RIPHAH
INTERNATIONAL UNIVERSITY

Computer Organization & Assembly Language

LAB 07

Submitted to:

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Submitted by:

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BSCS-3

Class Task 1

emu8086 - assembler and microprocessor emulator 4.08

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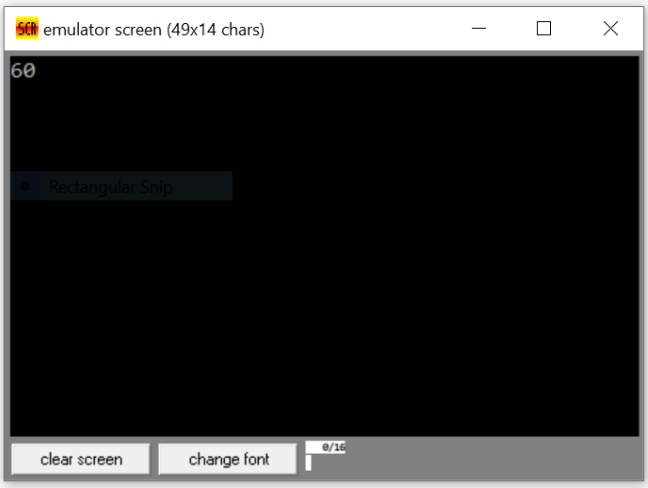
```
01
02 ; You may customize this and other start-up templates;
03 ; The location of this template is c:\emu8086\inc\0_com_template.txt
04 ; Mahnoor Zahid
05 ;66572
06 org 100h
07
08  quotient db ?
09  reminder db ?
10
11  main proc
12  mov ax,30
13  mov bl,5
14  div bl
15  mov quotient,al
16  mov reminder,ah
17
18  mov dl,quotient
19  add dl,48
20  mov ah,2
21  int 21h
22
23  mov dl,reminder
24  add dl,48
25  mov ah ,2
26  int 21h
27
28  main endp
29  end main
30  ret
31
```



Class Task 2

emu8086 - assembler and microprocessor emulator 4.08

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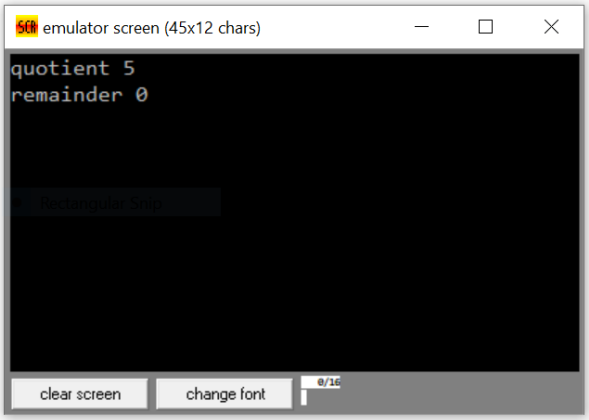
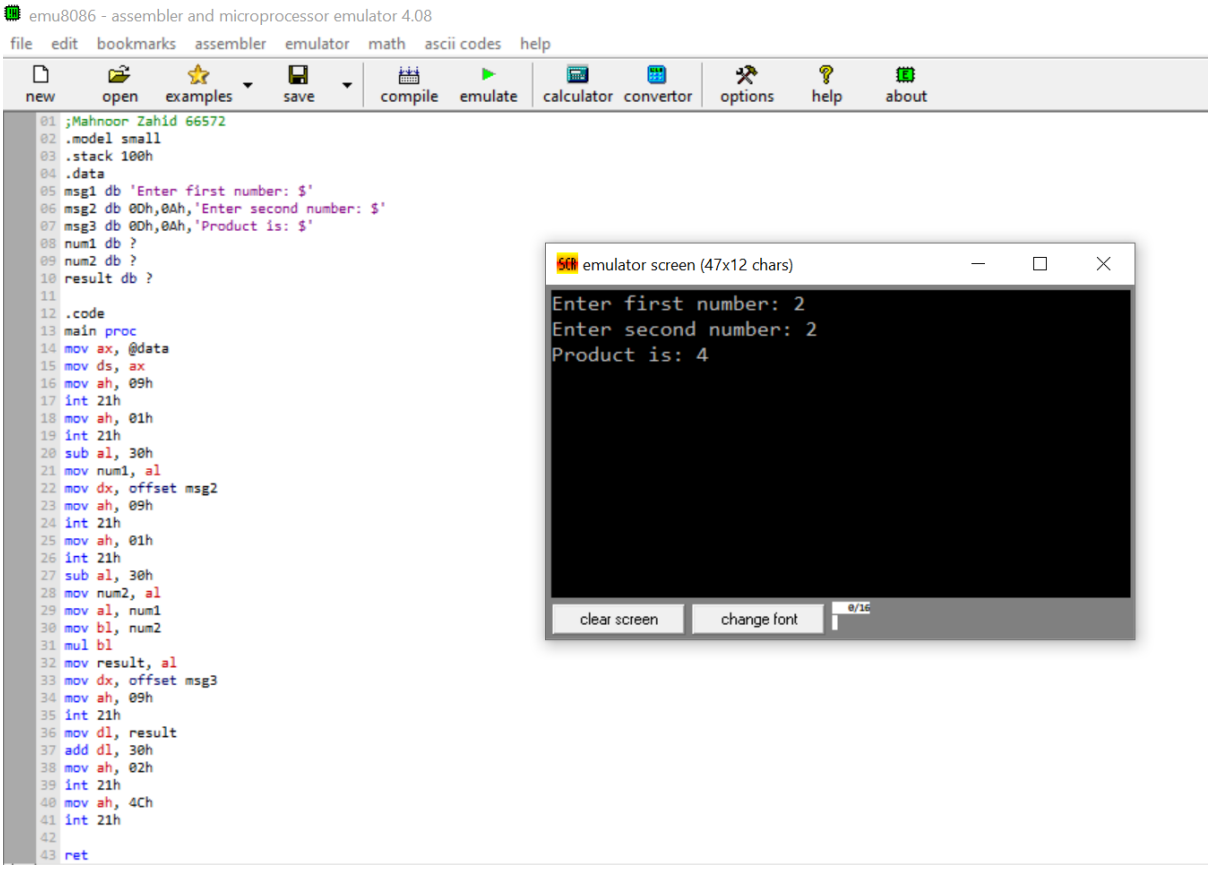
```
;Mahnoor Zahid
;66572
;program to divide two digits
.model small
.data
rm DB "remainder $"
qt DB "quotient $"
.code
main proc

mov ax,25
mov bl,5
div bl
mov cl, al
mov ch, ah
mov ax,@data
mov ds,ax
mov dx, offset qt
mov ah,9
int 21h
mov dl, cl
add dl,48
mov ah,2
int 21h
mov dx, 10
mov ah, 2
int 21h
mov dx,13
mov ah, 2
int 21h
mov ax, @data
mov ds, ax
mov dx, offset rm
mov ah,9
int 21h
mov dl, ch
add dl, 48
mov ah,2
int 21h
mov ah,4ch
int 21h

ret
```



