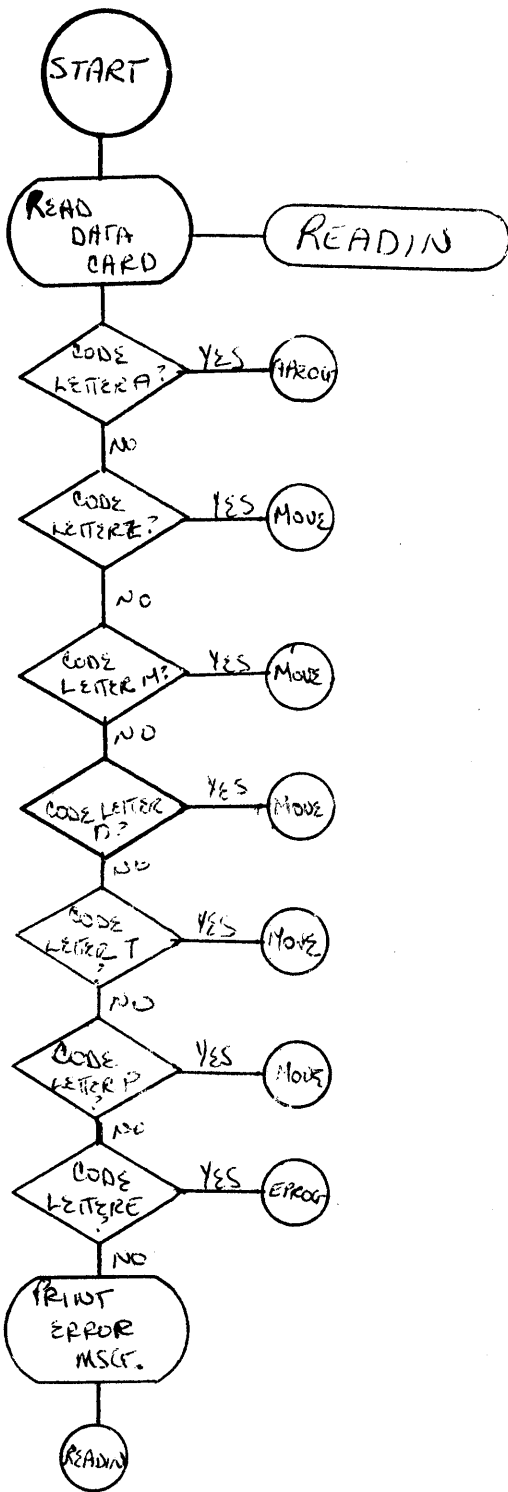
1058	STATISANIIA,631 SPECT.ANAL. RAW+SMOOTH	ZDL T2506	ZRLCZ	1
1059	CALC. OF COLL. INTEGRALS FOR POT.FUNCT.	Z+	ZPTFZ	0
1060	SOLUTION OF NON-LINEAR EQUATIONS	Z	ZAR Z	0
1061	COMP. FIXED END MOMENTS IN A BEAM	ZG	ZG+WZ	0
1062	CARD SORTING + DATA AVERAGING	Z	ZWEKZ	0
1063	SPS FIXED END MOMENTS IN A BEAM	Z	ZJG Z	0
1064	TEST FORTRAN PROGRAM FOR MECHANIZED LSFZ		ZCACZ	0
1065	STRAIGHT LINE TRAJ. PREDICTION	ZDL LM2328	ZHD Z	1
1066	STAT.III CALCULATIONS	ZDL T2506	ZRLCZ	1
1067	PHYS. ADVANCED LAB. FOR DATA ANALYSIS	Z	ZELKZ	0
1068	DATA RED. TANK2 TESTS OF POLARIS A-3	ZDL S1264A	ZCACZ	1
1069	REGRESSION ANALYSIS	Z	ZPGSZ	0
1070	DEMONSTRATION PROGRAM	Z	ZCACZ	0
1071	STATISAN RELOADER	ZDL T2506	ZRLCZ	1
1072	FORCOM MODIFICATION OF FORTRAN DECK	Z	ZCACZ	0
1073	FIXED END MOMENTS	Z	ZPCWZ	0
1074	MOMENTS OF INERTIA /COMPOSITE SECTS.	Z	ZJG Z	0
1075	DISTRIBUTION FACTORS	Z	ZPCWZ	0
1076	APPROX. TO CONVOLUTION INTEGRAL	ZS1253	ZWEKZ	0
1077	BEAM REACTIONS,SHEARS,MOMENTS	Z	ZJG Z	0
1078	AVERAGING PROGRAM FOR STAT 631	ZDL T2506	ZRLCZ	0
1079	CARD VERIFIER PROGRAM	Z	ZRLCZ	0
1080	CARD NUMBERING PROGRAM	Z	ZRLCZ	0
1081	MATRIX INVERSION IN FORTRAN	Z	ZPCWZ	0
1082	SAILBOAT PERFORMANCE COMPUTATION	Z	ZPGSZ	0
1083	PI MINUS CAPTURE TIME	Z	ZEB Z	0
1084	OCEANOGRAPHIC DATA REDUCTION	ZDL LK2321	ZSJLZ	1
1085	SPECTRUM ANALYSIS	ZDL MK2465	ZRLCZ	1
1086	DATA REDUCTION FOR T-2	Z	ZCACZ	0
1087	FORTRAN 1A TESTING	Z	ZRLCZ	0
1088	MATRIX MULTIPLICATION	Z	ZJG Z	0
1089	SEMI SUBMERGED SHIP PROGRAM	ZDL FX2530	ZWEKZ	1
1090	EVALUATION OF NEUMANN SEA SPECTRUM	ZDL FX2530	ZWEKZ	1
1091	ANALYTIC CURVE FITTING FOR SHIP LINES	ZDL KJ2331	ZRBSZ	1
1092	INPUT-OUTPUT ROUTINES	Z	ZFBWZ	0
1093	MATRIX INVERSION BY PARTITIONING 28*28	Z	ZJG Z	0
1094	TABLE LOOK-UP FOR INTERPOLATION	Z	ZPGFZ	0
1095	LUDERS DENNIS-NEUMANN SPECTRUM	ZDL LU2525	ZWEKZ	1
1096	MULTI-TRACE PROGRAM	Z	ZRLCZ	0
1097	APPROXIMATION TO CONVOLUTION INTEGRAL	ZDL KW2190	ZWEKZ	1
1098	SEMI-SUBMERGED SHIP PROGRAM II	ZDL FX2530	ZWEKZ	1
1099	KEUFFEL AND ESSER	Z	ZAR Z	2
1100	OCEANOGRAPHIC DATA REDUCTION	ZDL LK2321	ZGWZZ	1
1101	ADMISSIONS OFFICE PROGRAM	Z	ZKLRZ	0
1102	FOURIER ANALYSIS	ZDL MI2500	ZRLCZ	1
1103	KERNAL FUNCTION	Z	ZRLCZ	0
1104	STANDARD DEVIATION-GROUPS OF TEN	Z	ZKLRZ	0
1105	SEMI-SUBMERGED EPULIBRIUM	ZDL FX2530	ZYC Z	1
1106	CALC. OF SIN DELTA PHI AND PHI	ZDL FX2343	ZWEKZ	1
1107	COEFF. OF POLYNOMIAL EQUATION	Z	ZTM Z	0
1108	TRANSFORMATION OF WAVE SPECTRA	ZDL FX2343	ZWEKZ	1
1109	LINEAR PROGRAMMING	Z	ZMR Z	0
1110	NON DIMENSIONAL WAVE AMP. CALC.	Z22-063	ZJWHZ	1
1111	SIMULTANEOUS EQUATIONS	Z	ZRBSZ	0
1112	SUBMARINE KERNEL FUNCTION	ZDL KW2190	ZRLCZ	1
1113	STATISTICS TEST	Z	ZRLCZ	0
1114	SHIP MOTIONS	ZDL 22-539	ZRBSZ	1
1115	RATIONAL APPROXIMATION	Z	ZAR Z	0
1116	BEAM DESIGN- FORTRAN FORMAT	Z	ZJG Z	0
1117	DIFFERENTIAL EQUATIONS-MATH. LAB.	Z	ZKLRZ	0

1118SUBMARINE KERNEL FUNCTION	ZDL OB2259	ZRLCZ	1
1119HEELED SAILBOAT TABLFS	Z	ZWEKZ	0
1120SAILBOAT PROGRAM	Z	ZWEKZ	0
1121THE FLUT. ANA. MH2447	Z22-081	ZCJHZ	1
1122PRED. TRAJ. UNDFRWATER BODY LM2328	Z22-096	ZHD Z	1
1123LEAST SQUARE FIT AND DIPOLE MOMFNT	Z	ZPTFZ	0
1124FACTORIZATION PROGRAM	Z	ZTM Z	0
1125FLUTTER DATA MAX-MIN MI 2447	Z22-081	ZCJHZ	1
1126FLUTTER DATA 1/20 SEC. MI 2447	Z22-081	ZCJHZ	1
1127SUBMARINE KERNEL FUNCTION OB 2259	Z22-049	ZWEKZ	1
1128ULTIMATE STRENGTH OF CONC BEAMS	Z	ZPCWZ	0
1129WIND ANALYSIS ON TALL BUILDINGS	Z	ZPCWZ	0
1130SAILBOAT TESTS MODES	Z2538	ZWEKZ	1
1131SAILBOAT	Z2382	ZWEKZ	1
1132TIME SHEET ANALYSIS TESTS. 2506	Z220900	ZRLCZ	1
1133CLASS PROBLEM--MATH 54	Z	ZKLRZ	0
1134HARMONIC ANALYSIS	Z2500	ZRLCZ	1
1135EVALUATION OF PROPELLOR INFLOW INTFG.	Z	ZCEGZ	0
1136AISC CODE TABLE OF ALLOWABLE FR IN FOMPZ	Z	ZJG Z	0
1137ISENTROPIC FLOW	Z	ZJG Z	0
1138PILYNOMIAL OPERATIONS	Z	ZFBWZ	0
1139SPECTRUM ANALYSIS MK2465	Z22-552	ZRLCZ	1
1140I.B.M. GENERAL PURPOSE PROGRAM	Z	ZEY Z	0
1141SPECTRAL ANALYSIS DL2540	Z22-033	ZWEKZ	1
1142KEUFFEL AND ESSER	Z	ZAR Z	2
1143SELF DEMONSTRATOR	Z	ZRLCZ	0
1144EDUCATIONAL PROJECT--CE 53	Z	ZJG Z	0
1145HYDROFOIL INTER. CARR. GY1766	Z11-/LO	ZCEGZ	1
1146RANDOM WALK	Z	ZRLCZ	0
1147HULL FORM STUDY -KING ENG	Z22-	ZKE Z	1
1148NUMERICAL QUADRATURE,NEWTON-COTES METH.Z	Z	ZPTFZ	0
1149MAXIMUM AND VALUE OF A MATRIX	Z	ZADVZ	0
1150KEUFFEL AND ESSER	Z	ZAR Z	2
1151FLUTTER OF HULL AND RUDDER MH2440	Z22-080	ZCJHZ	1
1152UNSTEADY BOUNDARY LAYER LK2321	Z22-546	ZCEGZ	1
1153HARMONIC ANALYSIS LK2321	Z22-546	ZS JLZ	1
1154CURVE FITTING GY-1766	Z22-063	ZCEGZ	1
1155OCEANOGRAPHIC DATA ANALYSIS LK2321	Z22-546	ZGWZZ	1
1156STANDING WAVE DATA ANALYSIS LK2321	Z22-546	ZGWZZ	1
1157LIFTING SURFACE INTEGRAL LF2375	Z22-548	ZCEGZ	1

SAMPLE PROBLEM-
RESULTS

-21-

1000 TEST PROBLEMS--FORTRAN,SPS,MACH.LANG.	AR	24 39	00 00	24 39	U
1003 HARMONIC ANALYSIS	GWZ	00 35	00 00	00 35	S
1007 FLOAT SUBROUTINE	RLC	00 14	00 00	00 14	U
1013 UNSTEADY BOUNDARY LAYER	CEG	02 42	07 26	10 08	S
1014 MEGATRON TRAJECTORY	SJL	04 22	00 00	04 22	S
1018 PI ZERO LIFETIME	K+T	10 15	12 49	23 04	U
1020 FLOATING POINT EDITOR	RLC	01 50	00 00	01 50	U
1021 EQUUNS. OF MOTION FOR SUB. BODIES	TM	00 41	06 16	06 57	S
1023 FORTRAN MODIFICATIONS OF SUBROUTINES	GWZ	02 05	00 00	02 05	U
1025 FLUTTER STUDIES	CJH	00 17	00 10	00 27	S
1028 EXPERIMENTAL FLUTTER ANALYSIS	MRA	13 14	00 00	13 14	S
1030 TEST REGRESSION ANALYSIS PROGRAM	RLC	00 27	01 22	01 49	U
1032 LIFTING LINE SUMS	CEG	00 00	00 48	00 48	S
1033 MACHINE LANG. DECK REPRODUCTION	GWZ	00 00	00 05	00 05	U
1034 TIME SHEET ANALYSIS	PGS	08 13	00 52	09 05	S
1035 EVALUATION OF POWER SERIES	JD	00 00	00 15	00 15	S
1036 PT.BYPT. EVALUATION/SIN-COS SERIES	WEK	00 00	01 05	01 05	S
1037 MATRIX ITERATION-JACOBI METHOD	PTF	06 47	02 13	09 00	U
1038 DATA REDUCTION-SUMM. + CURVE FITTING	WEK	02 18	03 36	05 54	S
1039 STATISANII 631/SPECT.ANAL. COV. SECT.	RLC	05 02	00 00	05 02	S
1040 MATRIX INVERSION	PTF	01 13	00 22	01 35	U
1041 DATA REDUCTION + CURVE FITTING	CEG	03 15	00 00	03 15	S
1042 STANDING WAVE DATA REDUCTION	GWZ	00 09	00 00	00 09	S
1043 CONVOY--MK1	CEG	01 18	00 36	01 54	S
1046 MONTHLY REPORT	KLR	03 30	00 00	03 30	U
1050 NIM	KLR	01 15	00 00	01 15	U
1054 KEUFFEL AND ESSER	AR	01 38	00 00	01 38	O
DL LK2321		10 52			
PHYS 5649		04 22			
DL LM2328		06 57			
DL MH2440		00 27			
DL MI2447		13 14			
DL GY2169		00 48			
DL 22-900		09 05			
NOBS78211		06 09			
DL S1253		01 05			
DL T2506		05 02			
DL GY1766		05 09			
KEUFFEL AND ESSER		01 38			
TOTAL TEST TIME			95 59		
TOTAL PRODUCTION TIME			037 55		
TOTAL SPONSORED RESEARCH TIME			063 10		
TOTAL UNSPONSORED TIME			069 06		
TOTAL IDLE TIME			36 42		
TOTAL MACHINE ERROR TIME			011 50		
TOTAL DEMONSTRATION TIME			19		
TOTAL OUTSIDE USE TIME			1 38		
TOTAL EDUCATIONAL USE TIME					
TOTAL RESEARCH TIME			132 16		
TOTAL USEFUL TIME			134 13		
TOTAL ON TIME			182 45		

