

```
1
2          ;TEXT AFTER SEMICOLON IS COMMENTS, YOU DON'T NEED TO TYPE IT IN
4 000000          .ASECT          ;START PROGRAM SEGMENT
5 001000          .=001000          ;CODE STARTS AT ADDRESS OCTAL 1000
6
7 001000          START:
8 001000 012705 001024          MOV #MYMSG,R5          ;ADDRESS OF STRING
9 001004 004767 000032          JSR PC,PRINTS          ;SHOW STRING
10
11 001010 004767 000050          JSR PC,NEWLIN          ;NEW LINE
12
13 001014 000167 177774          JMP .          ;INFINITE LOOP
14          ;OR
15 001020 005000          CLR R0          ;CLEAR ERROR CODE
16 001022 000207          RTS PC          ;RETURN TO OS
17
18 001024          MYMSG:
19 001024 110 105 114          .ASCII 'HELLO WORLD!'
001027 114 117 040
001032 127 117 122
001035 114 104 041
20 001040 377          .BYTE ^D255          ;255 TERMINATED (IN DECIMAL)
21          .EVEN          ;FORCE EVEN BOUNDARY
22
23 001042          PRINTS:          ;PRINTSTRING - PRINT 255 TERMINATED STRING R5
24 001042 112500          MOVB (R5)+,R0          ;GET A BYTE
25 001044 120027 000377          CMPB R0,#^D255          ;CHAR 255? (DECIMAL)
26 001050 001404          BEQ PRSD          ;DONE? THEN RETURN
27 001052 004767 000034          JSR PC,PRINTC          ;PRINT NEXT CHAR
28 001056 000167 177760          JMP PRINTS          ;REPEAT FOR NEXT CHARACTER
29 001062          PRSD:
30 001062 000207          RTS PC          ;RETURN TO CALLING ROUTINE
31
32 001064          NEWLIN:          ;NEWLINE - MOVE DOWN A LINE
33 001064 010046          MOV R0,-(SP)
34 001066 012700 000015          MOV #15,R0          ;CHR 13
35 001072 004767 000014          JSR PC,PRINTC
36 001076 012700 000012          MOV #12,R0          ;CHR 10
37 001102 004767 000004          JSR PC,PRINTC
38 001106 012600          MOV (SP)+,R0
39 001110 000207          RTS PC          ;RETURN TO CALLING ROUTINE
40
41 001112          PRINTC:          ;PRINTCHAR - SHOW CHAR R0
42 001112 105737 177564          TSTB @#177564          ;C0 CONSOLE OUT STATUS
43 001116 100375          BPL PRINTC          ;WAIT FOR READY (BIT 7 = 1)
44 001120 110037 177566          MOVB R0,@#177566          ;C0 CONSOLE OUT DATA
45 001124 000207          RTS PC          ;RETURN TO CALLING ROUTINE
46
47 001126          .BLKB 200          ;128 BYTE (200 OCT) SPACE FOR STACK
48          ;AT END OF PROGRAM
49 001000          .END START          ;END OF PROGRAM
```

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Symbol table

MYMSG 001024 PRINTC 001112 PRINTS 001042 PRSD 001062 START 001000
NEWLIN 001064

. ABS. 001326 000 (RW,I,GBL,ABS,OVR)
000000 001 (RW,I,LCL,REL,CON)
Errors detected: 0

*** Assembler statistics

Work file reads: 21
Work file writes: 22
Size of work file: 73 Words (1 Pages)
Size of core pool: 7680 Words (30 Pages)
Operating system: RT-11

Elapsed time: 00:00:00.01
DK:HELLO3,DK:HELLO3/C=DK:HELLO3

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Cross reference table (CREF V05.03)

MYMSG 1-8 1-18#
NEWLIN 1-11 1-32#
PRINTC 1-27 1-35 1-37 1-41# 1-43
PRINTS 1-9 1-23# 1-28
PRSD 1-26 1-29#
START 1-7# 1-49