Questions

1. Write logical steps to add the following two Hex numbers. Both the numbers should be saved for future use. Save the sum in the accumulator. Numbers: A2H and 18H

MVI A, 0A2H ; Store 8 Bit data to A

STA 2000H ; Save Data from A to Memory

MVI B, 18H ; Store 8 bit data to B

MOV C, A ; Move A to C

MOV A, B ; Move B to A

STA 2001H ; Store the second number to memory

ADD C ; Add A and C

HLT ; Terminate program

1. Write a program to add 16-bit addition using “DAD” instruction.

LHLD 8501H ; Get first 16-bit number in HL

XCHG ; Save first 16-bit number in DE

LHLD 8503H ; Get second 16-bit number in HL

DAD D ; Add DE to HL

SHLD 8505H ; Store l6-bit result in memory locations

HLT ; Terminate program

3) Labsheet 3, 1b question.

4) Add contents of two memory locations.

LXI D,2000H ; Memory location 1

LXI H,2001H ; Memory Location 2

MVI A, 00H ; Set A to 0

ADD M ; Adding data stored from memory addressed by HL Pair

XCHG M ; Exchange DE pair and HL pair

ADD M ; Adding data stored from memory addressed by HL Pair

HLT

5) Compare two numbers and store the greater number in memory location 2500H

LDA 2000H

LXI H, 2001H

CMP M

JNC LT

LDA 2001H

STA 2500H

HLT

LT: STA 2500H

HLT