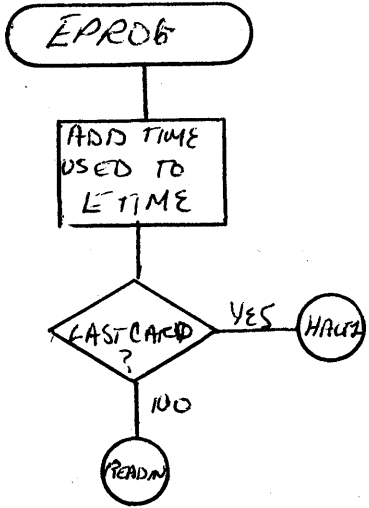
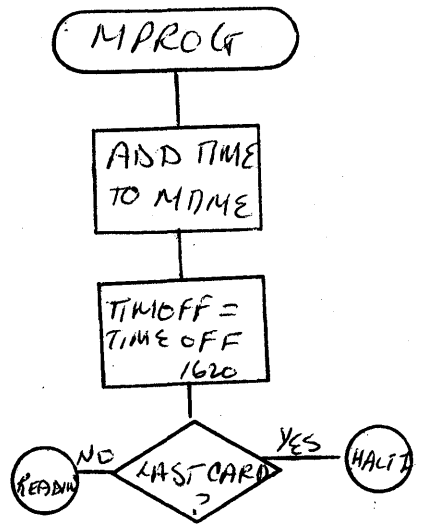
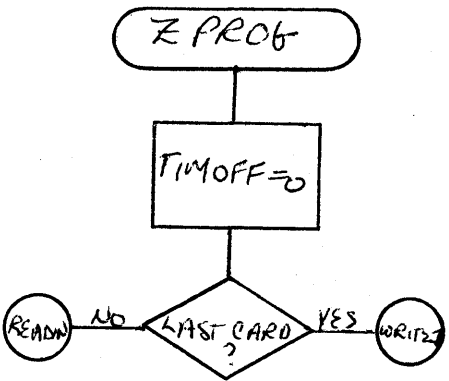
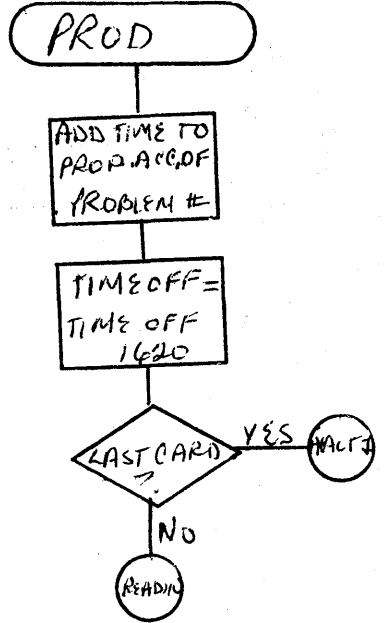
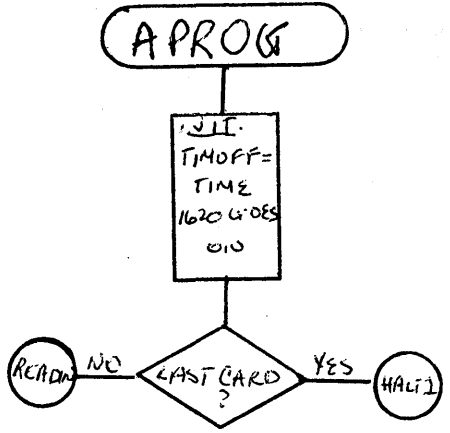


EXITS

APROC	ZPROC
MOVE	PROC
EPROC	MPROC
READIN	DPROC
TEST	

LABELS

START
READIN
MOVE

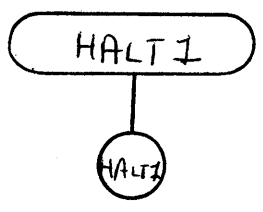
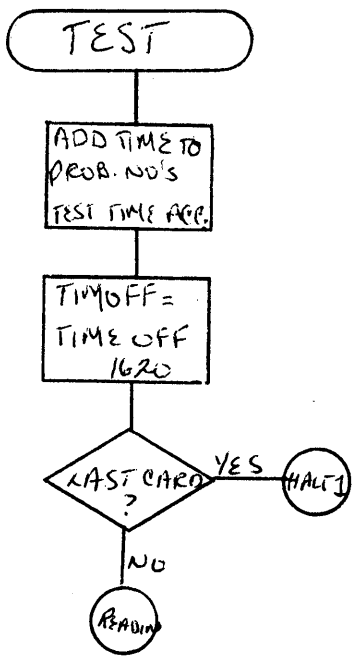
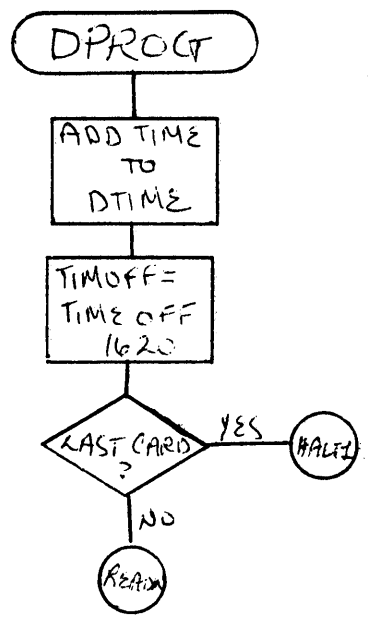


EXITS

READ IN
HALT 1
WRITE 1

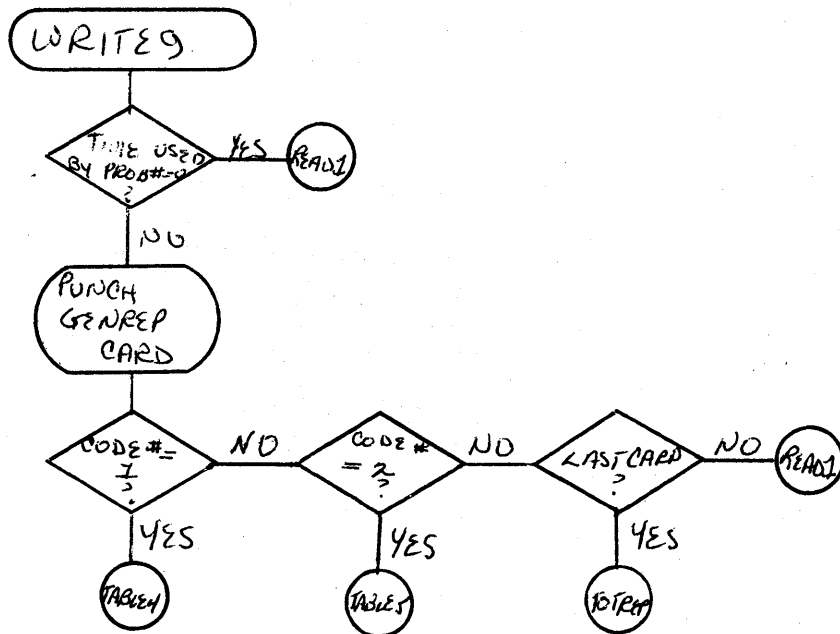
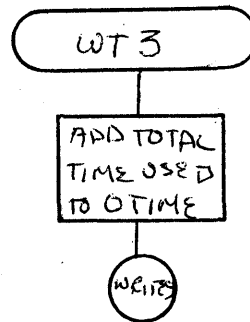
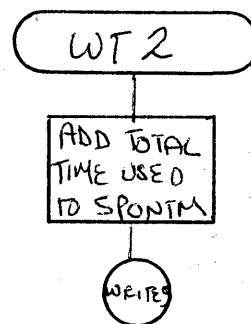
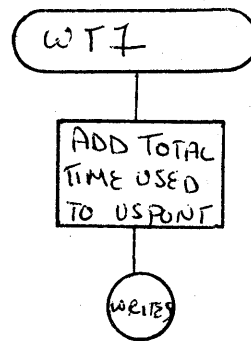
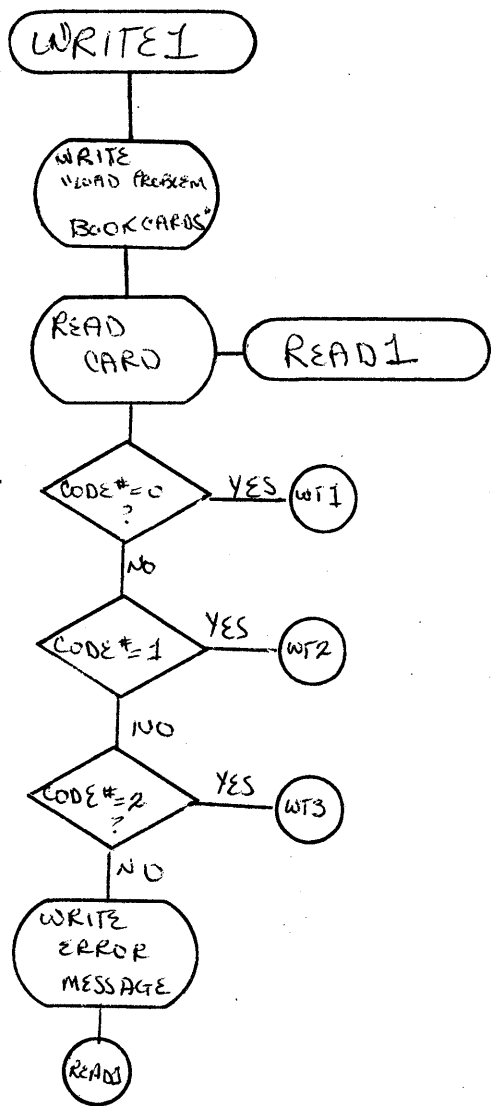
LABELS

