

# Assembly Language LAB

*Islamic University – Gaza*  
*Engineering Faculty*  
*Department of Computer Engineering*  
*2013*

*ECOM 2125: Assembly Language LAB*

*Created by: Eng. Ahmed M. Ayash*

*Modified and Presented By: Eihab S. El-Radie*



## *Lab # 2*

### *Assembly Language*

### *Fundamentals*

### *HW Solution*

## Homework:

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

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

Solution:

```
.model small  
.386  
.stack 100h  
.data  
msg      db 1 dup('*'),0Ah,0Dh  
          db 2 dup('*'),0Ah,0Dh  
          db 3 dup('*'),0Ah,0Dh  
          db 4 dup('*'),0Ah,0Dh  
          db 5 dup('*'),0Ah,0Dh,'$'  
  
        .code  
main:  
        mov ax,@data  
        mov ds,ax  
  
        mov ah,09h  
        mov dx,offset msg  
        int 21h  
  
        mov ah,4Ch  
        int 21h  
end main
```

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

Eihab

Salah

El-Radie

**Solution:**

```
.model small
.386
.stack 100h
.data
msg db "Eihab",0Ah,"  Salah" ,0Ah,"    El-Radie'$',"

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

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

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

3. Write an assembly language program that moves in ebx value 12344321 and moves in dx value 4334 using the variables String1 and String2 stored in memory.

```
String1 dd 12343412h  
String2 dd 43214321h
```

**Solution:**

```
.model small  
.386  
.stack 100h  
.data  
String1 dd 12343412h  
String2 dd 43214321h  
comment!  
    ebx 12344321h  
    dx 4334  
!  
  
. code  
main:  
    mov ax,@data  
    mov ds,ax  
  
    mov ebx,String1  
    mov edx,String2  
    mov cx,dx      ;cx = 4321h  
    mov dl,bh      ;dx = 4334h  
    mov bx,cx      ;bx = 4321h ;ebx 12344321h  
  
    mov ah,4ch  
    int 21h  
end main
```