

Class Activity #2

Program#1 Enter Character

emu8086 - assembler and microprocessor emulator 4.08

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NEW OPEN SAVE ASSEMBLE RUN

```

01 :MODEL SMALL
02 :STACK 100H
03 .DATA
04 MSG DB 'ENTER A CAHARACTER: $'
05
06 .CODE
07 MAIN PROC
08     MOU AX, @DATA
09     MOU DS, AX
10
11     MOU AH, 09H
12     LEA DX, MSG
13     INT 21H
14
15     MOU AH, 01H
16     INT 21H
17
18     MOU DL, AL
19     MOU AH, 02H
20     INT 21H
21
22     MOU AH, 2CH
23     INT 21H
24
25 MAIN ENDP
26 END MAIN

```

original source code

```

07 .CODE
08 MAIN PROC
09 MOU AX, @DATA
10 MOU DS, AX
11
12 MOU AH, 09H
13 LEA DX, MSG
14 INT 21H
15
16 MOU AH, 01H
17 INT 21H
18
19 MOU DL, AL
20 MOU AH, 02H
21 INT 21H
22
23 MOU AH, 2CH
24 INT 21H

```

emulator: noname.exe_

file debug view virtual devices virtual drive help

LOAD reload step back single step run step delay ms: 0

emulator screen (80x25 chars)

ENTER A CAHARACTER: JJ

```

10 .CODE
11 MAIN PROC
12     MOU AX, @DATA
13     MOU DS, AX
14
15 ;DISPLAY FIRST MESSAGE
16     MOU AH, 09H
17     LEA DX, MSG1
18     INT 21H
19
20 ;INPUT FIRST CHARACTER
21     MOU AH, 01H
22     INT 21H
23     MOU BL, AL ;STORE FIRST CHARACTER IN BL
24
25 ;DISPLAY SECOND MESSAGE
26     MOU AH, 09H
27     LEA DX, MSG2
28     INT 21H
29
30 ;INPUT SECOND CHARACTER
31     MOU AH, 01H
32     INT 21H
33     MOU CL, AL ;STORE SECOND CHARACTER IS CL
34
35 ;DISPLAY THIRD MESSAGE
36     MOU AH, 09H
37     LEA DX, MSG3
38     INT 21H
39
40 ;INPUT THIRD CHARACTER
41     MOU AH, 01H
42     INT 21H
43     MOU DL, AL ;STORE THIRD CHARACTER IN DL
44
45 ;DISPLAY RESULT MESSAGE
46     MOU AH, 09H
47     LEA DX, RESULT
48     INT 21H
49
50 ;DISPLAY ALL THREE CHARACTERS
51     MOU AH, 02H
52     MOU DL, CL
53     INT 21H
54
55     MOU AH, 02H
56     MOU DL, CL
57     INT 21H
58
59     MOU AH, 02H
60     INT 21H
61
62     MOU AH, 4CH
63     INT 21H
64
65 MAIN ENDP
66 END MAIN

```

original source code

```

07 .CODE
08 MAIN PROC
09 MOU AX, @DATA
10 MOU DS, AX
11
12 MOU AH, 09H
13 LEA DX, MSG
14 INT 21H
15
16 MOU AH, 01H
17 INT 21H
18
19 MOU DL, AL
20 MOU AH, 02H
21 INT 21H
22
23 MOU AH, 4CH
24 INT 21H

```

emulator: noname.exe_

file debug view virtual devices virtual drive help

LOAD reload step back single step run step delay ms: 0

registers H L F400:0204 F400:0204

AX 4C 61 F4200: FF 255 RES F4201: FF 255 RES BIOS DI INT 021h

emulator screen (80x25 chars)

ENTER FIRST CHARACTER: a
ENTER SECOND CHARACTER: a
ENTER THIRD CHARACTE: a
YOU ENTERED: aaa

clear screen change font 0/16

Program#2 Upper Case

```

01 :MODEL SMALL
02 :STACK 100H
03 .DATA
04 MSG DB 'ENTER UPPERCASE LETTER: $'
05
06 .CODE
07 MAIN PROC
08
09     MOU AX, @DATA
10     MOU DS, AX
11
12     MOU AH, 09H
13     LEA DX, MSG
14     INT 21H
15
16     MOU AH, 01H
17     INT 21H
18
19     MOU DL, AL
20     MOU AH, 02H
21     INT 21H
22
23     MOU AH, 4CH
24     INT 21H
25
26 MAIN ENDP
27 END MAIN

```

original source code

```

07 .CODE
08 MAIN PROC
09 MOU AX, @DATA
10 MOU DS, AX
11
12 MOU AH, 09H
13 LEA DX, MSG
14 INT 21H
15
16 MOU AH, 01H
17 INT 21H
18
19 MOU DL, AL
20 MOU AH, 02H
21 INT 21H
22
23 MOU AH, 4CH
24 INT 21H

```

emulator: noname.exe_

file debug view virtual devices

emulator screen (80x25 chars)

ENTER UPPERCASE LETTER: UU