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Roll Number: 19BCS061

Class: 3rd year (5th sem)

Experiment 3: Write a program to add N numbers stored at consecutive locations starting from 2050H and store their 8 bit sum at following address.

Memory Address	Assembly Code	Hex Code	Comments
0000	LXI H, 2050H	21	Load data at location 2050 in HL rp. To get value of N
0001		50	
0002		20	
0003	MOV C,M	4E	Move data (N) to C register
0004	MVI A,00H	3E	Move 00 to A
0005		00	
0006	LOOP: INX H	23	Increase value of HL rp
0007	ADD M	86	Add data in memory with Accumulator data and store in accumulator
0008	DCR C	0D	Decrease value of C
0009	JNZ LOOP	C2	Jump if value of C not zero to loop.
000A		06	
000B		00	
000C	INX H	23	Increase value oh HL rp
000D	MOV M,A	77	Move value in accumulator to memory location.
000E	HLT	76	Halt

Procedure:

Step – 1: Writing program in memory.

1. Press Reset
2. Press SET/MEM
3. Type in Address 0000
4. Press Enter
5. Type 1st Hex Code (Here 21)
6. Press Enter
7. Follow Step 5 and 6 to type in all Hex Codes

Step – 2: Assigning Values to the Address Location

1. Press Reset
2. Press SET/MEM
3. Type in Address of 1st Location (Here 2050)
4. Press Enter

5. Enter value of N (total count of numbers)
6. Press Enter
7. Enter a number
8. Press Enter
9. Repeat Step 7 and 8 N-1 times

