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**Section: 08**

**Assignment 1**

**Problem 1:**

.MODEL SMALL

.STACK 100h

.DATA

.CODE

MAIN PROC

MOV AX, @DATA

MOV DS, AX

;storing the values

MOV AX, 24h

MOV BX, 31h

;performing AX\*BX

MUL BX

;storing the product to DX register

MOV DX, AX

MOV AX, 4C00h

INT 21h

MAIN ENDP

END MAIN

**Problem 2:**

.MODEL SMALL

.STACK 100h

.DATA

.CODE

MAIN PROC

MOV AX, @DATA

MOV DS, AX

; I'm doing the calculation considering the data is in word form.

MOV AX, 8A3h

MOV BX, 12h

;performing DX:AX/BX and in our case DX contains 0000h

DIV BX

; After executing this line our remainder is stored in DX and the quotient is stored in AX

MOV AX, 4C00h

INT 21h

MAIN ENDP

END MAIN

**Problem 3:**

.MODEL SMALL

.STACK 100h

.DATA

.CODE

MAIN PROC

MOV AX, @DATA

MOV DS, AX

;storing the values

MOV AX, 09

MOV BX, 07

; swapping the values using AL, BH, BL (no third register used)

MOV BH, AL

MOV AL, BL

MOV BL, BH

MOV BH, 00h

MOV AX, 4C00h

INT 21h

MAIN ENDP

END MAIN

**Problem 4:**

.MODEL SMALL

.STACK 100h

.DATA

;declaring and assigning value in the variable

A dw 18h

.CODE

MAIN PROC

MOV AX, @DATA

MOV DS, AX

;storing the value of the variable in a register

MOV AX, A

;performing -(A+1) since AX holds the value of A

INC AX

NEG AX

;again storing the updated value in the variable

MOV A, AX

MOV AX, 4C00H

INT 21h

MAIN ENDP

END MAIN