EXPERIMENT NO: 7

AIM: PART A: WRITE AN 8085 ASSEMBLY LANGUAGE PROGRAM TO CONVERT GIVEN BCD NUMBER INTO ITS EQUIVALENT BINARY NUMBER.

PROGRAM:

LDA 1051H
MOV B, A
ANI 0FH
MOV C, A
MOV A, B
ANI 0F0H
JZ SKIP
RRC
RRC
RRC
RRC
MOV D, A
XRA A
MVI E, 0AH

SUM: ADD E
DCR D
JNZ SUM

SKIP: ADC C
STA 1052H
HLT

OBSERVATION:

Input: 2001H: 72H
Output: 2101H: 48H

PART B: WRITE AN 8085 ASSEMBLY LANGUAGE PROGRAM TO CONVERT GIVEN BINARY NUMBER INTO ITS EQUIVALENT BCD NUMBER.

```
LDA 2001H
MOV B, A
ANI 0FH
MOV C, A
MOV A, B
ANI 0F0H
RRC
RRC
RRC
RRC
MOV D, A
MVI E, 0AH
XRA A

SUM: ADD E
DCR D
JNZ SUM

ADC C
STA 2002H
HLT
```

OBSERVATION:

Input: 2001H: FFH
Output: 2011H: 02H
              2012H: 05H
              2013H: 05H

CONCLUSION:

EXPERIMENT NO: 8

AIM: PART A:WRITE AN 8085 ASSEMBLY LANGUAGE PROGRAM TO CONVERT GIVEN BINARY NUMBER INTO ITS EQUIVALENT ASCII NUMBER.

PROGRAM:

```
LXI SP, 0FFFFH
LXI H, 2250H
LXI D, 2260H
MOV A, M
MOV B, A
RRC
RRC
RRC
RRC
CALL ASCII
STAX D
INX D
MOV A, B
CALL ASCII
STAX D
HLT

ASCII: ANI 0FH
    CPI 0AH
    JC CODE
    ADI 07H

CODE:  ADI 30H
    RET
```

OBSERVATION:

Input:	2250H:	7EH
Output:	2260H:	37H
	2261H:	45H

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PART B: WRITE AN 8085 ASSEMBLY LANGUAGE PROGRAM TO CONVERT GIVEN ASCII NUMBER INTO ITS EQUIVALENT BINARY NUMBER.

PROGRAM:

```
LXI SP, 0FFFFH
LXI H, 2250H
LXI D, 2260H
MOV A, M
CALL ASCIIBIN
STAX D
INX H
MOV A, M
CALL ASCIIBIN
INX D
STAX D
HLT

ASCIIBIN: SUI 30H
      CPI 0AH
      RC
      SUI 07H
      RET
```

OBSERVATION:

Input:	2250H:	36H (ASCII Data 1)
	2251H:	45H (ASCII Data 2)
Output:	2260H:	06H (BINARY ANSWER FOR ASCII DATA 1)
	2261H:	0EH (BINARY ANSWER FOR ASCII DATA 2)

CONCLUSION:

EXPERIMENT NO: 9

AIM: WRITE AN ASSEMBLY LANGUAGE PROGRAM IN 8085 CALCULATE THE SUM OF A SERIES OF EVEN NUMBERS.

PROGRAM:

LDA 2500H
MOV C, A
MVI B, 00H
LXI H, 2501H

BACK: MOV A, M
    ANI 01H
    JNZ SKIP
    MOV A, B
    ADD M
    MOV B, A

SKIP: INX H
    DCR C
    JNZ BACK

STA 2505H
HLT

OBSERVATION:

INPUT: 2500 H = 4H
2501 H = 20H
2502 H = 15H
2503 H = 13H
2504 H = 22H

OUTPUT: Result: 2505 H = 20+22= 42H

CONCLUSION:

EXPERIMENT NO: 10

AIM: WRITE AN ASSEMBLY LANGUAGE PROGRAM IN 8085 CALCULATE THE SUM OF SERIES OF ODD NUMBERS.

PROGRAM:

```
LDA 2500H
MOV C, A
LXI H, 2501H
MVI E, 00H
MOV D, E

BACK: MOV A, M
    ANI 01H
    JZ SKIP
    MOV A, E
    ADD M
    MOV E, A
    JNC SKIP
    INR D

SKIP: INX H
    DCR C
    JNZ BACK

HLT
```

OBSERVATION:

Inputs: 2500 H = 4H
2501 H = 9AH
2502 H = 52H
2503 H = 89H
2504 H = 3FH

OUTPUT: Result = 2505 H = 89H + 3FH= C8H

CONCLUSION: