MAWLANA BHASHANI SCIENCE AND TECHNOLOGY UNIVERSITY

Santosh,Tangail-1902

LAB REPORT

Lab Report No : 03

Lab Report name : Assembly Language-03

Course Title : Microprocessor and Assembly Language Lab

Course Code : ICT- 3106

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Submitted by,

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MBSTU

1.Write an assembly program to display different triangle using asterisk and digit.

2.Write an assembly program to enter two 8 bit numbers and print their sum which is less than 9.

Algorithm:

1.Start the program.

2.Enter two numbers from ‘al’ register.

3.Move those two numbers to ‘bh’,’bl’ register accordingly.

4.Add ‘bh’ & ‘bl’ and store the reault in ‘bh’ register.

5.Sub 48 from ‘bh’ register.

6.Display ‘bh’ register.

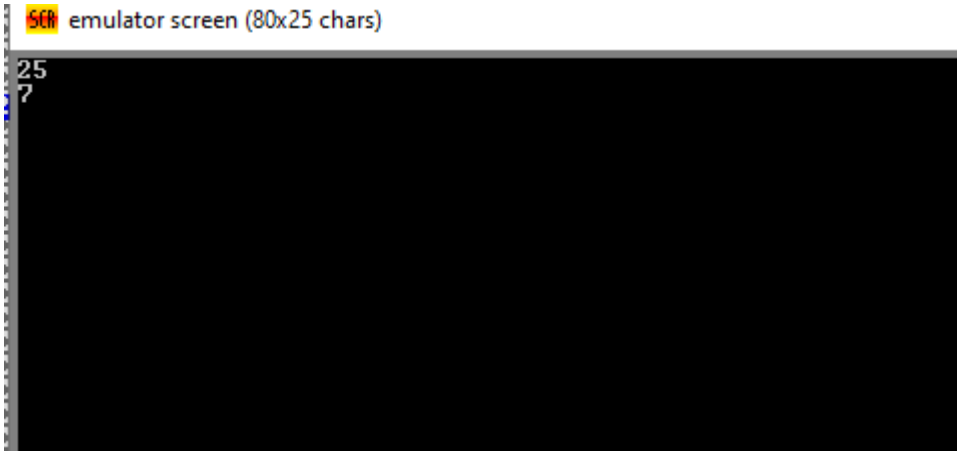
7.Stop the program.

Source code:

```
.model small

.stack 100h

.code

main proc

 mov ah,1

 int 21h

 mov bh,al


 mov ah,1

 int 21h

 mov bl,al
```

```
mov ah,2
mov dl,10
int 21h
mov dl,13
int 21h

add bh,bl
sub bh,48

mov ah,2
mov dl,bh
int 21h

exit:
mov ah,4ch
int 21h
main endp
end main
```

Output:



3.Write an assembly program to enter two 8 bit numbers and print their sum which is larger than 9.

Algorithm:

1.Start the program.

2.Enter to number from ‘al’ register,

3.Move those two numbers to ‘bh’ and ‘bl’ register accordingly.

4.Add them and sub 58 from ‘bh’ register and store the result to ‘bh’ register.

5.Display 1 first and then ‘bh’ .

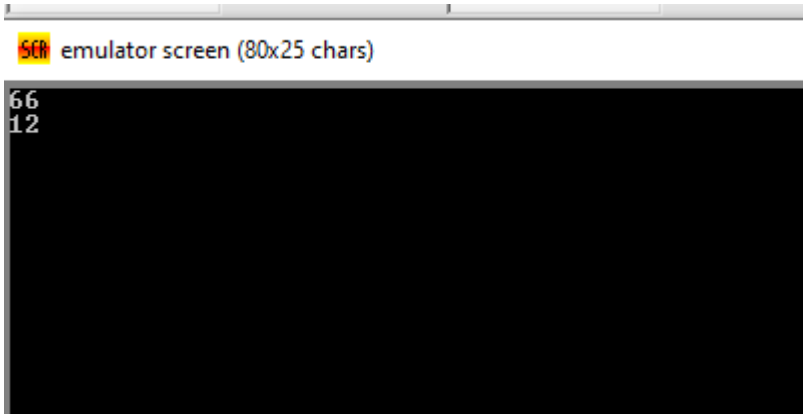
6.Stop the program.

Source code:

```
.model small

.stack 100h

.code

main proc

 mov ah,1

 int 21h

 mov bh,al
```

```
mov ah,1
int 21h
mov bl,al

mov ah,2
mov dl,10
int 21h
mov dl,13
int 21h

add bh,bl
sub bh,58

mov ah,2
mov dl,'1'
int 21h
mov dl,bh
int 21h

exit:
mov ah,4ch
int 21h
main endp
end main
```

Output:



4. Write an assembly program to enter a number and perform multiplication with itself which less than 9.

Algorithm: 1.Start a program.

2.Enter first number in 'bl' register.

3.Enter second number from 'al' register and multiply it with 'bl' register.

4.Move the value in bl register,

5.Add 48 with bl register.

6.Display it.

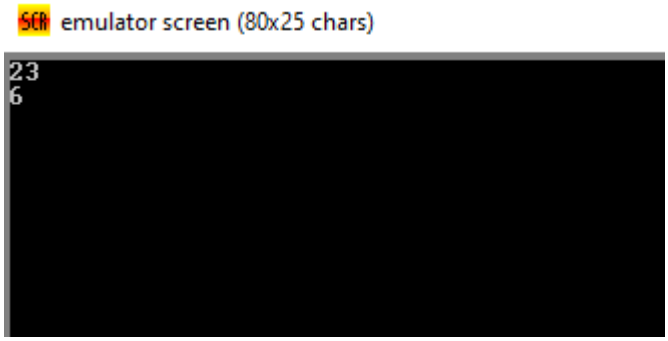
Source code:

```
.model small

.stack 100h

.data

.code

main proc

 mov ah,1

 int 21h
```

```
mov bl,al
sub bl,48

mov ah,1
int 21h
sub al,48

mul bl
mov bl,al
add bl,48

mov ah,2
mov dl,10
int 21h
mov dl,13
int 21h

mov ah,2
mov dl,bl
int 21h

exit:
mov ah,4ch
int 21h
main endp
```

end main

Output:



6. Write an assembly program to enter two numbers and perform division.

Algorithm:

1.Start the program.

2.Enter two numbers.

3.Move them to ‘bl’ and ‘al’ register accordingly.

4.Divide ‘al’ register by ‘bl’ register.

5.Display bl register and bh register.

6.stop the program.

Source code:

```
.model small

.stack 100h

.data

.code

main proc

 mov al,7
```

```
mov bl,2


div bl

mov bx,ax

mov ah,2

mov dl,bl

add dl,48

int 21h

mov dl,bh

add dl,48

int 21h


exit:

mov ah,4ch

int 21h

main endp

end main
```

Output: