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Practical Lab 1 (MIT)

1. Store 8-bit data in memory

```
MVI A, 52H  
STA 4000H  
HLT
```

2. Exchange the contents of memory locations

```
LDA 2000H  
MOV B, A  
LDA 4000H  
STA 2000H  
MOV A, B  
STA 4000H
```

3. Add two 8-bit numbers

```
LXI H 4000H  
MOV A, M  
INX H  
ADD M  
INX H  
MOV M, A  
HLT
```

4. Subtract two 8-bit numbers

```
LXI H, 4000H  
MOV A, M  
INX H  
SUB M  
INX H  
MOV M, A  
HLT
```

5. Add two 16-bit numbers

```
LHLD 4000H
```

```
XCHG
LHLD 4002H
MOV A, E
ADD L
MOV L, A
MOV A, D
ADC H
MOV H, A
SHLD 4004H
HLT
```

6. Add contents of two memory locations

```
LXI H, 4000H
MOV A, M
INX H
ADD M
MOV M, A
MVI A, 00
ADC A
INX H
MOV M, A
HLT
```

7. Subtract two 16-bit numbers

```
LHLD 4000H
XCHG
LHLD 4002H
MOV A, E
SUB L
MOV L, A
MOV A, D
SBB H
MOV H, A
SHLD 4004H
HLT
```