Assembly Programming Lab. (2)

<DupOp1.asm>

```
.model small
.stack
.data
msg db 1 dup('*'), '$' ;  Run the program again by replacing 1 with 2, 3, 4, etc.
.code
main proc
            mov ax, @data
            mov ds, ax

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

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

```
.model small
.stack
.data
msg db 1 dup('*'),0Ah,0Dh  ; 0Ah: New line(line feed), 0Dh: Carriage Return →check it out in Ascii code table
    db 2 dup('*'),0Ah,0Dh, '$'
.code
main proc
            mov ax, @data
            mov ds, ax

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

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

INT21h_01h.asm

```
.model small
.stack
.data
msg1 db "Enter the char.: ",'$'
msg2 db 0ah,0dh,"The char. you entered is: ",'$'

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

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

            mov ah, 01h;  Read single character from standard input
            int 21h
            mov bl, al

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

            mov ah,02h
            mov dl,bl
            int 21h

            mov ah,4ch
             int 21h
          end main
          end
```

Q1-1. Write an assembly language program to print all letters as follows:

AB..........YZ

Note: To print a character on the screen you have to use the int 21h with the service 2, the character to be printed have to be in dl. For Example, the following code print A on the screen.

mov ah, 2

mov dl, 41h

int 21h

Note: Don't use loop.

Q1-2. Rewrite an assembly language program question above using the loop.

Q2-1. Print the following output on the command window using the DUP Operator.

```
*
**
***
****
*****
```

Hint code)

```
.model small
.stack
.data
msg db 1 dup('*'),0Ah,0Dh
    db 2 dup('*'),0Ah,0Dh, '$'

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

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

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

Q2-2. Rewrite an assembly language program question above using the loop.

Q3-1. Write your name on the console (using 0Ah = line feed) as the following:

KIM

    YOUNG

        GAB

Q3-2. Rewrite an assembly language program question above using the loop.