**Practical-1(A)**

* Aim: Write an ASP for addition of two 8 bit numbers.
* Input: 3010H=25H

3011H=CFH

* Code: LDA 3010H

MOV B,A

LDA 3011H

ADD B

STA 3013H

HLT

* Output: 3013H=F4H

**Practical-1(B)**

* Aim: Write an ASP for addition of two 16 bit numbers.
* Input: 3090H=F9H

3091H=7AH

3092H=3CH

3093H=20H

* Code: LDA 3090H

MOV B,A

LDA 3091H

ADD B

STA 3095H

LDA 3092H

MOV D,A

LDA 3093H

ADD D

STA 3096H

HLT

* Output: 3095H=73H

3096H=5CH

**Practical-1(C)-Method 1**

* Aim: Write an ASP for subtraction of two 8 bit numbers.
* Input: 3050H=07H (7<9)

3051H=09H

* Code: LDA 3050H

MOV B,A

LDA 3051H

SUB B

STA 3053H

HLT

* Output: 3053H=02H

**Method 2**

* Input: 3050H=09H (9>7)

3051H=07H

* Code: LXI H,3050H

MOV A,M

INX H

SUB M

STA 3053H

HLT

* Output: 3053H=02H

**Practical-2(A)**

* Aim:Multiplication of two 8 bit numbers.
* Input: 3090H=04H

3091H=03H

3092H=00H

* Code: MVI D,03H

MVI C,00H

LDA 3090H

MOV B,A

LDA 3092H

LOOP:ADD B

INC LOOP

INR C

LOOP:DCR D

JNZ LOOP2

STA 3094H

MOV A,C

STA 3095H

HLT

* Output: 3094H=0CH

3095H=00H

**Practical-2(B)**

* Aim:Division of two 8 bit numbers.
* Input: 3050H=07H

3051H=02H

* Code: MVI D,00H

LXI H,3050H

MOV B,M

INX H

MOV C,M

MOV A,B

LOOP:SUB C

INR D

CMP C

JNC LOOP

STA 3053H

MOV A,D

STA 3054H

HLT

* Output: 3053H=01H

3054H=03H

**Practical-3**

* Aim: Write a program to add a block of data stored in memory location(HL).
* Input: 3020H=F2H

3021H=29H

3022H=C5H

3023H=37H

* Code: MVI C,04H

LXI H,3020H

LXI D,3090H

LOOP:MOV A,M

STAX D

INX H

INX D

DCR C

JNZ LOOP

HLT

* Output: 3090H=F2H

3091H=29H

3092H=C5H

3093H=37H

**Practical-4(A)**

* Aim: Write a program to find mini. From two 8 bit numbers.
* Input: 2901H=59H

2902H=65H

* Code: LDA 2901H

MOV B,A

LDA 2902H

CMP B

JC LOOP

MOV A,B

LOOP:STA 2904H

HLT

* Output: 2904H=59H

**Practical-4(B)**

* Aim: Write an 8085 assembly language program to get the mini. From block of N 8 bit numbers.
* Input: 3070H=15H

3071H=62H

3072H=FFH

3073H=09H

* Code: MVI C,04H

LXI H,3070H

MOV A,M

DCR C

LOOP2:INX H

MOV B,M

CMP B

JC LOOP

MOV A,B

LOOP:STA 3075H

DCR C

JNZ LOOP2

HLT

* Output: 3075H=09H

**Practical-5(A)**

* Aim: Write a program to find max. From two 8 bit numbers.
* Input: 2901H=59H

2902H=65H

* Code: LDA 2901H

MOV B,A

LDA 2902H

CMP B

JNC LOOP

MOV A,B

LOOP:STA 2904H

HLT

* Output: 2904H=65H

**Practical-5(B)**

* Aim: Write an 8085 assembly language program to get the max. From block of N 8 bit numbers.
* Input: 3070H=15H

3071H=62H

3072H=FFH

3073H=09H

* Code: MVI C,04H

LXI H,3070H

MOV A,M

DCR C

LOOP2:INX H

MOV B,M

CMP B

JNC LOOP

MOV A,B

LOOP:STA 3075H

DCR C

JNC LOOP2

HLT

* Output: 3075H=FFH

**Practical-6(A)**

* Aim: Write a program to sort data in ascending order.
* Input: 4201H=10H

4202H=25H

4203H=12H

4204H=37H

* Code: MVI C,04H

DCR C

LOOP3:MOV B,C

LXI H,4201H

LOOP2:MOV A,M

INX H

CMP M

JC LOOP

MOV D,M

MOV M,A

DCX H

MOV M,D

INX H Output: 4201H=10H

LOOP:DCR B 4202H=12H

INX LOOP2 4203H=25H

DCR C 4204H=37H

JNZ LOOP3

HLT

**Practical-6(B)**

* Aim: Write a program to sort data in decending order.
* Input: 4201H=10H

4202H=25H

4203H=12H

4204H=37H

* Code: MVI C,04H

DCR C

LOOP3:MOV B,C

LXI H,4201H

LOOP2:MOV A,M

INX H

CMP M

JNC LOOP

MOV D,M

MOV M,A

DCX H

MOV M,D

INX H Output: 4201H=37H

LOOP:DCR B 4202H=25H

JNZ LOOP2 4203H=12H

DCR C 4204H=10H

JNZ LOOP3

HLT

**Practical-7(A)**

* Aim: Write an 8085 assembly language program to covert a given BCD no. into its euq. Binary numbers.
* Input: 2500H=96H
* Code: LXI H,2500H

MOV B,M

MOV A,B

ANI 0FH

MOV C,A

MOV A,B

ANI F0H

RRC

RRC

RRC

RRC

MOV D,A

MVI E,0AH

XRA A

LOOP:ADD E

DCR D

JNZ LOOP

ADD C

STA 2502H

HLT

* Output: 2502H=60H

**Practical-7(B)**

* Aim: Write an 8085 assembly language program to covert a given Binary no. into its euq. BCD numbers.
* Input: 2000H=FFH
* Code: LDA 2000H

MVI B,00H

MVI C,00H

X:CPI 64H

JC LOOP

SUI 64H

INR B

JMP X

LOOP:CPI 0AH

JC LOO2

SUI 0AH

INR C

JMP LOOP

LOOP2:STA 2004H

MOV A,B

STA 2002H

MOV A,C

STA 2003H

HLT

* Output: 2002H=02H

2003H=05H

2004H=05H

**Practical-8(A)**

* Aim: Write an 8085 assembly language program to covert a given Binary no. into its euq. ASCII numbers.
* Input: 2500H=12H
* Code: LDA 2500H

CPI 0AH

JC LOOP

ADI 07H

LOOP:ADI 30H

STA 2502H

HLT

* Output: 2502H=49H

**Practical-8(B)**

* Aim: Write an 8085 assembly language program to covert a given ASCII no. into its euq. Binary numbers.
* Input: 2000H=49H
* Code: LDA 2000H

SUI 30H

CPI 0AH

JC LOOP

SUI 07H

LOOP:STA 2002H

HLT

* Output: 2002H=12H

**Practical-9**

* Aim: Write an 8085 assembly language program to calculate the sum of a series of EVEN numbers.
* Input: 2500H=4H

2501H=20H

2502H=15H

2503H=13H

2504H=22H

* Code: LDA 2500H

MOV C,A

MUI B,00H

LXI H,2501H

BACK:MOV A,M

ANI 01H

INZ SKIP

MOV A,B

ADD M

MOV B,A

SKIP:INX H

DCR C

INZ BACK

STA 2505H

HLT

* Output: 2505H=42H

**Practical-10**

* Aim: Write an 8085 assembly language program to calculate the sum of a series of ODD numbers.
* Input: 2500H=4H

2501H=9AH

2502H=52H

2503H=89H

2504H=3FH

* Code: LDA 2500H

MOV C,A

LXI H,2501H

MUI E,00H

MOV E,00H

MOVD,E

BACK:MOV A,M

ANI 01H

JZ SKIP

MOV A,E

ADD M

MOV E,A

JNC SKIP

INR D

SKIP:INX H

HLT

* Output: 2505H=C8H