**Name: MD. Shamim Mia**

**ID: 19101532**

**Section: 08**

**Assignment 2**

**Task 01:**

.MODEL SMALL

.STACK 100h

.DATA

msg db "Enter a number$"

.CODE

MAIN PROC

MOV AX, @DATA

MOV DS, AX

;printing the string inside msg

MOV AH, 9

LEA DX, msg

INT 21h

; going to new line where cursor will be at the beginning

MOV AH, 2

MOV DL, 0Dh

INT 21h

MOV DL, 0Ah

INT 21h

;taking input and moving the input to BL

MOV AH, 1

INT 21h

MOV BL, AL

;going to new line where cursor will be at the beginning

MOV AH, 2

MOV DL, 0Dh

INT 21h

MOV DL, 0Ah

INT 21h

;moving the value of BL to DL and increasing the value by 1 and at last printing the new value

MOV DL, BL

INC DL

INT 21h

MOV AX, 4C00h

INT 21h

MAIN ENDP

END MAIN

**Task 02:**

.MODEL SMALL

.STACK 100h

.DATA

.CODE

MAIN PROC

MOV AX, @DATA

MOV DS, AX

;taking input and moving the input to BL

MOV AH, 1

INT 21h

MOV BL, AL

;going to new line where cursor will be at the beginning

MOV AH, 2

MOV DL, 0Dh

INT 21h

MOV DL, 0Ah

INT 21h

;moving the value of BL to DL and increasing the value by 20h for the ascii value of lower case and at last printing the new value

MOV DL, BL

ADD DL, 20h

INT 21h

MOV AX, 4C00h

INT 21h

MAIN ENDP

END MAIN

**Task 03:**

.MODEL SMALL

.STACK 100h

.DATA

msg1 db "Enter First Initial: $"

msg2 db "Enter Second Initial: $"

msg3 db "Enter Third Initial: $"

.CODE

MAIN PROC

MOV AX, @DATA

MOV DS, AX

;printing the string inside msg1

MOV AH, 9

LEA DX, msg1

INT 21h

;taking first initial as input and moving the input to BL

MOV AH, 1

INT 21h

MOV BL, AL

;going to new line where cursor will be at the beginning

MOV AH, 2

MOV DL, 0Dh

INT 21h

MOV DL, 0Ah

INT 21h

;printing the string inside msg2

MOV AH, 9

LEA DX, msg2

INT 21h

;taking second initial as input and moving the input to BH

MOV AH, 1

INT 21h

MOV BH, AL

;going to new line where cursor will be at the beginning

MOV AH, 2

MOV DL, 0Dh

INT 21h

MOV DL, 0Ah

INT 21h

;printing the string inside msg3

MOV AH, 9

LEA DX, msg3

INT 21h

;taking third initial as input and moving the input to CL

MOV AH, 1

INT 21h

MOV CL, AL

;going to new line where cursor will be at the beginning

MOV AH, 2

MOV DL, 0Dh

INT 21h

MOV DL, 0Ah

INT 21h

;moving the value of CL to DL and printing the third initial

MOV DL, CL

INT 21h

;going to new line where cursor will be at the beginning

MOV DL, 0Dh

INT 21h

MOV DL, 0Ah

INT 21h

;moving the value of BH to DL and printing the second initial

MOV DL, BH

INT 21h

;going to new line where cursor will be at the beginning

MOV DL, 0Dh

INT 21h

MOV DL, 0Ah

INT 21h

;moving the value of BL to DL and printing the first initial

MOV DL, BL

INT 21h

MOV AX, 4C00h

INT 21h

MAIN ENDP

END MAIN

**Task 04:**

.MODEL SMALL

.STACK 100h

.DATA

msg1 db "ENTER A HEX DIGIT: $"

msg2 db "IN DECIMAL IT IS $"

.CODE

MAIN PROC

MOV AX, @DATA

MOV DS, AX

;printing the string inside msg1

MOV AH, 9

LEA DX, msg1

INT 21h

;taking HEX digit as input and moving the input to BL

MOV AH, 1

INT 21h

MOV BL, AL

;going to new line where cursor will be at the beginning

MOV AH, 2

MOV DL, 0Dh

INT 21h

MOV DL, 0Ah

INT 21h

;printing the string inside msg2

MOV AH, 9

LEA DX, msg2

INT 21h

;printing 1(ascii value 49) cause 10(A) to 15(F) all numbers start with 1

MOV AH, 2

MOV DL, 49

INT 21h

;printing the lsb of the decimal number by subtracting the difference between ascii values(ascii of A - ascii of 0=17) since ascii values are sequental for numbers and letters

MOV DL, BL

SUB DL, 17

INT 21h

MOV AX, 4C00h

INT 21h

MAIN ENDP

END MAIN