APROG
ZPROG
EPROG
PROD
MPROG



EXITS
HALT I
READ IN

LABELS
DPROG
TEST
HALT I

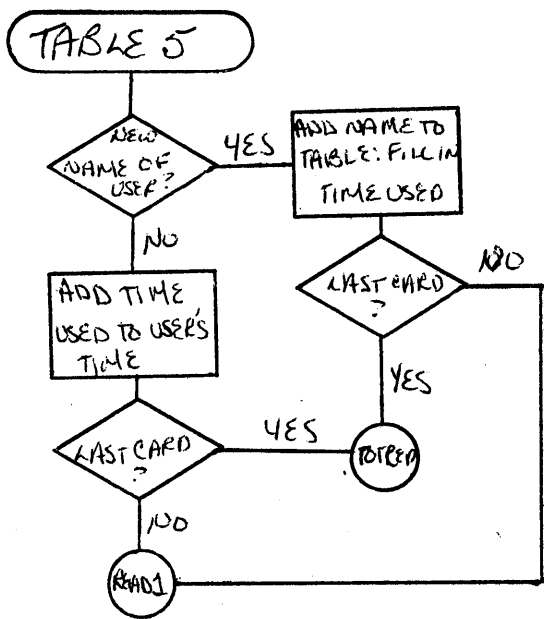
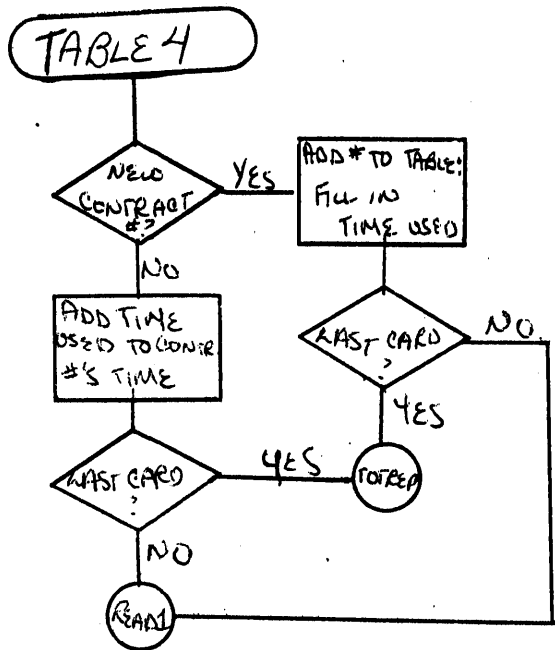


EXITS

WT1	TABLE4
WT2	TABLE5
WT3	TOTREP
READ1	WRITES

LABELS

WRITE1	READ1
WRITES	
WT1	
WT2	
WT3	

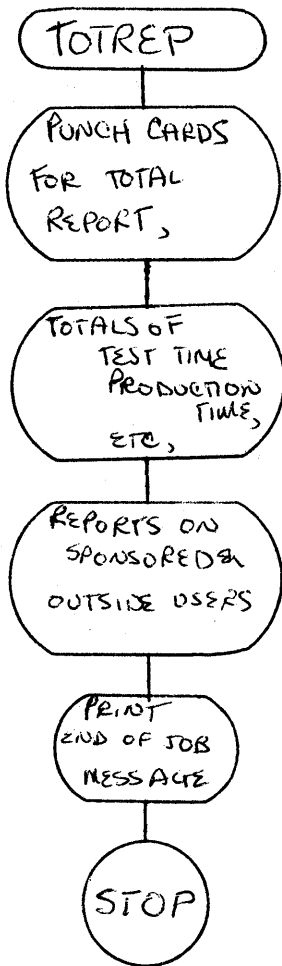


EXITS

TOTREP
READ1

LABELS

TABLE 4
TABLE 5



LABEL
TOTREP

16000
 16001 2 00000
 16003 2 00000
 16005 2 00000
 16010 5 00000
 16012 34 0000 00102
 16024 39 02419 00100
 16036 48 00000 00000
 16048 26 02677 02672
 16060 11 02677 -0017
 16072 32 0267P 00000
 16084 24 0267P 02695
 16096 46 16300 01200
 16108 26 04607 0267P
 16120 26 04691 02463
 16132 26 04685 02463
 16144 11 02677 00004
 16156 25 04691 0267P
 16168 12 02677 00001
 16180 25 04689 0267P
 16192 12 02677 00001
 16204 25 04685 0267P
 16216 12 02677 00001
 16228 26 16246 02677
 16240 33 00000 00000
 16252 25 04683 0267P
 16264 39 04591 00400
 16276 11 02677 00004
 16288 49 16060 00000
 16300 26 02705 02700
 16312 11 02705 -0075
 16324 32 0270N 00000
 16336 24 0270N 02781
 16348 46 16564 01200
 16360 26 04665 0270N
 16372 26 04691 02463
 16384 26 04685 02463
 16396 11 02705 00004
 16408 25 04691 0270N
 16420 12 02705 00001
 16432 25 04689 0270N
 16444 12 02705 00001
 16456 25 04685 0270N
 16468 25 04685 0270N
 16480 12 02705 00001
 16492 26 16510 02705
 16504 33 00000 00000
 16516 25 04683 0270N
 16528 39 04591 00400
 16540 11 02705 00004
 16552 49 16312 00000
 16564 31 05174 05434
 16576 15 05273 00000
 16588 26 05315 02463
 16600 26 05309 02465
 16612 25 05315 05158
 16624 25 05313 05157
 16636 25 05309 05156
 16648 25 05307 05155

DORG 16000Z
 DC 2,0Z
 DC 2,0Z
 FIVE DC 2,0Z
 DC 5,0Z
 TOTREP RCTY Z
 WATY TOTMSGZ
 H Z
 TABLE6 TF LOCUS2,LOCUS1Z
 COM1 AM LOCUS2,17Z
 SF LOCUS2,,6Z
 C LOCUS2,ZERO1,6Z
 BE TABLE7Z
 TF REP2+16,LOCUS2,11Z
 TF REP2+100,SEVENS-4Z
 TF REP2+94,SEVENS-4Z
 AM LOCUS2,4,10Z
 TD REP2+100,LOCUS2,11Z
 SM LOCUS2,1,10Z
 TD REP2+98,LOCUS2,11Z
 SM LOCUS2,1,10Z
 TD REP2+94,LOCUS2,11Z
 SM LOCUS2,1,10Z
 TF *+18,LOCUS2Z
 CF Z
 TD REP2+92,LOCUS2,11Z
 WACD REP2Z
 AM LOCUS2,4,10Z
 B COM1Z
 TABLE7 TF LOCUS4,LOCUS3Z
 COM2 AM LOCUS4,75Z
 SF LOCUS4,,6Z
 C LOCUS4,ZERO2,6Z
 BE TABLE8Z
 TF REP2+74,LOCUS4,11Z
 TF REP2+100,SEVENS-4Z
 TF REP2+94,SEVENS-4Z
 AM LOCUS4,4,10Z
 TD REP2+100,LOCUS4,11Z
 SM LOCUS4,1,10Z
 TD REP2+98,LOCUS4,11Z
 SM LOCUS4,1,10Z
 TD REP2+94,LOCUS4,11Z
 TD REP2+94,LOCUS4,11Z
 SM LOCUS4,1,10Z
 TF *+18,LOCUS4Z
 CF Z
 TD REP2+92,LOCUS4,11Z
 WACD REP2Z
 AM LOCUS4,4,10Z
 B COM2Z
 TABLE8 TR REP3-1,T-1Z
 TDM REP3+98,0Z
 TF REP3+140,SEVENS-4Z
 TF REP3+134,SEVENS-2Z
 TD REP3+140,TTIMEZ
 TD REP3+138,TTIME-1Z
 TD REP3+134,TTIME-2Z
 TD REP3+132,TTIME-3Z

16660 25 05305 05154
 16672 39 05175 00400
 16684 31 05174 05634
 16696 15 05273 00000
 16708 26 05315 02463
 16720 26 05309 02465
 16732 25 05315 05163
 16744 25 05313 05162
 16756 25 05309 05161
 16768 25 05307 05160
 16780 25 05305 05159
 16792 39 05175 00400
 16804 31 05174 05534
 16816 15 05273 00000
 16828 26 05315 02463
 16840 26 05309 02465
 16852 25 05315 05058
 16864 25 05313 05057
 16876 25 05309 05056
 16888 25 05307 05055
 16900 25 05305 05054
 16912 39 05175 00400
 16924 31 05174 05834
 16936 15 05273 00000
 16948 26 05315 02463
 16960 26 05309 02465
 16972 25 05315 05063
 16984 25 05313 05062
 16996 25 05309 05061
 17008 25 05307 05060
 17020 25 05305 05059
 17032 39 05175 00400
 17044 31 05174 05934
 17056 15 05273 00000
 17068 26 05315 02463
 17080 26 05309 02465
 17092 25 05315 04754
 17104 25 05313 04753
 17116 25 05309 04752
 17128 25 05307 04751
 17140 25 05305 04750
 17152 39 05175 00400
 17164 31 05174 06034
 17176 15 05273 00000
 17188 26 05315 02463
 17200 26 05309 02465
 17212 25 05315 04775
 17224 25 05313 04774
 17236 25 05309 04773
 17248 25 05307 04772
 17260 25 05305 04771
 17272 39 05175 00400
 17284 31 05174 06134
 17296 15 05273 00000
 17308 26 05315 02463
 17320 26 05309 02465
 17332 25 05315 04780
 17344 25 05313 04779
 17356 25 05309 04778
 17368 25 05307 04777

