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# Micro Processor Practical- 6.

## 1. Program to demonstrate the application for INT 10H:

The image shows a screenshot of an x86 assembly editor and emulator. The editor window on the left displays the following assembly code:

```
01 ;Name: Brendan Lucas
02 ;Roll No: 8953
03 ;Div: SE Comps B
04
05 name "int10h"
06
07 org 100h
08
09 push cs
10 pop es
11
12 mov bh, 0
13 lea bp, msg
14 mov bl, 0f3h
15 mov cx, 12
16 mov dl, 2
17 mov dh, 1
18 mov ah, 13h
19 int 10h
20
21 mov al, 'c'
22 mov ah, 0eh
23 int 10h
24
25 mov bh, 0
26 lea bp, msg
27 mov bl, 0f3h
28 mov cx, 12
29 mov dl, 2
30 mov dh, 3
31 mov ah, 13h
32 int 10h
33
34 mov al, 'c'
35 mov ah, 0eh
36 int 10h
37
38 mov al, 'c'
39 mov ah, 0eh
40 int 10h
41
42 mov ah, 0
43 int 16h
44
45 ret
46
47 msg db 'hello world!'
48
49 cmsg db 'h', 0cfh, 'e', 8bh, 'l', 0f0h, 'l', 5fh, 'o', 3ch, ' ', 0e0h
50 db 'u', 0b3h, 'o', 2eh, 'r', 0cah, 'l', 1ah, 'd', 0ach, 't', 2fh
51
52
```

The emulator window on the right shows the CPU registers and memory. The registers window displays the following values:

| Register | Value |
|----------|-------|
| AX       | 00 3C |
| BX       | 00 F3 |
| CX       | 00 0C |
| DX       | 03 02 |
| SI       | F400  |
| DI       | 01C0  |
| BP       | 0700  |
| SP       | FFF8  |
| IP       | 0147  |
| DS       | 0000  |

The memory window shows the following values:

| Address | Value       |
|---------|-------------|
| F41C0   | FF 255 RES  |
| F41C1   | FF 255 RES  |
| F41C2   | 16 022      |
| F41C3   | CP 207      |
| F41C4   | 00 000 NULL |
| F41C5   | 00 000 NULL |
| F41C6   | 00 000 NULL |
| F41C7   | 00 000 NULL |
| F41C8   | 00 000 NULL |
| F41C9   | 00 000 NULL |
| F41CA   | 00 000 NULL |
| F41CB   | 00 000 NULL |
| F41CC   | 00 000 NULL |
| F41CD   | 00 000 NULL |
| F41CE   | 00 000 NULL |
| F41CF   | FF 255 RES  |
| F41D0   | FF 255 RES  |
| F41D1   | FF 255 RES  |
| F41D2   | CD 205      |

The emulator screen (80x25 chars) displays the text "hello world!" in a colorful font.