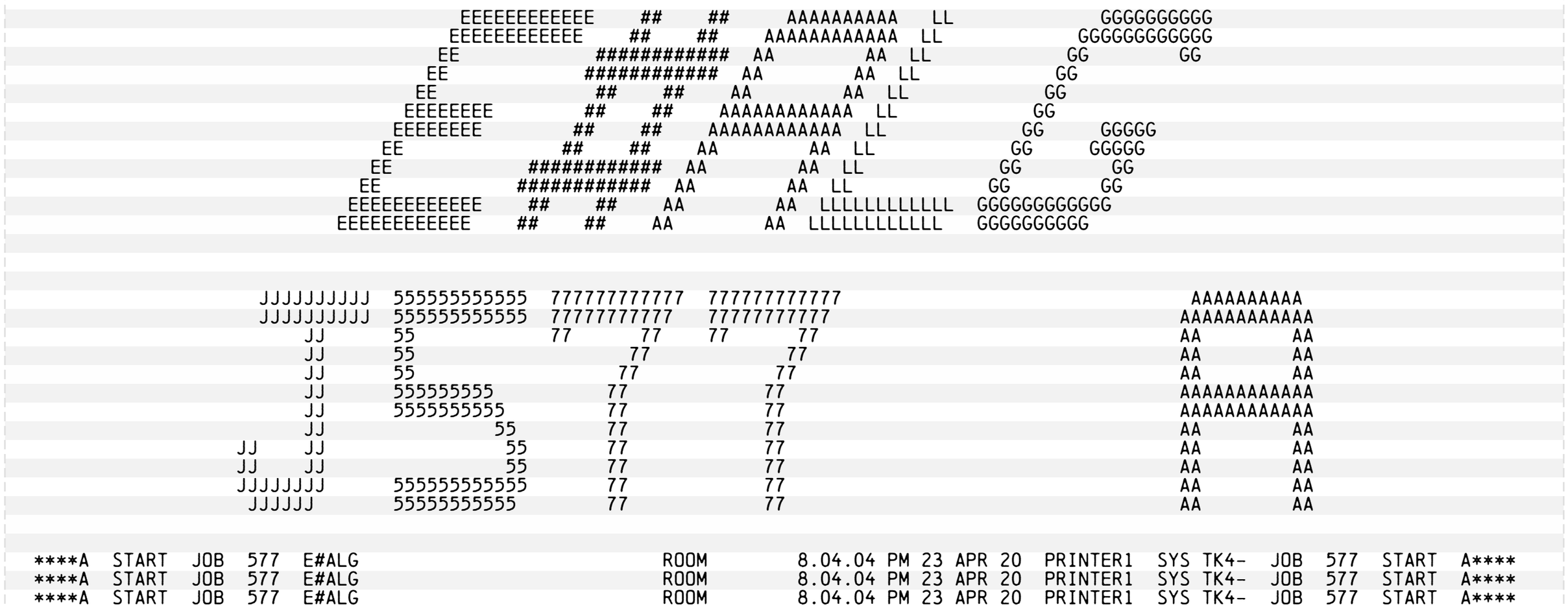

****A START JOB 577 E#ALG ROOM 8.04.04 PM 23 APR 20 PRINTER1 SYS TK4- JOB 577 START A****
****A START JOB 577 E#ALG ROOM 8.04.04 PM 23 APR 20 PRINTER1 SYS TK4- JOB 577 START A****
****A START JOB 577 E#ALG ROOM 8.04.04 PM 23 APR 20 PRINTER1 SYS TK4- JOB 577 START A****