TD REP3+130,TTIME-4Z
 WACD REP3Z
 TR REP3-1,P-1Z
 TDM REP3+98,0Z
 TF REP3+140,SEVENS-4Z
 TF REP3+134,SEVENS-2Z
 TD REP3+140,PTIMEZ
 TD REP3+138,PTIME-1Z
 TD REP3+134,PTIME-2Z
 TD REP3+132,PTIME-3Z
 TD REP3+130,PTIME-4Z
 WACD REP3Z
 TR REP3-1,S-1Z
 TDM REP3+98,0Z
 TF REP3+140,SEVENS-4Z
 TF REP3+134,SEVENS-2Z
 TD REP3+140,SPONTMZ
 TD REP3+138,SPONTM-1Z
 TD REP3+134,SPONTM-2Z
 TD REP3+132,SPONTM-3Z
 TD REP3+130,SPONTM-4Z
 WACD REP3Z
 TR REP3-1,TU-1Z
 TDM REP3+98,0Z
 TF REP3+140,SEVENS-4Z
 TF REP3+134,SEVENS-2Z
 TD REP3+140,USPONTZ
 TD REP3+138,USPONT-1Z
 TD REP3+134,USPONT-2Z
 TD REP3+132,USPONT-3Z
 TD REP3+130,USPONT-4Z
 WACD REP3Z
 TR REP3-1,TI-1Z
 TDM REP3+98,0Z
 TF REP3+140,SEVENS-4Z
 TF REP3+134,SEVENS-2Z
 TD REP3+140,IDLEZ
 TD REP3+138,IDLE-1Z
 TD REP3+134,IDLE-2Z
 TD REP3+132,IDLE-3Z
 TD REP3+130,IDLE-4Z
 WACD REP3Z
 TR REP3-1,TM-1Z
 TDM REP3+98,0Z
 TF REP3+140,SEVENS-4Z
 TF REP3+134,SEVENS-2Z
 TD REP3+140,MTIMEZ
 TD REP3+138,MTIME-1Z
 TD REP3+134,MTIME-2Z
 TD REP3+132,MTIME-3Z
 TD REP3+130,MTIME-4Z
 WACD REP3Z
 TR REP3-1,TD-1Z
 TDM REP3+98,0Z
 TF REP3+140,SEVENS-4Z
 TF REP3+134,SEVENS-2Z
 TD REP3+140,DTIMEZ
 TD REP3+138,DTIME-1Z
 TD REP3+134,DTIME-2Z
 TD REP3+132,DTIME-3Z

"NEW REP"

17380 25 05305 04776
 17392 39 05175 00400
 17404 31 05174 05334
 17416 15 05273 00000
 17428 26 05315 02463
 17440 26 05309 02465
 17452 25 05315 05168
 17464 25 05313 05167
 17476 25 05309 05166
 17488 25 05307 05165
 17500 25 05305 05164
 17512 39 05175 00400
 17524 31 05174 06234
 17536 15 05273 00000
 17548 26 05315 02463
 17560 26 05309 02465
 17572 25 05315 05173
 17584 25 05313 05172
 17596 25 05309 05171
 17608 25 05307 05170
 17620 25 05305 05169
 17632 39 05175 00400
 17644 26 03865 05063
 17656 32 05055 00000
 17668 27 03870 05058
 17680 25 16001 03861
 17692 25 16003 05054
 17704 25 16005 05059
 17716 21 16001 16003
 17728 21 16001 16005
 17740 25 03861 16001
 17752 25 06540 16001
 17764 33 03862 00000
 17776 41 00000 00000
 17788 31 05174 05734
 17800 15 05273 00000
 17812 26 05315 02463
 17824 26 05309 02465
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 17860 25 05309 03863
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 17980 21 16003 16001
 17992 21 16003 16005
 18004 25 06540 16003
 18016 32 04777 00000
 18028 27 03870 04780
 18040 25 16005 04776
 18052 25 16003 06540
 18064 25 16001 03861
 18076 21 16003 16001
 18088 21 16003 16005

TD REP3+130,DTIME-4Z
 WACD REP3Z
 TR REP3-1,0-1Z
 TDM REP3+98,0Z
 TF REP3+140,SEVENS-4Z
 TF REP3+134,SEVENS-2Z
 TD REP3+140,OTIMEZ
 TD REP3+138,OTIME-1Z
 TD REP3+134,OTIME-2Z
 TD REP3+132,OTIME-3Z
 TD REP3+130,OTIME-4Z
 WACD REP3Z
 TR REP3-1,TE-1Z
 TDM REP3+98,0Z
 TF REP3+140,SEVENS-4Z
 TF REP3+134,SEVENS-2Z
 TD REP3+140,ETIMEZ
 TD REP3+138,ETIME-1Z
 TD REP3+134,ETIME-2Z
 TD REP3+132,ETIME-3Z
 TD REP3+130,ETIME-4Z
 WACD REP3Z
 TF ADD-5,USPONTZ
 SF SPONTM-3Z
 BT ADD,SPONTMZ
 TD FIVE-4,ADD-9Z
 TD FIVE-2,SPONTM-4Z
 TD FIVE,USPONT-4Z
 A FIVE-4,FIVE-2Z
 A FIVE-4,FIVEZ
 TD ADD-9,FIVE-4Z
 TD HOLD,FIVE-4Z
 CF ADD-8Z
 NOP Z
 TR REP3-1,TR-1Z
 TDM REP3+98,0Z
 TF REP3+140,SEVENS-4Z
 TF REP3+134,SEVENS-2Z
 TD REP3+140,ADD-5Z
 TD REP3+138,ADD-6Z
 TD REP3+134,ADD-7Z
 TD REP3+132,ADD-8Z
 TD REP3+130,ADD-9Z
 WACD REP3Z
 SF ADD-8Z
 SF OTIME-3Z
 BT ADD,OTIMEZ
 TD FIVE,OTIME-4Z
 TD FIVE-2,HOLDZ
 TD FIVE-4,ADD-9Z
 A FIVE-2,FIVE-4Z
 A FIVE-2,FIVEZ
 TD HOLD,FIVE-2Z
 SF DTIME-3Z
 BT ADD,DTIMEZ
 TD FIVE,DTIME-4Z
 TD FIVE-2,HOLDZ
 TD FIVE-4,ADD-9Z
 A FIVE-2,FIVE-4Z
 A FIVE-2,FIVEZ

18100 25 06540 16003
 18112 32 05170 00000
 18124 27 03870 05173
 18136 25 16005 05169
 18148 25 16003 06540
 18160 25 16001 03861
 18172 21 16003 16001
 18184 21 16003 16005
 18196 25 06540 16003
 18208 25 03861 06540
 18220 33 03862 00000
 18232 31 05174 06334
 18244 15 05273 00000
 18256 26 05315 02463
 18268 26 05309 02465
 18280 25 05315 03865
 18292 25 05313 03864
 18304 25 05309 03863
 18316 25 05307 03862
 18328 25 05305 03861
 18340 39 05175 00400
 18352 32 03862 00000
 18364 32 04751 00000
 18376 27 03870 04754
 18388 25 16005 04750
 18400 25 16001 03861
 18412 25 16003 06540
 18424 21 16003 16001
 18436 21 16003 16005
 18448 25 06540 16003
 18460 32 04772 00000
 18472 27 03870 04775
 18484 25 16005 04771
 18496 25 16001 03861
 18508 25 16003 06540
 18520 21 16003 16001
 18532 21 16003 16005
 18544 25 03861 16003
 18556 33 03862 00000
 18568 31 05174 06440
 18580 15 05273 00000
 18592 26 05315 02463
 18604 26 05309 02465
 18616 25 05315 03865
 18628 25 05313 03864
 18640 25 05309 03863
 18652 25 05307 03862
 18664 25 05305 03861
 18676 39 05175 00400
 18688 34 00000 00102
 18700 39 06543 00100
 18712 48 00000 00000
 18724 49 03646 00000
 00402
 00402 34 00000 00102
 00414 39 04847 00100
 00426 48 00000 00000
 00438 37 04895 00500
 00450 25 05064 04895
 00462 25 05065 04897

