[Coal - Lab]

[Lab Report #05]

(Assembly Language Programs)

➢ Write a program which Print First 5 Even Numbers :

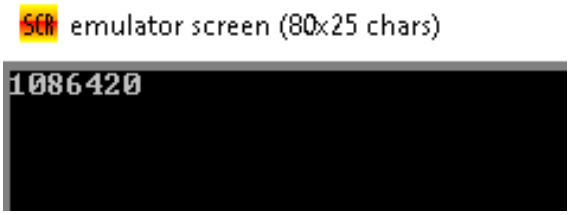
```
include "emu8086.inc"
.model samll
.stack 100h
.data
.code
main proc
    mov cx,10
    l2:
    l1:
    mov ax,cx
    mov bl,2
    div bl
    cmp ah,0
    jz even
    jnz decc
    even:
    mov ax,cx

    mov bl,10
    div bl
    cmp al,0
    jz single
    jnz double
    single:
    mov ah,0
    mov dx,cx
    mov ah,2
    add dx,30h
    int 21h
    ;dec cx
```

```
    loop l1
    jmp exit

    double:
    mov dl,al
    mov bl,ah
    mov ah,2
    add dl,30h
    int 21h
    mov dl,bl
    mov ah,2
    add dl,30h
    int 21h
    loop l1
    jmp exit
    decc:
    dec cx
    jmp l2
    exit:
    main endp
end main
```

Output:



➢ Write a program which Display Table(2) by User given :

```
include "emu8086.inc"
.model small
.stack 100h
.data
    a db ?
    b db ?
    f db ?
.code
main proc
```

```
    print "---( Table from 1 - 9 )---"
    mov ah,2
    mov dl,0ah
    int 21h
    mov dl,0dh
    int 21h
    print "Enter a Number : "
    mov ah, 1
    int 21h
    mov a, al
    sub a, 30h
    mov ah, 2
    mov dl,0ah
    int 21h
    mov dl, 0dh
    int 21h
    print "Table of "
    mov dl, a
    add dl, 30h
    int 21h
    print " :"
    mov dl, 0ah
    int 21h
    mov dl, 0ah
    int 21h
    mov dl, 0dh
    int 21h
    mov b,1
    mov f,1
    mov cx, 10
L1:
    mov dl, a
    add dl, 30h
    mov ah, 2
    int 21h
    print " * "

    mov ah,0
    mov al,b
    mov bl,10
    div bl
    cmp al,0
```

```
jz single
jnz double
single:

mov dl,b
mov ah,2
add dl,30h
int 21h
inc b
jmp L2

double:
mov ah,0
mov dl,al
mov bl,ah
mov ah,2
add dl,30h
int 21h
mov dl,bl
mov ah,2
add dl,30h
int 21h
jmp L2

L2:
mov ah,0
print " = "
mov al,f
mul a
inc f

mov bl,10
div bl

cmp al,0
jz sing
jnz doub
sing:

mov dl,ah
mov ah,2
add dl,30h
```

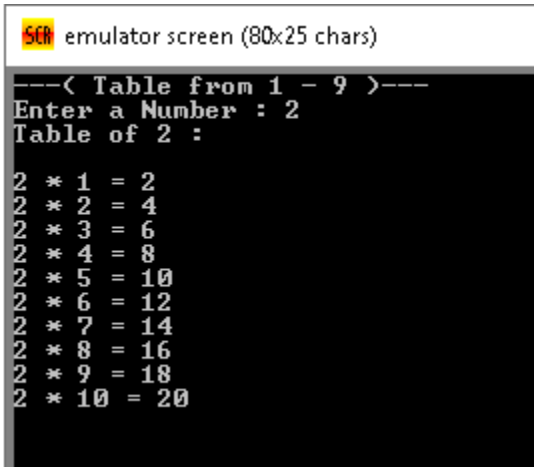
```
    int 21h
    mov dl, 0ah
    int 21h
    mov dl, 0dh
    int 21h
    jmp next

    doub:
    mov dl,al
    mov bl,ah
    mov ah,2
    add dl,30h
    int 21h
    mov dl,bl
    mov ah,2
    add dl,30h
    int 21h
    mov dl, 0ah
    int 21h
    mov dl, 0dh
    int 21h

    jmp next
    next:
    loop L1

    main endp
end main
```

Output:



➢ Write a program to Display Sum of 1st Five Odd Numbers:

```
include 'emu8086.inc'
.model small
.stack 100h
.data
   a dw 0
   b dw 0
.code
main proc
   mov cx,9
   start:
   mov a,cx
   jmp sum
   back:
   mov dx,cx
   mov ah,2
   add dx,30h
   int 21h
   dec cx
   cmp cx,0
   je next
   loop start
   next:
   mov ah,0
   print ' Sum : '
   mov ax,bx
   mov bl,10
   div bl
   mov dl,al
   mov bl,ah
   mov ah,2
   add dl,30h
   int 21h
   mov dl,bl
   mov ah,2
   add dl,30h
   int 21h
   jmp exit
   sum:
```

```
    add bx,a
    jmp back

    exit:
    main endp
end main
```

Output: