



Computer Organization & Assembly Language

LAB 11

Submitted to:

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66572

BSCS-3

Task 1 lab

The screenshot shows the emu8086 interface. The assembly code in the editor is:

```
01 ; You may customize this and other start-up templates;
02 ; The location of this template is c:\emu8086\inc\0_com_template.txt
03 ; Mahnoor Zahid 66572
04 org 100h
05
06 .model small
07 .stack 100h
08 .data
09 .code
10
11 main proc
12     mov ax,'1'
13     push ax
14
15     mov bx,'2'
16     push bx
17
18     pop ax
19     pop bx
20
21     mov dx,ax
22     mov ah,2
23     int 21h
24
25     mov dx,bx
26     mov ah,2
27     int 21h
28
29
30
31 ret
32
33
34
35
```

The terminal window shows the output: "21".

Task 2 lab

The screenshot shows the emu8086 interface. The assembly code in the editor is:

```
01 ; You may customize this and other start-up templates;
02 ; The location of this template is c:\emu8086\inc\0_com_template.txt
03 ; Mahnoor Zahid 66572
04 org 100h
05
06 .model small
07 .data
08 string db 'roonham$'
09 .code
10 main proc
11 mov ax, @data
12 mov ds, ax
13 mov si, offset string
14 mov cx,7
15 psh:
16 mov bx, [si]
17 push bx
18 inc si
19 loop psh
20 mov cx,?
21 pp:
22 pop dx
23 mov ah,2
24 int 21h
25 loop pp
26 mov ah,4ch
27 int 21h
28 main endp
29 end main
30
31
32
33
```

The terminal window shows the output: "mahnoor".

Task 1

emu8086 - assembler and microprocessor emulator 4.08

file edit bookmarks assembler emulator math ascii codes help

The screenshot shows the emu8086 interface. The main window displays assembly code:

```
01 ; You may customize this and other start-up templates;
02 ; The location of this template is c:\emu8086\inc\0_com_template.txt
03 ; Mahnoor Zahid 66572
04 org 100h
05
06 .model small
07 .data
08 string db '27566 roonhaM$'
09 .code
10 main proc
11 mov ax, @data
12 mov ds, ax
13 mov si, offset string
14 mov cx,13
15 psh:
16 mov bx, [si]
17 push bx
18 inc si
19 loop psh
20 mov cx,13
21 pp:
22 pop dx
23 mov ah,2
24 int 21h
25 loop pp
26 mov ah,4ch
27 int 21h
28 main endp
29 end main
30
31
32
33
```

To the right, a terminal window titled "emu8086 screen (44x15 chars)" shows the output:

```
Mahnoor 66572
```

At the bottom of the terminal window are buttons for "clear screen" and "change font".

Task 2

emu8086 - assembler and microprocessor emulator 4.08

file edit bookmarks assembler emulator math ascii codes help

The screenshot shows the emu8086 interface. The main window displays assembly code:

```
01 ; You may customize this and other start-up templates;
02 ; The location of this template is c:\emu8086\inc\0_com_template.txt
03 ; Mahnoor Zahid 66572
04
05 org 100h
06
07 .model small
08 .stack 100h
09 .data
10 .code
11 main proc
12     mov ax, @data
13     mov ds, ax
14
15     mov cx, 10
16     mov dl, '0'
17 push:
18     mov ah, 0
19     push dx
20     inc dl
21     loop push
22     mov cx, 10
23 pop:
24     pop dx
25     mov ah, 2
26     int 21h
27     loop pop
28
29     mov ah, 4Ch
30     int 21h
31 main endp
32 end main
33 ret
```

To the right, a terminal window titled "emu8086 screen (50x19 chars)" shows the output:

```
9876543210
```

At the bottom of the terminal window are buttons for "clear screen" and "change font".