



## **Computer Organization & Assembly Language**

### **LAB 05**

**Submitted to:**

Ma'am Rehana

**Submitted by:**

Mahnoor Zahid

66572

BSCS-3

## Task 1

emu8086 - assembler and microprocessor emulator 4.08

file edit bookmarks assembler emulator math ascii codes help

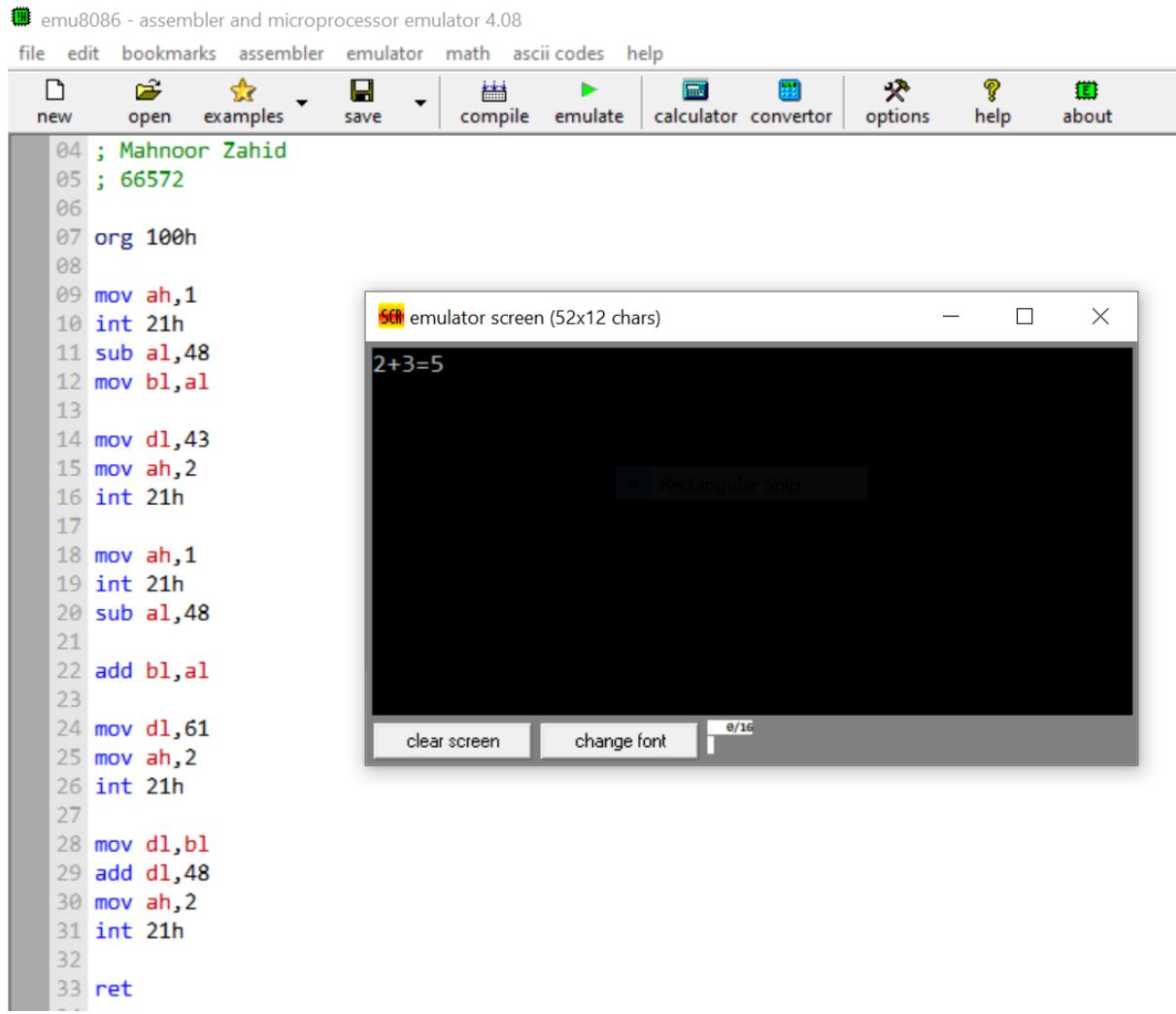
new open examples save compile emulate calculator converter options help about

```
04 ; Mahnoor Zahid
05 ; 66572
06
07 org 100h
08
09 mov ah,1
10 int 21h
11 sub al,48
12 mov bl,al
13
14 mov dl,43
15 mov ah,2
16 int 21h
17
18 mov ah,1
19 int 21h
20 sub al,48
21
22 add bl,al
23
24 mov dl,61
25 mov ah,2
26 int 21h
27
28 mov dl,bl
29 add dl,48
30 mov ah,2
31 int 21h
32
33 ret
```

SCR emulator screen (52x12 chars)

2+3=5

clear screen change font 8/16

The image shows a screenshot of the emu8086 software. On the left, there's a code editor window displaying assembly language code. The code starts with a comment "; Mahnoor Zahid" and "; 66572". It then defines the origin at 100h, performs several INT 21h calls to print characters, and uses ADD BL, AL to calculate 2+3. On the right, a terminal window titled "SCR emulator screen (52x12 chars)" shows the result of the calculation: "2+3=5". Below the terminal window are buttons for "clear screen", "change font", and a font size selector set to "8/16". The top menu bar includes "file", "edit", "bookmarks", "assembler", "emulator", "math", "ascii codes", "help", and "about". The toolbar below the menu contains icons for "new", "open", "examples", "save", "compile", "emulate", "calculator", "converter", "options", "help", and "about".

