

String Display

Expt No: 10

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Aim:

To display string to standard output in 8086.

Algorithm:

- Move the data segment to the AX register and then move it to the DS register.
- Move value of count to CX register.
- Move value 9 to AH register.
- Move offset of msg to DX register.
- Request interrupt 21H to display string to standard output

Program:

Program	Comments
assume cs:code, ds:data	Declare code and data segments
data segment	Start of data segment
msg db "hello world"	Define byte array msg with value "hello world"
data ends	End of data segment
code segment	Start of code segment
start: mov ax, data	Move data to AX register
mov ds, ax	Move contents of AX register to DS register
mov ah, 9	Move value 9 to AH register
mov dx, offset msg	Move offset of msg to DX register
int 21h	Request interrupt 21H to display string
mov ah, 4ch	To request interrupt
int 21h	Request interrupt routine
code ends	End of code segment
end start	

Unassembled code:

```
-u
0E25:0000 B8240E      MOV     AX,0E24
0E25:0003 8ED8        MOV     DS,AX
0E25:0005 B409        MOV     AH,09
0E25:0007 BA0000      MOV     DX,0000
0E25:000A CD21        INT     21
0E25:000C B44C        MOV     AH,4C
0E25:000E CD21        INT     21
0E25:0010 FE4E04      DEC     BYTE PTR [BP+04]
0E25:0013 EBE8        JMP     FFFD
0E25:0015 89EC        MOV     SP,BP
0E25:0017 5D          POP     BP
0E25:0018 C20400      RET     0004
0E25:001B 55          PUSH    BP
0E25:001C 8BEC        MOV     BP,SP
0E25:001E 83EC1A      SUB     SP,+1A
-
```

Input and Output:

```
0E24:0070 8B 5E FA 8A 87 B7 2D 88-46 E7 B4 00 3B 06 AA 2C  .^....-.F....,
-g
hello world      7
Program terminated normally
-
```

Figure 1: **Input:** hello world ; **Output:** hello world

Result:

The 8086 programs were written to display string to standard output, and the results observed.