J E S 2 J O B L O G

```
20.04.03 JOB  577  $HASP373 E#ALG    STARTED - INIT  1 - CLASS A - SYS TK4-
20.04.03 JOB  577  IEF403I E#ALG - STARTED - TIME=20.04.03
20.04.03 JOB  577  IEFACTRT - STEPNAME  PROCSTEP  PROGRAM   RETCODE
20.04.03 JOB  577  E#ALG      ALGOL               ALGOL     RC= 0000
20.04.04 JOB  577  E#ALG      GO                  LOADER    RC= 0000
20.04.04 JOB  577  IEF404I E#ALG - ENDED - TIME=20.04.04
20.04.04 JOB  577  $HASP395 E#ALG    ENDED

------ JES2 JOB STATISTICS ------

 23 APR 20 JOB EXECUTION DATE

          5 CARDS READ

        197 SYSOUT PRINT RECORDS

          0 SYSOUT PUNCH RECORDS

       0.01 MINUTES EXECUTION TIME
```

```
 1      //E#ALG JOB CLASS=A,MSGCLASS=A,MSGLEVEL=(1,1),NOTIFY=HERC01,             JOB  577
        //             USER=HERC01,PASSWORD=         GENERATED BY IKJEFF10
 2      // EXEC ALGOFCG,PARM.ALGOL=LONG,PARM.GO=NOPRINT
        ***                                                                    00001001
        ********************************************************************** 00002001
        ***                                                                    00003001
        ***       IBM ALGOL F LEVEL 2.1                                        00004001
        ***                                                                    00005001
        ***       360S-AL-531 ALGOL F COMPILER                                 00006001
        ***            AND                                                     00007001
        ***       360S-LM-532 ALGOL F LIBRARY                                  00008001
        ***                                                                    00009001
        ***       COMPILE AND EXECUTE A PROGRAM                                00010001
        ***                                                                    00011001
        ********************************************************************** 00012001
        ***                                                                    00013001
 3      XXALGOL   EXEC PGM=ALGOL,REGION=1024K                                  00014001
 4      XXSYSPRINT DD  SYSOUT=*                                                00015001
 5      XXSYSPUNCH DD  DUMMY                                                   00016001
 6      XXSYSLIN   DD  DSN=&&OBJECT,UNIT=VIO,SPACE=(3200,(20,10)),             00017001
        XX             DISP=(,PASS)                                            00018001
 7      XXSYSUT1   DD  UNIT=VIO,SPACE=(2048,(50,10))                           00019001
 8      XXSYSUT2   DD  UNIT=VIO,SPACE=(2048,(50,10))                           00020001
 9      XXSYSUT3   DD  UNIT=VIO,SPACE=(2048,(40,10))                           00021001
10      //SYSIN DD DSN=E.TEST.SOURCE(E#ALG),DISP=SHR
11      XXGO      EXEC PGM=LOADER,PARM='MAP,LET,PRINT',COND=(5,LT,ALGOL)       00022001
12      XXSYSLIN   DD  DSN=&&OBJECT,DISP=(OLD,DELETE)                          00023001
13      XXSYSLIB   DD  DSN=SYS1.ALGLIB,DISP=SHR                                00024001
14      XXSYSLOUT  DD  SYSOUT=*                                                00025001
15      XXSYSPRINT DD  SYSOUT=*                                                00026001
16      XXALGLDD01 DD  SYSOUT=*                                                00027001
17      XXSYSUT1   DD  UNIT=VIO,SPACE=(1024,(20,10))                           00028001
18      //GO.SYSIN DD DSN=E.TEST.DATA(E),DISP=SHR
```

```
IEF236I ALLOC. FOR E#ALG ALGOL
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I DMY  ALLOCATED TO SYSPUNCH
IEF237I VIO  ALLOCATED TO SYSLIN
IEF237I VIO  ALLOCATED TO SYSUT1
IEF237I VIO  ALLOCATED TO SYSUT2
IEF237I VIO  ALLOCATED TO SYSUT3
IEF237I 242  ALLOCATED TO SYSIN
