S.N.	Name of Experiment	Date	Signature
1.	Write a program to load the registers (B, C, D & E) with your class roll no. in 8085	076/4/23	
2.	Write a program to add three numbers i.e. (02, 03 and 04) and show result in register E. In assembly language in 8085	076/4/23	
3.	Write a program in assembly language to load 5 numbers stored in memory B, C, D, E and H respectively in 8085	076/4/23	
4.	WAP to add 10 bytes of data stored in memory starting from 202A and show the 16-bit result through register D and E.	076/4/24	
5.	WAP to find smallest number among 10 bytes of data stored in memory location.	076/4/24	
6.	Write a program to find greatest number among 10 bytes of data stored in memory location.	076/4/24	
7.	WAP to multiply 10H and 14H and show the 16-bit result in registers B and C in a microprocessor simulator 8085	076/5/3	
8.	There are 10 numbers in the memory. Write a program to add only positive numbers and show the result at some memory location in simulator.	076/5/3	
9.	WAP to display a string "Programming makes me happy."	076/5/4	

LAB-1

Date:- 2076/4/23

WRITE A PROGRAM TO LOAD THE REGISTERS (B, C, D & E) with YOUR CLASS ROEL NO. in 8085

PROGRAM:

Mnemonics	Op-code
MVI B, 03H	06
MVI C, 03H	0E
MVI D, 03H	16
MVI E, 03H	1E
HLT	76

Data	Memory Location
06	2000
03	2001
0E	2002
03	2003
16	2004
03	2005
1E	2006
03	2007
76	2008

Fig:- Data represented in memory

OUTPUT:-

Registers

B = 03

C = 03

D = 03

E = 03

CONCLUSION:-

Hence, class roll number was stored in registers B, C, D & E in 8085 microprocessor.

LAB-2

Date:- 2076/4/23

WRITE A PROGRAM TO ADD THREE NUMBERS I.E. (02, 03 & 04) & SHOW THE RESULT IN REGISTER E IN ASSEMBLY LANGUAGE IN 8085

PROGRAM:-

Mnemonics	Opcode
MVI A, 02H	3E
MVI B, 03H	06
MVI C, 04H	0E
ADD B	80
ADD C	81
MOV E, A	5F
HLT	76

Data	Memory
3E	3000
02	3001
06	3002
03	3003
0E	3004
04	3005
80	3006
81	3007
5F	3008
76	3009

Fig:- Data represented in Memory

RESULT:-

Register

E = 09

CONCLUSION:-

Hence, the result of the addition of three numbers i.e. (02, 03 & 04) was stored in register E and shown in register E with result 09.

LAB-4

Date: 2076/4/24

WRITE A PROGRAM TO ADD 10 BYTES OF DATA STORED IN MEMORY STARTING FROM 202A AND SHOW THE 16-BIT RESULT THROUGH REGISTER D AND E.

PROGRAM:-

Mnemonics	Opcode
LXI H, 202A H	21
MVI A, 00 H	3E
MVI C, 0A H	0E
MVI D, 00H	16
MVI E, 00H	1E
ADD: ADD M	86
JNC NEXT	D2
INR E	1C
NEXT: INX H	23
DCR C	0D
JNZ ADD	C2
MOV D, A	57
HLT	76

OUTPUT:-

Registers

D = 11

E = 02

CONCLUSION:-

Hence, the sum of 10 bytes of data stored in memory starting from 2024 was calculated and the result was stored in register E and D and the output was 0211 H.

LAB-5

Date:- 2076/4/24

WRITE A PROGRAM TO FIND SMALLEST NUMBER AMONG 10 BYTES OF DATA STORED IN MEMORY LOCATION.

PROGRAM:

Mnemonics		Opcode
LDA	2000	3A
LXI	H, 2001	21
MVI	C, 09	0E
COMPARE: CMP	M	BE
JC	ESCAPE.	DA
MOV	A, M	7E
ESCAPE: INX	H	23
DCR	C	0D
JNZ	COMPARE	C2
MOV	B, A	47
HLT		76

Data	Memory
01	2000
02	2001
03	2002
04	2003
05	2004
06	2005
07	2006
08	2007
09	2008
10	2009
3A	200A
00	200B
20	200C
21	200D
01	200E
20	200F
0E	2010
09	2011
BE	2012
DA	2013
17	2014
20	2015
7E	2016
23	2017
0D	2018
C2	2019
12	201A
20	201B
47	201C
76	201D

Fig:- Data Represented in Memory

OUTPUT:-

Register

B = 01

CONCLUSION:-

Hence, after the experiment it was concluded that the smallest number among 10 bytes of data stored in memory location (i.e. data 01 to 10) was stored in which the result 01 was stored in register B.