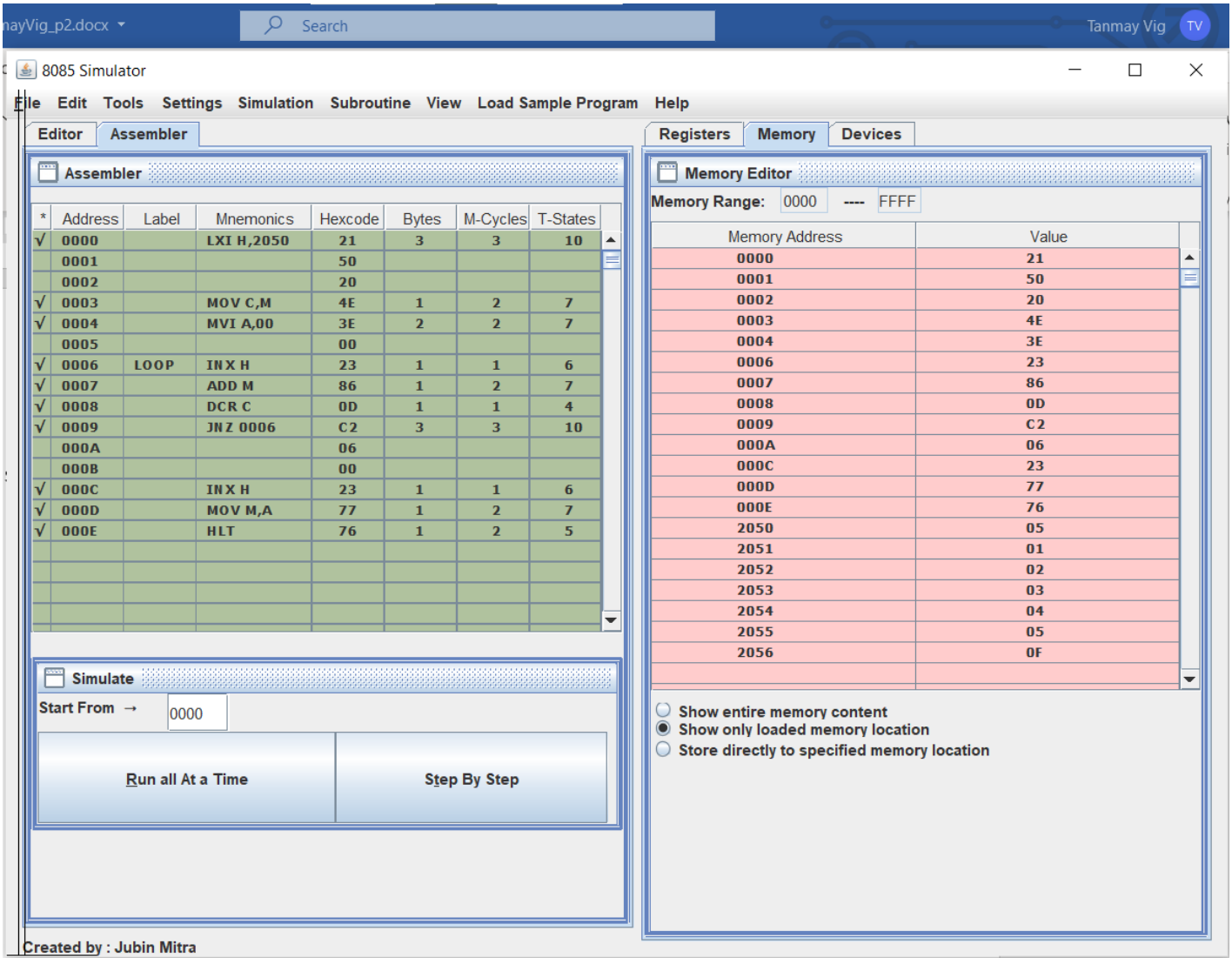
Step – 3: Executing the Program

1. Press Reset to Clear buffer
2. Press Go
3. Enter Starting address of program (Here 0000)
4. Press Execute

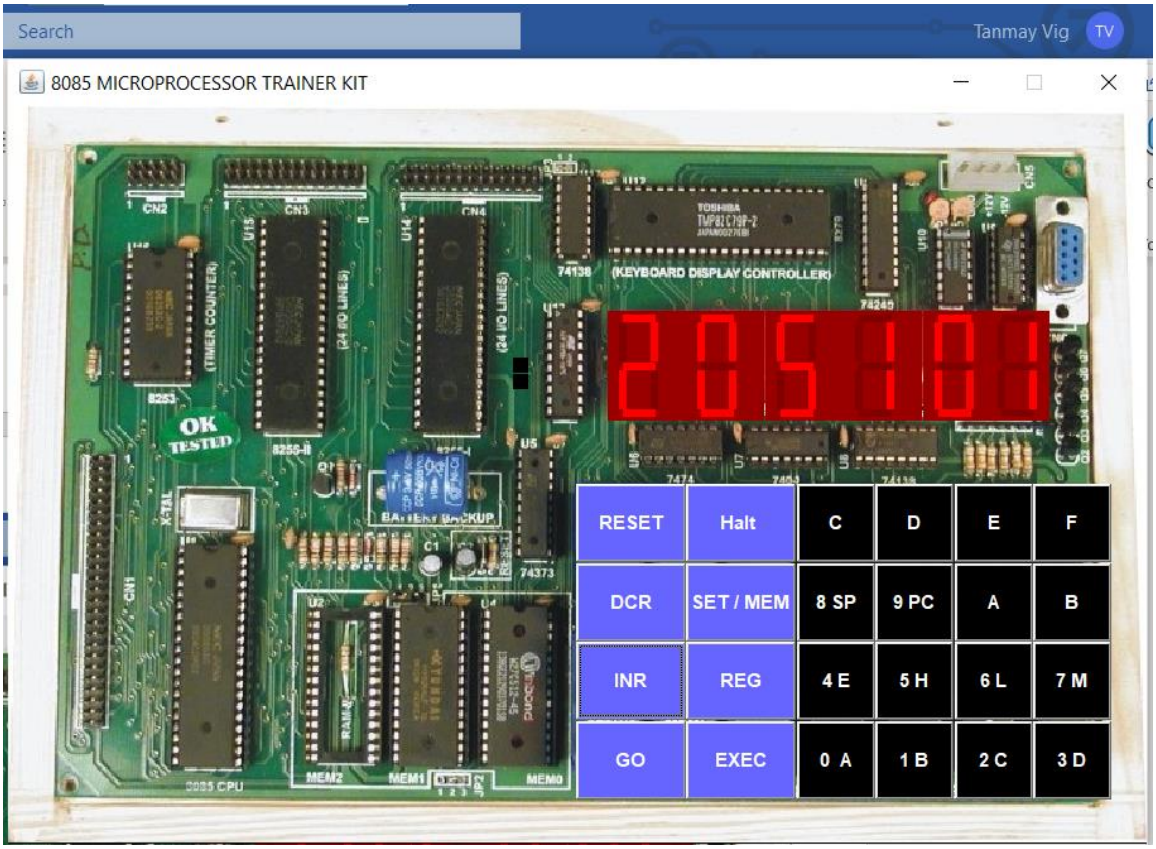