IEF142I E#ALG ALGOL - STEP WAS EXECUTED - COND CODE 0000
IEF285I   JES2.JOB00577.S00101                          SYSOUT
IEF285I   SYS20114.T200403.RA000.E#ALG.OBJECT           PASSED       *--------2
IEF285I   SYS20114.T200403.RA000.E#ALG.R0000001         DELETED      *--------0
IEF285I   SYS20114.T200403.RA000.E#ALG.R0000002         DELETED      *--------0
IEF285I   SYS20114.T200403.RA000.E#ALG.R0000003         DELETED      *-------25
IEF285I   E.TEST.SOURCE                                 KEPT         *--------2
IEF285I   VOL SER NOS= MV0001.
IEF373I STEP /ALGOL   / START 20114.2004
IEF374I STEP /ALGOL   / STOP  20114.2004 CPU    0MIN 00.05SEC SRB    0MIN 00.01SEC VIRT   192K SYS   292K
*********************************************************************************************************************
*     1. JOBSTEP OF JOB: E#ALG       STEPNAME: ALGOL       PROGRAM NAME: ALGOL      EXECUTED ON 23.04.20 FROM 20.04.03 TO 20.04.03 *
*         ELAPSED TIME  24:00:00,12                    CPU-IDENTIFIER:  TK4-           PAGE-IN:      0                          *
*             CPU TIME  00:00:00,06              VIRTUAL STORAGE USED:    192K        PAGE-OUT:      0                          *
*           CORR. CPU:  00:00:00,06   CPU TIME HAS BEEN CORRECTED BY  1 / 1,0  MULTIPLIER                                      *
*                                                                                                                             *
*     I/O OPERATION                                                                                                           *
*     NUMBER OF RECORDS READ VIA DD * OR DD DATA:      0                                                                      *
*     DMY.......0 DMY.......0 FFF.......2 FFF.......0 FFF.......0 FFF......25 242.......2                                     *
*                                                                                                                             *
*                                       CHARGE FOR STEP (W/O SYSOUT):          0,10                                       *
*********************************************************************************************************************
IEF236I ALLOC. FOR E#ALG GO
IEF237I VIO  ALLOCATED TO SYSLIN
IEF237I 148  ALLOCATED TO SYSLIB
IEF237I JES2 ALLOCATED TO SYSLOUT
IEF237I JES2 ALLOCATED TO SYSPRINT
IEF237I JES2 ALLOCATED TO ALGLDD01
IEF237I VIO  ALLOCATED TO SYSUT1
IEF237I 242  ALLOCATED TO SYSIN
IEF142I E#ALG GO - STEP WAS EXECUTED - COND CODE 0000
IEF285I   SYS20114.T200403.RA000.E#ALG.OBJECT           DELETED      *--------3
IEF285I   SYS1.ALGLIB                                   KEPT         *-------81
IEF285I   VOL SER NOS= MVSRES.
IEF285I   JES2.JOB00577.S00102                          SYSOUT
IEF285I   JES2.JOB00577.S00103                          SYSOUT
IEF285I   JES2.JOB00577.S00104                          SYSOUT
IEF285I   SYS20114.T200403.RA000.E#ALG.R0000004         DELETED      *--------0
IEF285I   E.TEST.DATA                                   KEPT         *--------2
IEF285I   VOL SER NOS= MV0001.
IEF373I STEP /GO      / START 20114.2004
IEF374I STEP /GO      / STOP  20114.2004 CPU    0MIN 00.75SEC SRB    0MIN 00.01SEC VIRT   332K SYS   236K
*********************************************************************************************************************
*     2. JOBSTEP OF JOB: E#ALG       STEPNAME: GO          PROGRAM NAME: LOADER     EXECUTED ON 23.04.20 FROM 20.04.03 TO 20.04.04 *
*         ELAPSED TIME  24:00:00,84                    CPU-IDENTIFIER:  TK4-           PAGE-IN:      0                          *
*             CPU TIME  00:00:00,76              VIRTUAL STORAGE USED:    332K        PAGE-OUT:      0                          *
