

**Question # 01: Write a program that calculates the total sum paid to a salesperson for eight months. The following are the monthly paychecks for those months: \$986, \$5673, \$4323, \$1298, \$3700, \$1200, \$4300 and \$2300.**

**CODING:**

```
.MODEL SMALL
```

```
.STACK 64
```

```
.DATA
```

```
COUNT EQU 08
```

```
SALARY DW 986, 5673, 4323, 1298, 3700, 1200, 4300 , 2300
```

```
ORG 0010H
```

```
SUM DW 2 DUP(?)
```

```
.CODE
```

MAIN PROC FAR

MOV AX,@DATA

MOV DS, AX

MOV CX, COUNT

MOV SI, OFFSET SALARY

MOV AX, 00

MOV BX, AX

BACK: ADD AX, [SI]

ADC BX,0

INC SI

INC SI

DEC CX

JNZ BACK

MOV SUM, AX

MOV SUM+2, BX

MOV AH, 4CH

INT 21H

MAIN ENDP

END MAIN

**Question # 02: Write a program to find the highest value from monthly paychecks given in Question # 01.**

**CODING:**

MODEL SMALL

.STACK 64

.DATA

SALARY DW 986, 5673, 4323, 1298, 3700, 1200, 4300 , 2300

ORG 0010H

HIGHEST DW ?

.CODE

MAIN PROC FAR

MOV AX, @DATA

MOV DS , AX

MOV CX, 8

MOV BX, OFFSET SALARY

SUB AX , AX

AGAIN: CMP AX , [BX]

JA NEXT

MOV AX , [BX]

NEXT: ADD BX , 2

LOOP AGAIN

MOV HIGHEST, AX

MOV AH, 4CH

INT 21H

MAIN: ENDP

END MAIN

**Question # 03: Write a program that scans the initials 'IbM' and replaces the lowercase 'b' with Uppercase 'B'.**

**CODING:**

.MODEL SMALL

.STACK 64

.DATA

DATA1 DB 'IbM','\$'

.CODE

MAIN PROC FAR

MOV AX, @DATA

MOV DS, AX

MOV ES, AX

CLD

MOV DI, OFFSET DATA1

MOV CX, 04

MOV AL , ' b '

REPNE SCASB

JNE OVER

DEC DI

MOV BYTE PTR [DI] , ' B '

OVER: MOV AH, 09

MOV DX, OFFSET DATA1

INT 21H

MAIN: ENDP

END MAIN

**Question # 04: Write a program using a lookup table and XLAT to retrieve the y value in the Equation  $y = x^2 + 2x + 5$  for x values of 0 to 9.**

**CODING:**

.MODEL SMALL

.STACK 64

.DATA

Y\_EQ DB 05,08,13,20,29,40,53,68,85,104

X\_VAL DB ?

STORE DB ?

.CODE

MAIN: PROC FAR

MOV AX, @DATA



MOV DS , AX

LEA BX , Y\_EQ

MOV AL , X\_VAL

XLAT

MOV STORE , AL

MOV AH , 4CH

INT 21

MAIN: ENDP

END MAIN

**Question # 05: Write a program that find number of zeros in a byte sized operand.**

**CODING:**

.MODEL SMALL

.STACK 64

.DATA

DATA1 DB 95H

COUNT DB ?

.CODE

MAIN : PROC FAR

MOV AX , @DATA

MOV DS , AX

SUB BL, BL

MOV DL, 8

MOV AL, DATA1

AGAIN: ROL AL, 1

JC NEXT

INC BL

NEXT: DEC DL

JNZ AGAIN

MOV COUNT, BL

MOV AH , 4CH

INT 21H

MAIN : ENDP

END MAIN