

## Assignment 6.2:

Roll no: 2019BTECS00022

Name: Prachi R. Chobhare.

Class: SYCSE

Q. Explore the working of Dyna-85 kit with execution flow of sample addition program.

Ans: • Dyna-85: It is 8085 microprocessor trainer kit, and it is based on intel 8085 high performance CPU operating at 3MHz by crystal oscillator. It has 16 Kbyte system monitor as memory. Codes and subroutines are accessible to user using variable commands. It has also hex keypad & display section for easy operations. It is also capable for serial ID # interface.

\* Addition of two 8-bit numbers:

① Using MVI command

```
MVI A, 02 H
MVI B, 03 H
ADD B
MOV C, A
HLT
```

→ Steps:

MVI A, 02 H: Move data 02H to accumulator



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 MVI B, 03H : Move data 03H to B register.

ADD B : Add B to A & stored in A.

MOV C, A : Copy contents of A to C, i.e. store result in C

HLT : Stop program.

② Using LDA commands.

LDA 2000H.

MOV B, A.

LDA 2001H

ADD B

STA 2002H

HLT

⇒ Steps :

LDA 2000H : load the content of 2000H memory location to accumulator, i.e. A set 2000H

MOV B, A : Move contents of accumulator to B register, i.e. B set A

LDA 2001H : load content of 2001H memory location to accumulator i.e. A set 2001H

ADD B : Add A & B & stored in A.



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STA 2002H : Copy contents of accumulator to 2002H memory location.

HLT : stop program.

③. Using LXI command

```
LXI H, 3000H.  
MOV A, M  
INX H  
MOV B, M  
ADD B  
INX H  
MOV M, A  
HLT
```

⇒ Steps :

LXI H, 3000H : Get the address of first number in HL pair. Now, HL pair points to 3000H.

MOV A, M : Get first operand to the accumulator.

INX H : Increment content of HL pair. Now, HL pair points to 3001H.

MOV B, M : Get second operand to the B register.

ADD B : Add B to A & stored in A.



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 INX H : Increment content of HL pair. Now, HL pair points to 3001 H.

MOV M, A : Get result in memory pointed by HL pair i.e. 3002 H.

HLT / RST 1 : Stop program.

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