*           CORR. CPU:  00:00:00,76   CPU TIME HAS BEEN CORRECTED BY  1 / 1,0  MULTIPLIER                                      *
*                                                                                                                             *
*     I/O OPERATION                                                                                                           *
*     NUMBER OF RECORDS READ VIA DD * OR DD DATA:      0                                                                      *
*     FFF.......3 148.....81 DMY.......0 DMY.......0 DMY.......0 FFF.......0 242.......2                                     *
*                                                                                                                             *
*                                       CHARGE FOR STEP (W/O SYSOUT):          1,26                                       *
*********************************************************************************************************************
IEF375I  JOB /E#ALG   / START 20114.2004
```

```
IEF376I  JOB /E#ALG   / STOP  20114.2004 CPU    0MIN 00.80SEC SRB    0MIN 00.02SEC
```

```
                SC     SOURCE STATEMENT

                      'BEGIN'
                         'COMMENT'
                          SALE, A.H.J. (1968). THE CALCULATION OF E TO MANY SIGNIFICANT DIGITS
                          THE COMPUTER JOURNAL. 11 (2): 229-230 - MODIFICATO!;

                         'PROCEDURE'ECALCULATION(N);
                  1      'VALUE'N;
                  2      'INTEGER'N;
                  3      'BEGIN'
                  3         'INTEGER'M;
                  4         'REAL'TEST;
                  5          M:=4;
                  6          TEST:=(N+1)*2.30258509;
                  7     LOOP: M:=M+1;
                  8         'IF'M*(LN(M)-1.0)+0.5*LN(6.2831852*M)<=TEST
                  8         'THEN''GOTO'LOOP;
                  9         'BEGIN'
                  9            'INTEGER'I,J,CARRY,TEMP;
                 10            'INTEGER''ARRAY'COEF[2:M];
                 11            'FOR'J:=2'STEP'1'UNTIL'M
                 11            'DO'COEF[J]:=1;
                 12             SYSACT(1,6,100);
                 13             SYSACT(1,12,1);
                 14             SYSACT(1,2,47);
                 15             OUTSTRING(1,'('E = 2.')');
                 16             SYSACT(1,14,1);
                 17            'FOR'I:=1'STEP'1'UNTIL'N
                 17              'DO''BEGIN'
                 17                  CARRY:=0;
                 18                 'FOR'J:=M'STEP'-1'UNTIL'2
                 18                 'DO''BEGIN'
                 18                        TEMP:=COEF[J]*10+CARRY;
                 19                        CARRY:=TEMP'/'J;
                 20                        COEF[J]:=TEMP-CARRY*J
                 20                    'END'OF DIGIT GENERATION;
                 21                 OUTDIGIT(1,CARRY);
                 22               'END'HAVING CALCULATE N DIGITS
                 22         'END'DELETING DECLARATIONS
                 22      'END'OF ECALCULATION;
                 23
                 23      'PROCEDURE'OUTDIGIT(DS,D);
                 24      'VALUE'DS,D;
                 25      'INTEGER'DS,D;
                 26      'BEGIN'
                 26         OUTSYMBOL(DS,'('0123456789')',D+1)
                 26      'END'OF OUTDIGIT;
                 27
                 27      'COMMENT'BEGIN MAIN;
                 27      'INTEGER'NC;
                 28       ININTEGER(0,NC);
                 29       ECALCULATION(NC)
                 29   'END'OF MAIN
```

