**Problem 1:**

.MODEL SMALL

.STACK 100H

.DATA

; DEFINE YOUR VARIABLES

amount DB "Enter the amount to pay (10-49): $"

numTaka DW ?

fiveNotes DW ?

oneNotes DW ?

.CODE

MAIN PROC

MOV AX, @DATA

MOV DS, AX

; YOUR CODE STARTS HERE

; Display prompt for input

MOV AH, 9

MOV DX, OFFSET amount

INT 21H

; Get input from user

MOV AH, 1

INT 21H

;second digit

INT 21H

SUB AL, '0'

ADD AX, numTaka ; Add to the first digit

MOV numTaka, AX

; Calculating number of 5 taka notes

MOV AX, numTaka

MOV DX, 0 ; Clear DX for division

MOV BX, 5 ; Divisor for 5 taka notes

DIV BX

MOV fiveNotes, AX

; Calculating total 1 taka notes

MOV AX, DX ; Remainder from previous division

MOV oneNotes, AX

; Print results

MOV AH, 9

MOV DX, OFFSET newline

INT 21H

MOV AH, 9

MOV DX, OFFSET fiveNotesMsg

INT 21H

MOV DX, fiveNotes

CALL printNum

MOV AH, 9

MOV DX, OFFSET newline

INT 21H

MOV AH, 9

MOV DX, OFFSET oneNotesMsg

INT 21H

MOV DX, oneNotes

CALL printNum

; YOUR CODE ENDS HERE

MOV AX, 4C00H

INT 21H

MAIN ENDP

END MAIN

**……………………**

**Problem 2:**

.MODEL SMALL

.STACK 100H

.DATA

; DEFINE YOUR VARIABLES

num1 DB ?

num2 DB ?

binary\_num1 DB 8 DUP(0)

binary\_num2 DB 8 DUP(0)

complement\_num1 DB 8 DUP(0)

complement\_num2 DB 8 DUP(0)

.CODE

MAIN PROC

MOV AX, @DATA

MOV DS, AX

; YOUR CODE STARTS HERE

; Input 1

MOV AH, 01H

INT 21H

SUB AL, 30H

MOV num1, AL

; Input 2

MOV AH, 01H

INT 21H

SUB AL, 30H

MOV num2, AL

; Converting num1 to binary

MOV AX, num1

MOV CX, 8

MOV SI, 0

;hex to dec

; YOUR CODE ENDS HERE

MOV AX, 4C00H

INT 21H

MAIN ENDP

END MAIN