# Microprocessor Lab-01 (Solution)

Write a program to exchange the content of location 9010H and 9020H. (Load values manually).

```
LDA 9010H
MOV B, A
LDA 9020H
STA 9010H
MOV A, B
STA 9020H
HLT
```

```
LXI H, 9010H
MOV B, M
LXI D, 9020H
LDAX D
MOV M, A
MOV A, B
STAX D
HLT
```

WAP to display
lower byte of a sixteen-bit number having memory location 9000 on port address 80H and higher byte on port address 81H.

```
LDA 9000H
OUT 80H
LDA 9001H
OUT 81H
HLT
```

```
LHLD 9000H
MOV A, L
OUT 80H
MOV A, H
OUT 81H
HLT
```

Compare the content of memory location [9000H] = 41H with [9001H] = 40H and [9002H] = 41H. Observe and note the content of flag.

```
LDA 9001H
MOV B, A
LDA 9000H
CMP B ;(Note Flags)
HLT
```

```
LDA 9002H
MOV B, A
LDA 9000H
CMP B (Note Flags)
HLT
```

There are three 16-bit data at location 9000H, 9002H and 9004H. WAP to add all the values and store the 24 bit result at 9007.

```
LHLD 9000H
XCHG
LHLD 9002H
DAD D
JNC SKIPCARRY
INR C
SKIPCARRY: XCHG
LHLD 9004H
DAD D
JNC SKIPCARRY1
INR C
SKIPCARRY1: SHLD 9007H
MOV A, C
STA 9009H
HLT
```

Set $D_2$ bit and reset $D_5$ bit of data at memory location [9000H] = 63H. And store the result at location [9005H] = ?

```
LDA 9000H
ORI 04H   ;0000 0100
ANI DFH   ;1101 1111
STA 9005H
HLT
```