Lab Task 1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;Mahnoor Zahid 66572
.model small
.stack 100h
.data
msg1 db 'Enter first number: $'
msg2 db 0Dh,0Ah,'Enter second number: $'
msg3 db 0Dh,0Ah,'Product is: $'
num1 db ?
num2 db ?
result db ?
.code
main proc
mov ax, @data
mov ds, ax
mov ah, 09h
int 21h
mov ah, 01h
int 21h
sub al, 30h
mov num1, al
mov dx, offset msg2
mov ah, 09h
int 21h
mov ah, 01h
int 21h
sub al, 30h
mov num2, al
mov al, num1
mov bl, num2
mul bl
mov result, al
mov dx, offset msg3
mov ah, 09h
int 21h
mov dl, result
add dl, 30h
mov ah, 02h
int 21h
mov ah, 4Ch
int 21h
ret
emulator screen (47x12 chars)
Enter first number: 2
Enter second number: 2
Product is: 4
clear screen
change font

Lab Task 2

emu8086 - assembler and microprocessor emulator 4.08

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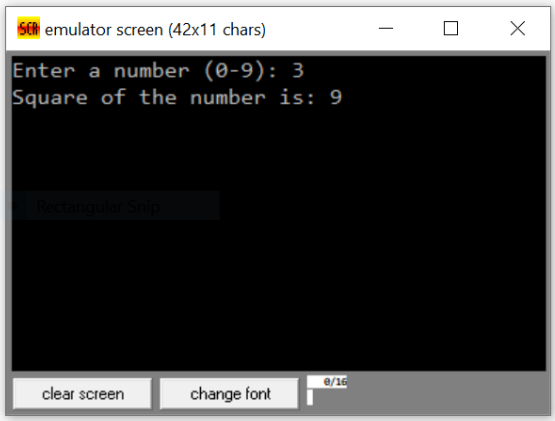
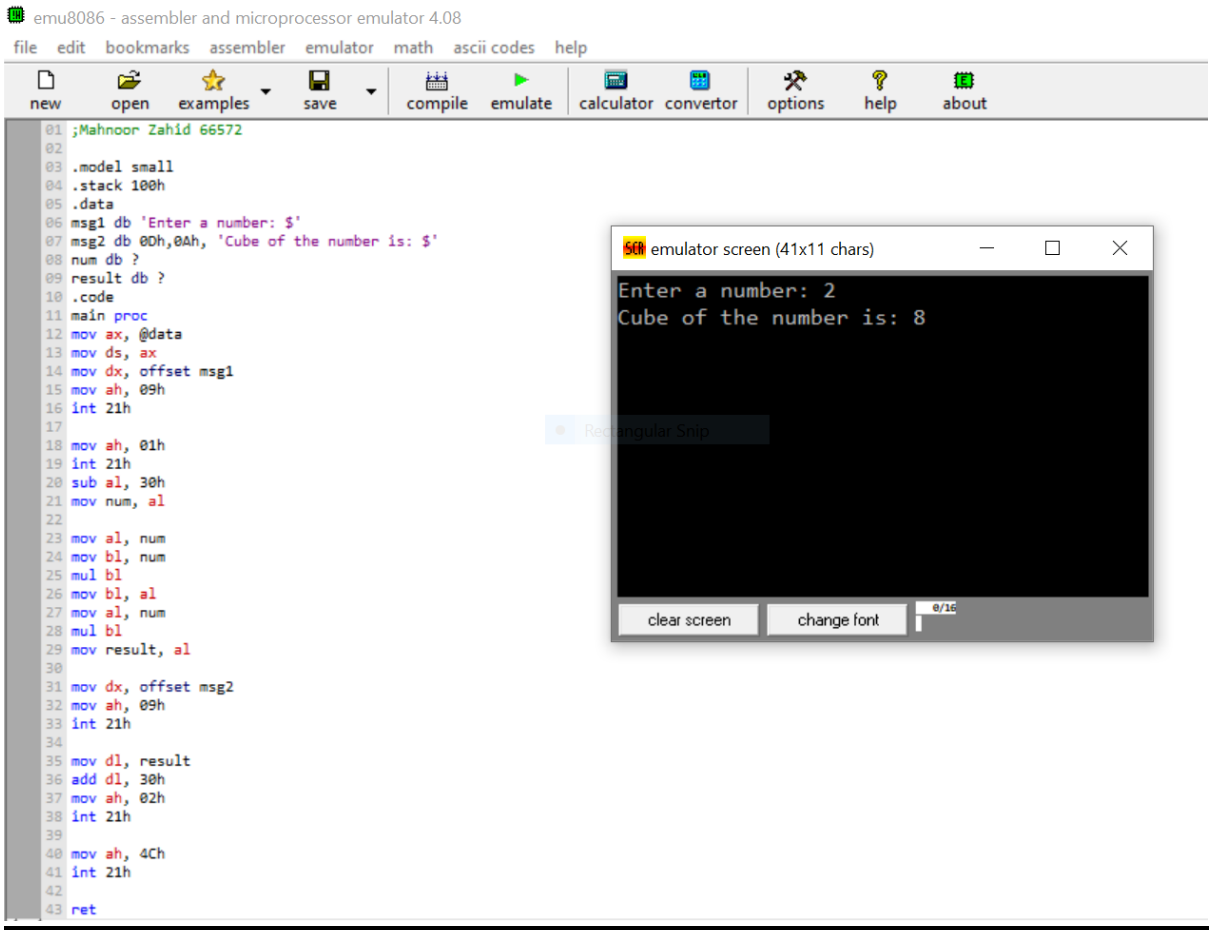
new open examples save compile emulate calculator convertor options help about

```
;Mahnoor Zahid 66572
.model small
.stack 100h
.data
msg1 db 'Enter a number (0-9): $'
msg2 db 0Dh,0Ah, 'Square of the number is: $'
num db ?
result db ?

.code
main proc
mov ax, @data
mov ds, ax

mov dx, offset msg1
mov ah, 09h
int 21h
mov ah, 01h
int 21h

sub al, 30h
mov num, al
mov al, num
mov bl, num
mul bl
mov result, al

mov dx, offset msg2
mov ah, 09h
int 21h

mov dl, result
add dl, 30h
mov ah, 02h
int 21h

mov ah, 4Ch
int 21h
main endp
end main

ret

```



Lab Task 3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;Mahnoor Zahid 66572
.model small
.stack 100h
.data
msg1 db 'Enter a number: $'
msg2 db 0Dh,0Ah, 'Cube of the number is: $'
num db ?
result db ?
.code
main proc
mov ax, @data
mov ds, ax
mov dx, offset msg1
mov ah, 09h
int 21h
mov ah, 01h
int 21h
sub al, 30h
mov num, al
mov al, num
mov bl, num
mul bl
mov bl, al
mov al, num
mul bl
mov result, al
mov dx, offset msg2
mov ah, 09h
int 21h
mov dl, result
add dl, 30h
mov ah, 02h
int 21h
mov ah, 4Ch
int 21h
ret
emulator screen (41x11 chars)
Enter a number: 2
Cube of the number is: 8
clear screen
change font