PBN	SC	PBN SURR	NAME	TYPE	DM PR	DSP LN	NAME	TYPE	DM PR	DSP LN	NAME	TYPE	DM PR	DSP LN
001	00000	000	ECALCU	P	01	070	NC	I		018	OUTDIG	P	02	078
002	00000	001	LOOP	L		074	M	I		020	N	I V		018
			TEST	R		028								
003	00009	002	CARRY	I		020	COEF	I A	01	028	I	I		018
			J	I		01C	TEMP	I		024				
004	00023	001	D	I V		020	DS	I V		018				

OBJECT MODULE SIZE 2460 BYTES
DATA STORAGE AREA SIZES

PBN	BYTES	PBN	BYTES	PBN	BYTES	PBN	BYTES	PBN	BYTES
001	48	002	80	003	136	004	64		

END OF ALGOL PROGRAM EXECUTION

E = 2.

7182818284590452353602874713526624977572470936999595749669676277240766303535475945713821785251664274
2746639193200305992181741359662904357290033429526059563073813232862794349076323382988075319525101901
1573834187930702154089149934884167509244761460668082264800168477411853742345442437107539077744992069
5517027618386062613313845830007520449338265602976067371132007093287091274437470472306969772093101416
9283681902551510865746377211125238978442505695369677078544996996794686445490598793163688923009879312
7736178215424999229576351482208269895193668033182528869398496465105820939239829488793320362509443117
3012381970684161403970198376793206832823764648042953118023287825098194558153017567173613320698112509
9618188159304169035159888851934580727386673858942287922849989208680582574927961048419844436346324496
8487560233624827041978623209002160990235304369941849146314093431738143640546253152096183690888707016
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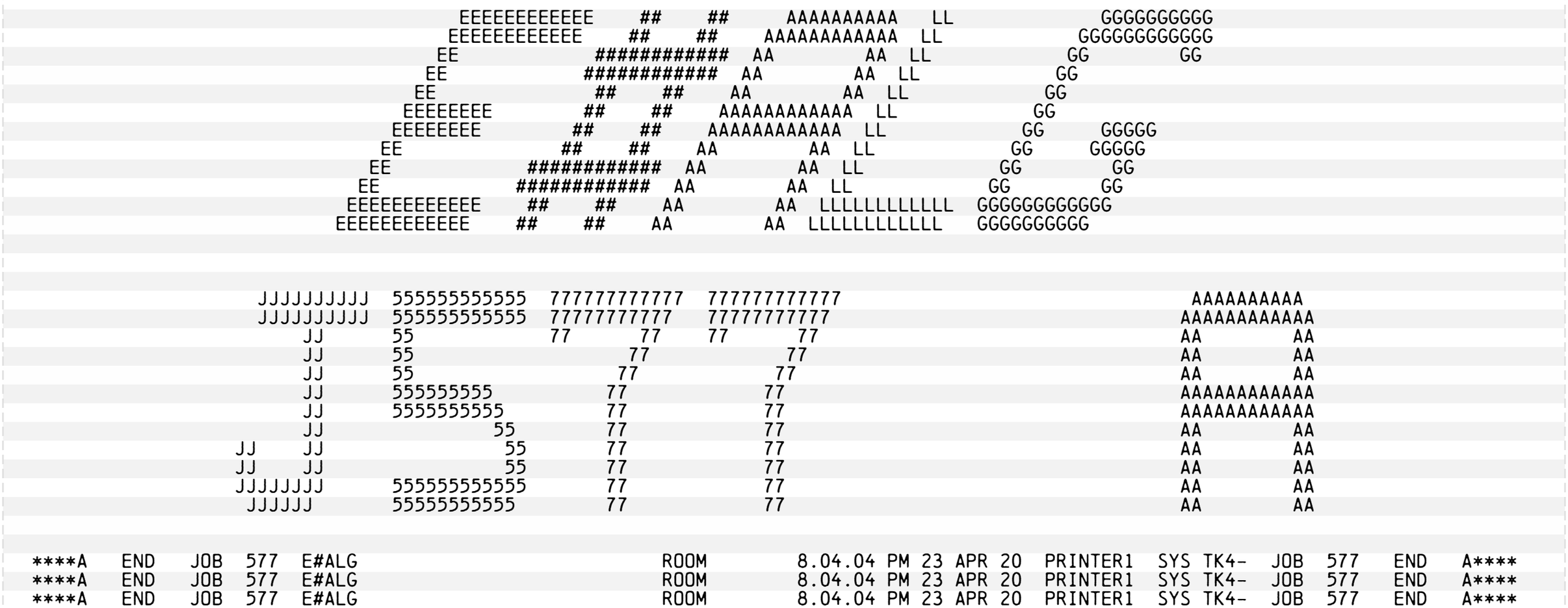

****A END JOB 577 E#ALG ROOM 8.04.04 PM 23 APR 20 PRINTER1 SYS TK4- JOB 577 END A****
****A END JOB 577 E#ALG ROOM 8.04.04 PM 23 APR 20 PRINTER1 SYS TK4- JOB 577 END A****
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