TD HOLD,FIVE-2Z
 SF ETIME-3Z
 BT ADD,ETIMEZ
 TD FIVE,ETIME-4Z
 TD FIVE-2,HOLDZ
 TD FIVE-4,ADD-9Z
 A FIVE-2,FIVE-4Z
 A FIVE-2,FIVEZ
 TD HOLD,FIVE-2Z
 TD ADD-9,HOLDZ
 CF ADD-8Z
 TR REP3-1,TUT-1Z
 TDM REP3+98,0Z
 TF REP3+140,SEVENS-4Z
 TF REP3+134,SEVENS-2Z
 TD REP3+140,ADD-5Z
 TD REP3+138,ADD-6Z
 TD REP3+134,ADD-7Z
 TD REP3+132,ADD-8Z
 TD REP3+130,ADD-9Z
 WACD REP3Z
 SF ADD-8Z
 SF IDLE-3Z
 BT ADD,IDLEZ
 TD FIVE,IDLE-4Z
 TD FIVE-4,ADD-9Z
 TD FIVE-2,HOLDZ
 A FIVE-2,FIVE-4Z
 A FIVE-2,FIVEZ
 TD HOLD,FIVE-2Z
 SF MTIME-3Z
 BT ADD,MTIMEZ
 TD FIVE,MTIME-4Z
 TD FIVE-4,ADD-9Z
 TD FIVE-2,HOLDZ
 A FIVE-2,FIVE-4Z
 A FIVE-2,FIVEZ
 TD ADD-9,FIVE-2Z
 CF ADD-8Z
 TR REP3-1,TO-1Z
 TDM REP3+98,0Z
 TF REP3+140,SEVENS-4Z
 TF REP3+134,SEVENS-2Z
 TD REP3+140,ADD-5Z
 TD REP3+138,ADD-6Z
 TD REP3+134,ADD-7Z
 TD REP3+132,ADD-8Z
 TD REP3+130,ADD-9Z
 WACD REP3Z
 RCTY Z
 WATY EOJMSGZ
 H Z
 B HALT1Z
 DORG 402Z
 WRITE1 RCTY Z
 WATY ORDER2Z
 H Z
 READ1 RACD PROBLNZ
 TD PROBNO-3,PROBLNZ
 TD PROBNO-2,PROBLN+2Z

00474 25 05066 04899
00486 25 05067 04901
00498 32 05064 00000
00510 13 05067 00008
00522 32 00095 00000
00534 32 0009R 00000
00546 11 00099 00003
00558 26 03865 0009R
00570 11 00099 00001
00582 32 0009R 00000
00594 11 00099 00003
00606 27 03870 0009R
00618 32 04894 00000
00630 26 02475 04901
00642 33 02468 00000
00654 31 02478 04902
00666 31 02558 05002
00678 16 02557 00000
00690 33 02556 00000
00702 16 02565 00000
00714 33 02564 00000
00726 26 02611 02463
00738 26 02617 02463
00750 25 02609 03862
00762 25 02611 03863
00774 25 02615 03864
00786 25 02617 03865
00798 32 05052 00000
00810 14 05053 000P0
00822 46 00930 01200
00834 14 05053 000P1
00846 46 01014 01200
00858 14 05053 000P2
00870 46 01098 01200
00882 39 02629 00100
00894 48 00000 00000
00906 46 16012 00900
00918 49 00438 00000
00930 16 02627 00004
00942 33 02626 00000
00954 26 06438 03865
00966 26 03865 05063
00978 27 03870 06438
00990 26 05063 03865
01002 49 01182 00000
01014 16 02627 00002
01026 33 02626 00000
01038 26 06438 03865
01050 26 03865 05058
01062 27 03870 06438
01074 26 05058 03865
01086 49 01182 00000
01098 16 02627 000N6
01110 33 02626 00000
01122 26 06438 03865
01134 26 03865 05168
01146 27 03870 06438
01158 26 05168 03865
01170 49 01182 00000
01182 32 02566 00000

TD PROBNO-1,PROBLN+4Z
TD PROBNO,PROBLN+6Z
SF PROBNO-3Z
MM PROBNO,8,10Z
SF 95Z
SF 99,6Z
AM 99,3,10Z
TF ADD-5,99,11Z
AM 99,1,10Z
SF 99,6Z
AM 99,3,10Z
BT ADD,99,11Z
SF PROBLN-1Z
TF GENREP+6,PROBLN+6Z
CF GENREP-1Z
TR GENREP+9,PROBLN+7Z
TR GENREP+89,PROBLN+107Z
TFM GENREP+88,0,10Z
CF GENREP+87Z
TFM GENREP+96,0,10Z
CF GENREP+95Z
TF GENREP+142,SEVENS-4Z
TF GENREP+148,SEVENS-4Z
TD GENREP+140,ADD-8Z
TD GENREP+142,ADD-7Z
TD GENREP+146,ADD-6Z
TD GENREP+148,ADD-5Z
SF PROBLN+157Z
CM PROBLN+158,70,10Z
RE WT1Z
CM PROBLN+158,71,10Z
BE WT2Z
CM PROBLN+158,72,10Z
BE WT3Z
WATY ORDER5Z
H Z
BLC TOTREPZ
B READ1Z
WT1 TFM GENREP+158,64,10Z
CF GENREP+157Z
TF SAVE,ADD-5Z
TF ADD-5,USPONTZ
BT ADD,SAVEZ
TF USPONT,ADD-5Z
B WRITE9Z
WT2 TFM GENREP+158,62,10Z
CF GENREP+157Z
TF SAVE,ADD-5Z
TF ADD-5,SPONTMZ
BT ADD,SAVEZ
TF SPONTM,ADD-5Z
B WRITE9Z
WT3 TFM GENREP+158,56,10Z
CF GFNREP+157Z
TF SAVE,ADD-5Z
TF ADD-5,OTIMEZ
BT ADD,SAVEZ
TF OTIME,ADD-5Z
H WRITE9Z
WRITE9 SF GENREP+97Z

01194 24 02611 02463
01206 46 02322 01200
01218 26 02585 02463
01230 26 02579 02463
01242 12 00099 -0004
01254 25 02585 0009R
01266 12 00099 00001
01278 25 02583 0009R
01290 12 00099 00001
01302 25 02579 0009R
01314 12 00099 00001
01326 26 01344 00099
01338 33 00000 00000
01350 25 02577 0009R
01362 26 01380 00099
01374 32 00000 00000
01386 26 02595 02463
01398 26 02601 02463
01410 11 00099 00007
01422 25 02601 0009R
01434 12 00099 00001
01446 25 02599 0009R
01458 12 00099 00001
01470 25 02595 0009R
01482 12 00099 00001
01494 26 01512 00099
01506 33 00000 00000
01518 25 02593 0009R
01530 26 01548 00099
01542 32 00000 00000
01554 39 02469 00400
01566 11 00099 00003
01578 26 03865 05163
01590 27 03870 0009R
01602 26 05163 03865
01614 12 00099 00004
01626 26 03865 05158
01638 27 03870 0009R
01650 26 05158 03865
01662 14 05053 000P1
01674 46 01734 01200
01686 14 05053 000P2
01698 46 02022 01200
01710 46 16012 00900
01722 49 00438 00000
01734 26 02677 02672
01746 32 0267P 00000
01758 11 02677 000J7
01770 24 0267P 02695
01782 46 01854 01200
01794 32 04982 00000
01806 24 0267P 04999
01818 46 01938 01200
01830 11 02677 00005
01842 49 01746 00000
01854 32 04982 00000
01866 26 0267P 04999
01878 11 02677 00004
01890 26 0267P 06438
01902 11 02677 00001