## Task 2

emu8086 - assembler and microprocessor emulator 4.08

file edit bookmarks assembler emulator math ascii codes help

new open examples save compile emulate calculator convertor options help about

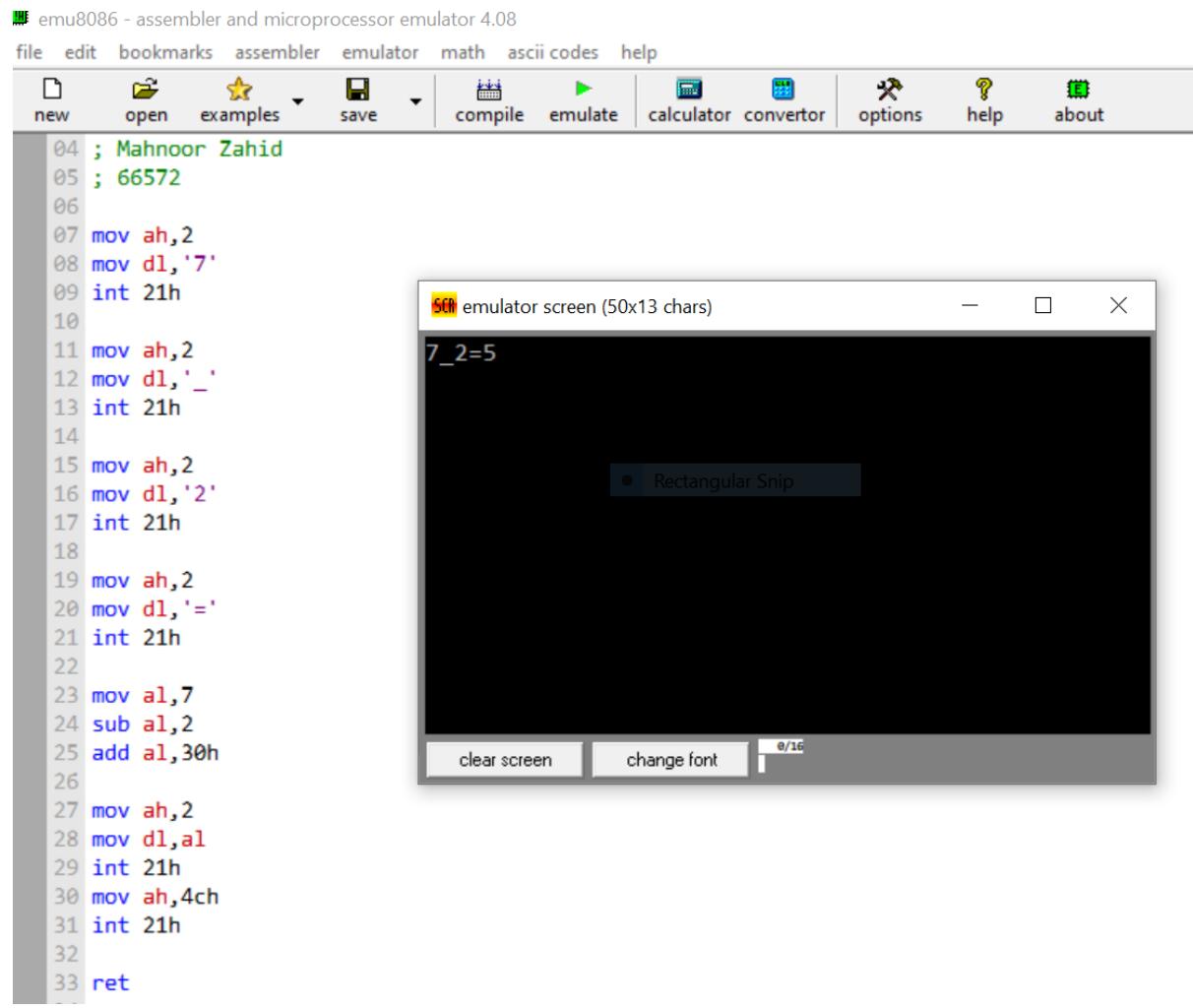
```
04 ; Mahnoor Zahid
05 ; 66572
06
07 mov ah,2
08 mov dl,'7'
09 int 21h
10
11 mov ah,2
12 mov dl,'_'
13 int 21h
14
15 mov ah,2
16 mov dl,'2'
17 int 21h
18
19 mov ah,2
20 mov dl,'='
21 int 21h
22
23 mov al,7
24 sub al,2
25 add al,30h
26
27 mov ah,2
28 mov dl,al
29 int 21h
30 mov ah,4ch
31 int 21h
32
33 ret
```

SC emulator screen (50x13 chars)

7\_2=5

● Rectangular Snip

clear screen change font 8/16

The image shows a screenshot of the emu8086 software. On the left, there is a code editor window displaying assembly language code. The code includes instructions like mov ah,2, int 21h, and various string operations. On the right, there is a terminal window titled "SC emulator screen (50x13 chars)" showing the output "7\_2=5". Below the terminal window, there are buttons for "clear screen" and "change font", and a font size selector set to 8/16.

## Task 3

emu8086 - assembler and microprocessor emulator 4.08

file edit bookmarks assembler emulator math ascii codes help

new open examples save | compile emulate calculator convertor options help about

```
04 ; Mahnoor Zahid
05 ; 66572
06
07 org 100h
08
09 mov ah,1
10 int 21h
11 mov bl,al
12
13 mov ah,1
14 int 21h
15 mov bh,al
16
17 mov ah,2
18 mov dl,bh
19 int 21h
20
21 mov ah,2
22 mov dl,bl
23 int 21h
24
25 mov ah,4ch
26 int 21h
27
28 ret
```

SC emulator screen (47x10 chars)

9559

clear screen change font 0/16

