

Experiment no-1: Write a program in Assembly language of 8085 to add two numbers using LDAX/STAX

<u>Assembly Code</u>	<u>Hex Code</u>
LXI D, 2050	11 50 20
LDAX D	1A
MOV B, A	47
LXI D, 2051	11 51 20
LDAX D	1A
ADD B	80
INX D	13
STAX D	12
HLT	76

Assembly Code:

LXI D, 1050H

LDAX D

MOV B,A

LXI D, 1051H

LDAX D

ADD B

INX D

STAX D

HLT

HEX Code:

11

50

10

1A

47

11

51

10

1A

80

12

12

76

Procedure:

Step 1) Writing program in memory

1. Press SET/MEM
2. Type in Address 0000
3. Press Enter
4. Type 1st HEX Code3 (Here 01)
5. Press Enter
6. Follow step 4 and 5 to type in all HEX Codes.

Step 2) Assigning values to the address location

1. Press SET/MEM
2. Type address of 1st Location (Here 2050)
3. Press Enter
4. Type in 1st value in Hexadecimal format
5. Follow steps 1-4 to assign values to the 2nd address location

Step 3) Executing the program

1. Press RESET to clear the buffer
2. Press SET/MEM
3. Type in starting address of the program (Here 0000)
4. Press GO

5. Press EXECUTE

Step 4) Checking the output

1. Press SET/MEM
2. Type in address of result location (Here 2703)
3. Press Enter
4. You will get the sum of both the numbers in hexadecimal format.

Output:

The screenshot displays the 8085 Simulator interface. The main window is titled "8085 Simulator" and includes a menu bar with "File", "Edit", "Tools", "Settings", "Simulation", "Subroutine", "View", "Load Sample Program", and "Help". Below the menu bar, there are tabs for "Editor" and "Assembler". The "Editor" tab is active, showing the "8085 Assembly Language Editor" with a text area containing assembly code. The "Assembler" tab is also visible, showing a list of memory addresses and their corresponding values. The "Memory Editor" window is open, displaying a table of memory addresses and values. The table has two columns: "Memory Address" and "Value". The memory range is set from 0000 to FFFF. The table shows the following data:

Memory Address	Value
2050	01
2051	03
2052	04
3000	11
3001	50
3002	20
3003	1A
3004	47
3005	11
3006	51
3007	20
3008	1A
3009	80
300A	13
300B	12
300C	76

Below the table, there are three radio buttons for memory display options:

- ☐ Show entire memory content
- ☒ Show only loaded memory location
- ☐ Store directly to specified memory location

The "Autocorrect" and "Disassemble" buttons are visible at the bottom of the editor window.

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8085 MICROPROCESSOR TRAINER KIT



