

**Name:** Muhammad Awais

**Roll No:** 20P – 0107

**Section:** 3A

## Explanation:

“Inc” increments by 1 and takes one operand;

“Dec” decrements by 1 and takes one operand;

“Mul” takes one operand and multiplies it with Ax and stores it in Ax;

Ex: `Mul bx ; ax = ax * bx`

“Div” takes one operand and divides it with Ax and stores it in Ax;

Ex: `Div bx ; ax = ax / bx`

(1)

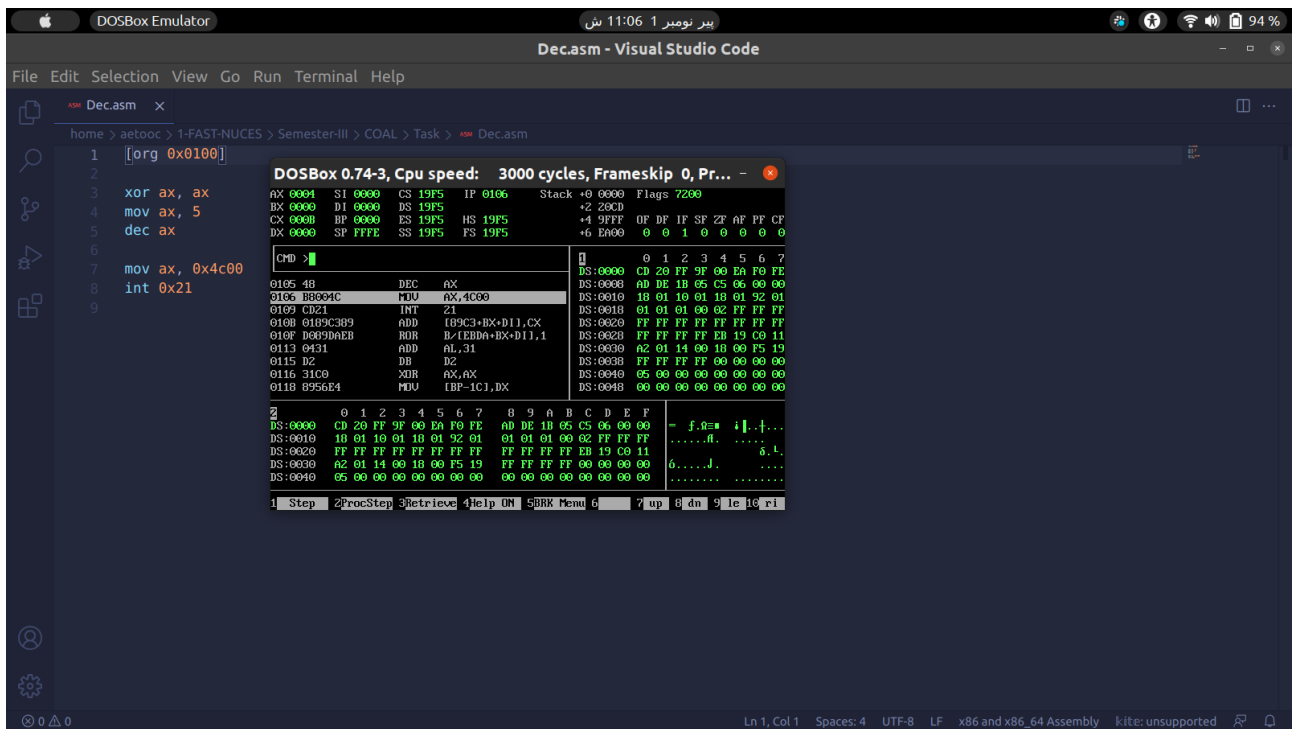
The screenshot shows a DOSBox emulator running an assembly program. The assembly code in the editor is as follows:

```
1 [org 0x0100]
2
3 xor ax, ax
4 mov ax, 5
5 inc ax
6
7 mov ax, 0x4c00
8 int 0x21
```

The DOSBox window displays the following information:

- CPU speed: 3000 cycles, Frameskip 0, Pr...
- Registers: AX=0000, SI=0000, CS=19F5, IP=0100, Stack=+0 0000, Flags=7204
- Memory: 0105 40 INC AX, 0106 B8004C MOV AX, 4C00, 0109 CD21 INT 21, 010B 01B9C3B9 ADD (B9C3+BX+DI), CX, 010F 00B3D0EB ROR B, (EBDA+BX+DI), 1, 0113 0431 ADD AL, 31, 0115 D2 DB D2, 0116 31C9 XOR AX, AX, 011B 0956E4 MOV (BP-1C), DX
- Command Prompt: C:\> 0 1 2 3 4 5 6 7 8 9 A B C D E F, DS:0000 CD 20 FF 9F 00 EA F0 FE, DS:0000 AD DE 1B 65 C5 06 00 00, DS:0010 1B 01 10 01 10 01 92 01, DS:0018 01 01 01 00 02 FF FF FF, DS:0020 FF FF FF FF FF FF FF FF, DS:0028 FF FF FF FF EB 19 C0 11, DS:0030 A2 01 14 00 18 00 F5 19, DS:0038 FF FF FF FF 00 00 00 00, DS:0040 65 00 00 00 00 00 00 00, DS:0048 00 00 00 00 00 00 00 00
- Message Box: = f.a= i | . + ...

(2)



(3)



(4)