LAB :- 6

Date:- 2076/04/26

WRITE A PROGRAM TO FIND GREATEST NUMBER AMONG 10 BYTES OF DATA STORED IN MEMORY LOCATION

PROGRAM:-

Mnemonics	Op-code
LDA 2000	3A
LXI H, 2001	21
MVI C, 09	0E
COMPARE:- CMP M	BE
JNC ESCAPE	D2
MOV A, M	7E
ESCAPE:- INX H	23
DCR C	0D
JNZ COMPARE	C2
MOV B, A	47
HLT	76

Data	Memory
01	2000
02	2001
03	2002
04	2003
05	2004
06	2005
07	2006
08	2007
09	2008
10	2009
3A	200A
00	200B
20	200C
21	200D
01	200E
20	200F
0E	2010
09	2011
BE	2012
D2	2013
17	2014
20	2015
7E	2016
23	2017
0D	2018
C2	2019
12	201A
20	201B
47	201C
76	201D

Fig:- Data Represented in Memory

OUTPUT:-

Register:-

B = 10

CONCLUSION:-

Hence, from the experiment it was concluded that the result stored from 01 to 10 i.e. 10 bytes of data stored in memory location, the greatest number 10 was stored in register B.

LAB-7

Date:- 076/5/3

WRITE A PROGRAM TO MULTIPLY 10H AND 14 H AND SHOW THE 16-BIT RESULT IN REGISTERS B AND C. IN A MICROPROCESSOR SIMULATOR 8085.

PROGRAM:

```
        MVI A, 00H
        MVI D, 14 H
        MVI E, 10 H
LOOP:   ADD D
        JNC NEXT
        INR B
NEXT:   DCR E
        JNZ LOOP
        MOV C, A
        HLT
```

RESULT:

Registers

B = 01

C = 40

CONCLUSION:

Hence, from the experiment in simulator the multiplication of 10H and 14 H was calculated and stored in register B and C with the result 01 in register B and 40 in register C.

LAB-8

Date:- 07/6/03

THERE ARE 10 NUMBERS IN THE MEMORY. WRITE A PROGRAM TO ADD ONLY POSITIVE NUMBERS AND SHOW THE RESULT AT SOME MEMORY LOCATION IN SIMULATOR 8085 MICROPROCESSOR

PROGRAM:

```
        MVI C 0AH
        MVI A 00H
        MVI B 00H ; initializing the sum = 00H in B
        LXI H 2000H
LOOP:   MOV A, M
        ANI 01 H
        JNZ JUMP
        MOV A, B
        ADD M
        MOV B, A
JUMP:   INX H
        DCR C
        JNZ LOOP
        STA 3000H
        LXI H, 3000H
        MOV D, M.
        HLT
```

Suppose,

ADDRESS	DATA
2000	01
2001	02
2002	01
2003	02
2004	01
2005	02
2006	01
2007	02
2008	01
2009	02

OUTPUT:

Register D = 0A

Memory Location 3000 H = 0A

CONCLUSION:

Hence, from the practical only even numbers were added and stored in some memory location.

LAB-9

07/5/7

WRITE A PROGRAM TO DISPLAY A STRING 'PROGRAMMING MAKES ME HAPPY' IN 8086 EMULATOR

PROGRAM:

```
org 100h
STR DB "PROGRAMMING MAKES ME HAPPY", "$"
MAIN PROC FAR
    MOV AX, @DATA
    MOV DS, AX
    MOV AH, 09H
    LEA DX, STR;
    INT 21H
    MOV AX, 4C00H
    INT 21H
    MOV AX, 4C00H
    INT 21H
    MAIN ENDP
    END MAIN
  ret
```

OUTPUT:

PROGRAMMING MAKES ME HAPPY

CONCLUSION:

Hence, a string "programming makes me happy" is display in the emulator 8086