LUCK

TABLE4
COMPAR

OK1

C GENREP+142,SEVENS-4Z
BE CM2Z
TF GENREP+116,SEVENS-4Z
TF GENREP+110,SEVENS-4Z
SM 99,4Z
TD GENREP+116,99,11Z
SM 99,1,10Z
TD GENREP+114,99,11Z
SM 99,1,10Z
TD GENREP+110,99,11Z
SM 99,1,10Z
TF **18,99Z
CF Z
TD GENREP+108,99,11Z
TF **18,99Z
SF Z
TF GENREP+126,SEVENS-4Z
TF GENREP+132,SEVENS-4Z
AM 99,7,10Z
TD GENREP+132,99,11Z
SM 99,1,10Z
TD GENREP+130,99,11Z
SM 99,1,10Z
TD GENREP+126,99,11Z
SM 99,1,10Z
TF **18,99Z
CF Z
TD GENREP+124,99,11Z
TF **18,99Z
SF Z
WACD GENREPZ
AM 99,3,10Z
TF ADD-5,PTIMEZ
BT ADD,99,11Z
TF PTIME,ADD-5Z
SM 99,4,10Z
TF ADD-5,TTIMEZ
BT ADD,99,11Z
TF TTIME,ADD-5Z
CM PROBLN+158,71,10Z
BE TABLE4Z
CM PROBLN+158,72,10Z
BE TABLE5Z
BLC TOTREPZ
B READ1Z
TABLE4 TF LOCUS2,LOCUS1Z
COMPAR SF LOCUS2,,6Z
AM LOCUS2,17,10Z
C LOCUS2,ZER01,6Z
BE OK1Z
SF PROBLN+87Z
C LOCUS2,PROBLN+104,6Z
BE OK2Z
AM LOCUS2,5,10Z
B COMPARZ
OK1 SF PROBLN+87Z
TF LOCUS2,PROBLN+104,6Z
AM LOCUS2,4,10Z
TF LOCUS2,SAVE,6Z
AM LOCUS2,1,10Z

01914 46 16012 00900
01926 49 00438 00000
01938 11 02677 00004
01950 26 03865 06438
01962 27 03870 0267P
01974 26 0267P 03865
01986 11 02677 00001
01998 46 16012 00900
02010 49 00438 00000
02022 26 02705 02700
02034 32 0270N 00000
02046 11 02705 000P5
02058 32 02706 00000
02070 24 0270N 02781
02082 46 02166 01200
02094 32 04902 00000
02106 24 0270N 04977
02118 46 02250 01200
02130 11 02705 00004
02142 11 02705 00001
02154 49 02034 00000
02166 32 04902 00000
02178 26 0270N 04977
02190 11 02705 00004
02202 26 0270N 06438
02214 11 02705 00001
02226 46 16012 00900
02238 49 00438 00000
02250 11 02705 00004
02262 26 03865 06438
02274 27 03870 0270N
02286 26 0270N 03865
02298 46 16012 00900
02310 49 00438 00000
02322 32 02614 00000
02334 33 02617 00000
02346 24 02617 02463
02358 46 02394 01200
02370 33 02614 00000
02382 49 01218 00000
02394 46 16012 00900
02406 49 00438 00000
02419 21 00000
02467 8 00000
02469 80 00000
02629 20 00000
02672 5 00000
02677 5 00000
02695 18 00000
02700 5 00000
02705 5 00000
02781 76 00001
02782 26 03865 04775
02794 27 03870 03675
02806 26 04775 03865
02818 26 04589 04509
02830 46 03646 00900
02842 49 03154 00000
02854 26 03865 04780
02866 27 03870 03675

BLC TOTREPZ
B READ1Z
OK2 AM LOCUS2,4,10Z
TF ADD-5,SAVEZ
BT ADD,LOCUS2,11Z
TF LOCUS2,ADD-5,6Z
AM LOCUS2,1,10Z
BLC TOTREPZ
B READ1Z
TABLE5 TF LOCUS4,LOCUS3Z
COMP9 SF LOCUS4,,6Z
AM LOCUS4,75,10Z
SF ZERO2-75Z
C LOCUS4,ZERO2,6Z
BE OK3Z
SF PROBLN+7Z
C LOCUS4,PROBLN+82,6Z
BE OK4Z
AM LOCUS4,4,10Z
AM LOCUS4,1,10Z
B COMP9Z
OK3 SF PROBLN+7Z
TF LOCUS4,PROBLN+82,6Z
AM LOCUS4,4,10Z
TF LOCUS4,SAVE,6Z
AM LOCUS4,1,10Z
BLC TOTREPZ
B READ1Z
OK4 AM LOCUS4,4,10Z
TF ADD-5,SAVEZ
BT ADD,LOCUS4,11Z
TF LOCUS4,ADD-5,6Z
BLC TOTREPZ
B READ1Z
CM2 SF GENREP+145Z
CF GENREP+148Z
C GENREP+148,SEVENS-4Z
BE TRY1Z
CF GENREP+145Z
B LUCKZ
TRY1 BLC TOTREPZ
B READ1Z
TOTMSG DAC 21,TOTAL REPORT FOLLOWS@Z
SEVENS DC 8,70707070Z
GENREP DAS 80Z
ORDER5 DAC 20,INVALID CODE NUMBER@Z
LOCUS1 DC 5,13000Z
LOCUS2 DS 5Z
ZERO1 DC 18,0Z
LOCUS3 DC 5,15000Z
LOCUS4 DS 5Z
ZERO2 DSR 76,1Z
MPROG TF ADD-5,MTIMEZ
BT ADD,SUBT-5Z
TF MTIME,ADD-5Z
TF TIMOFF,LOGLIN-72Z
BLC HALT1Z
B READINZ
DPROG TF ADD-5,DTIMEZ
BT ADD,SUBT-5Z

02878	26	04780	03865		TF	DTIME,ADD-5Z
02890	26	04589	04509		TF	TIMOFF,LOGLIN-72Z
02902	46	03646	00900		BLC	HALT1Z
02914	49	03154	00000		B	READINZ
02926	26	03865	05173	EPROG	TF	ADD-5,ETIMEZ
02938	27	03870	03675		BT	ADD,SUBT-5Z
02950	26	05173	03865		TF	ETIME,ADD-5Z
02962	26	04589	04509		TF	TIMOFF,LOGLIN-72Z
02974	46	03646	00900		BLC	HALT1Z
02986	49	03154	00000		B	READINZ
02998	26	04589	04758	ZPROG	TF	TIMOFF,ZEROZ
03010	46	00402	00900		BLC	WRITE1Z
03022	49	03154	00000		B	READINZ
03034	49	04310	00000	PROD	B	TABLE2Z
03046	32	04502	00000	APROG	SF	LOGLIN-79Z
03058	26	04589	04505		TF	TIMOFF,LOGLIN-76Z
03070	46	03646	00900		BLC	HALT1Z
03082	49	03154	00000		B	READINZ
03094	34	00000	00102	1010	START	RCTY Z
03106	39	04431	00100	1020		WATY IDENTZ
03118	48	00000	00000	1030		H Z
03130	32	04755	00000	1032		SF ZERO-3Z
03142	26	04754	04758	1033		TF IDLE,ZEROZ
03154	36	04502	00500	1040	READIN	RNCD LOGLIN-79Z
03166	32	04510	00000		SF	LOGLIN-71Z
03178	32	04582	00000	1055		SF ATIME-3Z
03190	14	04511	00001	1060		CM LOGLIN-70,1,10Z
03202	46	03046	01200	1070		BE APROGZ
03214	14	04511	000K6	1080		CM LOGLIN-70,26,10Z
03226	46	03406	01200		BE	MOVEZ
03238	14	04511	000J3	1100		CM LOGLIN-70,13,10Z
03250	46	03406	01200		BE	MOVEZ
03262	14	04511	00004	1120		CM LOGLIN-70,4,10Z
03274	46	03406	01200		BE	MOVEZ
03286	14	04511	000K0	2081		CM LOGLIN-70,20,10Z
03298	46	03406	01200	2082		BE MOVEZ
03310	14	04511	000J6	2083		CM LOGLIN-70,16,10Z
03322	46	03406	01200		BE	MOVEZ
03334	14	04511	00005		CM	LOGLIN-70,5,10Z
03346	46	02926	01200		BE	EPROGZ
03358	34	00000	00102		RCTY	Z
03370	39	04783	00100	2085		WATY ERROR1Z
03382	48	00000	00000	2086		H Z
03394	49	03154	00000	2087		B READINZ
03406	32	04502	00000	1140	MOVE	SF LOGLIN-79Z
03418	26	04119	04589	1160		TF IDLADD-1,TIMOFFZ
03430	32	04506	00000	1170		SF LOGLIN-75Z
03442	16	04186	-3478	1180		TFM IDLADD+66,*+36Z
03454	26	04115	04505	1185		TF IDLADD-5,LOGLIN-76Z
03466	49	04120	00000	1187		B IDLADDZ
03478	32	04512	00000	1190	INSTR	SF LOGLIN-69Z
03490	14	04511	000K6		CM	LOGLIN-70,26,10Z
03502	46	02998	01200	1090		BE ZPROGZ
03514	26	03675	04509	2050		TF SUBT-5,LOGLIN-72Z
03526	27	03680	04505	2070		BT SUBT,LOGLIN-76Z
03538	14	04511	000J6		CM	LOGLIN-70,16,10Z
03550	46	03034	01200		BE	PRODZ
03562	14	04511	000J3		CM	LOGLIN-70,13,10Z
03574	46	02782	01200		BE	MPROGZ
03586	14	04511	00004		CM	LOGLIN-70,4,10Z

03598	46	02854	01200		RE	DPROGZ	
03610	49	04202	00000	2088	TFST	B	TABLE1Z
03622	46	03646	00900	2090	RETURN	BLC	HALT1Z
03634	49	03154	00000	2100		B	READINZ
03646	48	00000	00000	2110	HALT1	H	Z
03658	49	03646	00000			B	HALT1Z
03679		10	00000	3005	BLANK1	DS	10Z
03680	32	03678	00000	3010	SUBT	SF	SURT-2Z
03692	32	03674	00000	3015		SF	SURT-6Z
03704	22	03675	03679	3020		S	SURT-5,SURT-1Z
03716	24	03675	04756	3025		C	SURT-5,ZERO-2Z
03728	47	03788	01300	3030		BN	BORROWZ
03740	22	03673	03677	3035	MINUS	S	SURT-7,SURT-3Z
03752	33	03674	00000	3040		CF	SURT-6Z
03764	33	03678	00000			CF	SURT-2Z
03776	42	00000	00000	3045		BB	Z
03788	21	03675	03679	3050	BORROW	A	SURT-5,SURT-1Z
03800	12	03673	00001	3051		SM	SURT-7,1,10Z
03812	11	03675	00000	3055		AM	SURT-5,40,10Z
03824	22	03675	03679	3060		S	SURT-5,SURT-1Z
03836	11	03675	00000	3065		AM	SURT-5,20,10Z
03848	49	03740	00000	3070		B	MINUSZ
03869		10	00000	3120	BLANK2	DS	10Z
03870	32	03868	00000	3130	ADD	SF	ADD-2Z
03882	26	04762	03863	3141		TF	AREA1,ADD-7Z
03894	26	03862	04762	3142		TF	ADD-8,AREA1Z
03906	15	03863	00000	3143		TDM	ADD-7,0,11Z
03918	33	03861	00000			CF	ADD-9Z
03930	15	03860	00000			TDM	ADD-10,0,11Z
03942	21	03865	03869	3150		A	ADD-5,ADD-1Z
03954	12	03865	00000	3160		SM	ADD-5,60,10Z
03966	14	03865	00000			CM	ADD-5,0,10Z
03978	47	04086	01300	3170		BN	ADDITZ
03990	11	03862	00001			AM	ADD-8,1,10Z
04002	21	03862	03867		ADDN	A	ADD-8,ADD-3Z
04014	26	04762	03862	3210		TF	AREA1,ADD-8Z
04026	26	03863	04762	3211		TF	ADD-7,AREA1Z
04038	33	03868	00000			CF	ADD-2Z
04050	43	04074	03861			BD	CUTOFF,ADD-9Z
04062	32	03862	00000			SF	ADD-8Z
04074	42	00000	00000		CUTOFF	BB	Z
04086	11	03865	00000	3221	ADDIT	AM	ADD-5,60,10Z
04098	49	04002	00000	3222		B	ADDNZ
04119		10	00000	4005	BLANK3	DS	10Z
04120	26	03675	04115	4010	IDLADD	TF	SURT-5,IDLADD-5Z
04132	27	03680	04119	4020		BT	SURT,IDLADD-1Z
04144	26	03865	04754	4030		TF	ADD-5,IDLEZ
04156	27	03870	03675	4040		BT	ADD,SURT-5Z
04168	26	04754	03865	4050		TF	IDL,ADD-5Z
04180	49	03478	00000	4060		B	INSTRZ
04201		10	00000	4110	BLANK4	DS	10Z
04202	13	04515	00008	4130	TABLE1	MM	LOGLIN-66,8,10Z
04214	32	00095	00000	4140		SF	95Z
04226	32	0009R	00000	4150		SF	99,,6Z
04238	11	00099	00003	4160		AM	99,3,10Z
04250	26	03865	0009R	4170		TF	ADD-5,99,11Z
04262	27	03870	03675	4180		BT	ADD,SURT-5Z
04274	26	0009R	03865	4190		TF	99,ADD-5,6Z
04286	26	04589	04509	4195		TF	TIMOFF,LOGLIN-72Z
04298	49	03622	00000	4200		B	RETURNZ

04310	13	04515	00008	TABLE2	MM	LOGLIN-66,8,10Z	
04322	32	00095	00000		SF	95Z	
04334	11	00099	00004		AM	99,4,10Z	
04346	32	0009R	00000		SF	99,,6Z	
04358	11	00099	00003		AM	99,3,10Z	
04370	26	03865	0009R		TF	ADD-5,99,11Z	
04382	27	03870	03675		BT	ADD,SUBT-5Z	
04394	26	0009R	03865		TF	99,ADD-5,6Z	
04406	26	04589	04509		TF	TIMOFF,LOGLIN-72Z	
04418	49	03622	00000		B	RETURNZ	
04431		36	00000	5010	IDENT	DAC	36,MONTHLY REPORT, COMPUTER TIME USED @Z
04581		80	00000	5020	LOGLIN	DS	80Z
04585		4	00000	5030	ATIME	DS	4Z
04589		4	00000	5040	TIMOFF	DS	4Z
04591		80	00000		REP2	DAS	80Z
04754		5	00000		IDLE	DS	5Z
04758		4	00000	5060	ZERO	DC	4,0Z
04762		4	00000	5070	AREA1	DS	4Z
04766		4	00000	5080	AREA2	DS	4Z
04770		4	00000	5100	AREA3	DS	4Z
04775		5	00000		MTIME	DC	5,0Z
04780		5	00000		DTIME	DC	5,0Z
04783		20	00000	5090	ERROR1	DAC	20,INVALID CODE LETTER@Z
04822	48	00000	00000	1006	HALT2	H	Z
04834	49	04822	00000	1007		B	HALT2Z
04847		24	00000	ORDER2	DAC		24,LOAD PROBLEM BOOK CARDS@Z
04895		80	00000	PROBLN	DAS		80Z
05058		5	00000	SPONTM	DC		5,0Z
05063		5	00000	USPONT	DC		5,0Z
05067		4	00000	PROBNO	DS		4Z
05147		80	00000	WRIT2	DS		80Z
05148		1	00000		DC		1,@Z
05152		4	00000	AREA5	DS		4Z
05153		1	00000		DC		1,@Z
05158		5	00000	TTIME	DC		5,0Z
05163		5	00000	PTIME	DC		5,0Z
05168		5	00000	OTIME	DC		5,0Z
05173		5	00000	ETIME	DC		5,0Z
05175		80	00000	REP3	DAS		80Z
05335		50	00000	O	DAC		50,TOTAL OUTSIDE USE TIME @Z
05435		50	00000	T	DAC		50,TOTAL TEST TIME @Z
05535		50	00000	S	DAC		50,TOTAL SPONSORED RESEARCH TIME @Z
05635		50	00000	P	DAC		50,TOTAL PRODUCTION TIME @Z
05735		50	00000	TR	DAC		50,TOTAL RESEARCH TIME @Z
05835		50	00000	TU	DAC		50,TOTAL UNSPONSORED TIME @Z
05935		50	00000	TI	DAC		50,TOTAL IDLE TIME @Z
06035		50	00000	TM	DAC		50,TOTAL MACHINE ERROR TIME @Z
06135		50	00000	TD	DAC		50,TOTAL DEMONSTRATION TIME @Z
06235		50	00000	TE	DAC		50,TOTAL EDUCATIONAL USE TIME @Z
06335		50	00000	TUT	DAC		50,TOTAL USEFUL TIME @Z
06438		5	00000	SAVE	DC		5,0Z
06441		50	00000	TO	DAC		50,TOTAL ON TIME @Z
06540		1	00000	HOLD	DS		1Z
06543		14	00000	EOJMSG	DAC		14,END OF REPORT@Z
03094				5110	DEND		STARTZ

1620 Reservation Sheet

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Date _____

9:00																			1:00
9:15																			1:15
9:30																			1:30
9:45																			1:45
10:00																			2:00
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12:00																			4:15
12:15																			4:30
12:30																			4:45
12:45																			5:00
1:00																			

5:00 P. M. - 9:00 A. M.

TIME

NAME

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PROBLEM LIST

Problem Number	NAME	Title and Brief Description	Spon. Res?

**COMPUTER
TECHNOLOGY**

THE COMPUTER MUSEUM HISTORY CENTER

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