Step – 4: Checking the Output

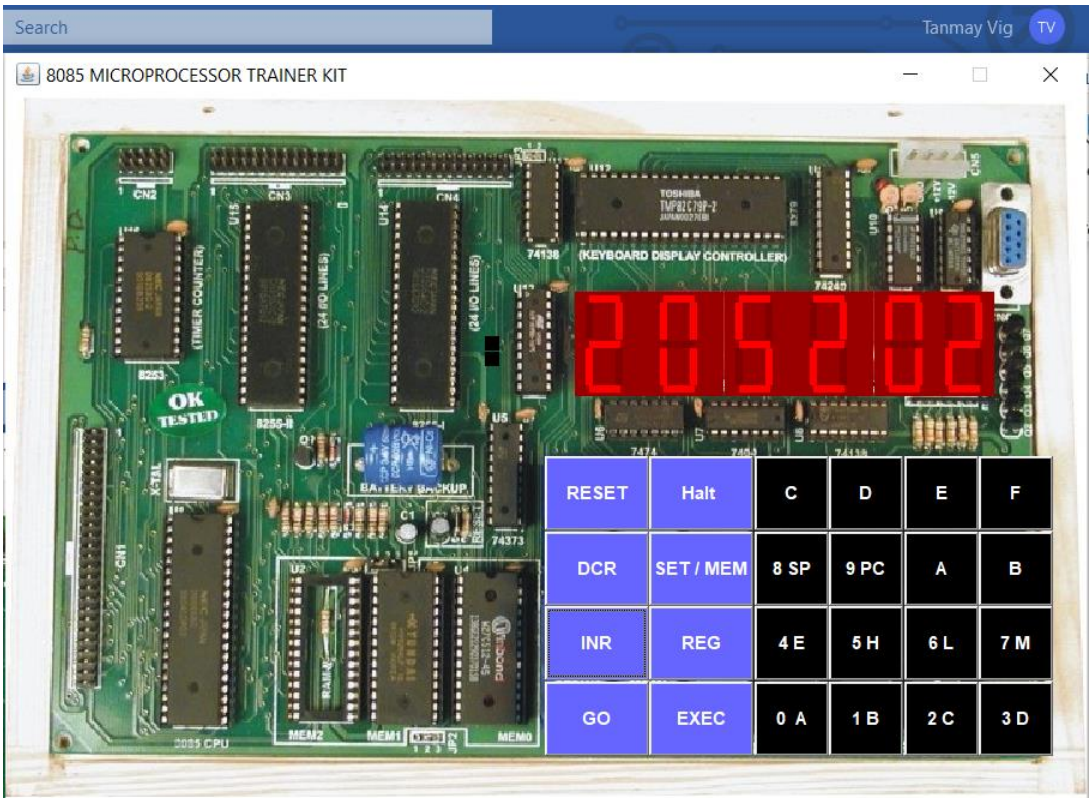
1. Press Reset and clear the buffer
2. Press Go
3. Enter Result Location (Here 2050+ value of N+1)
4. You will get here the sum of N digits in Hexadecimal format

Output:

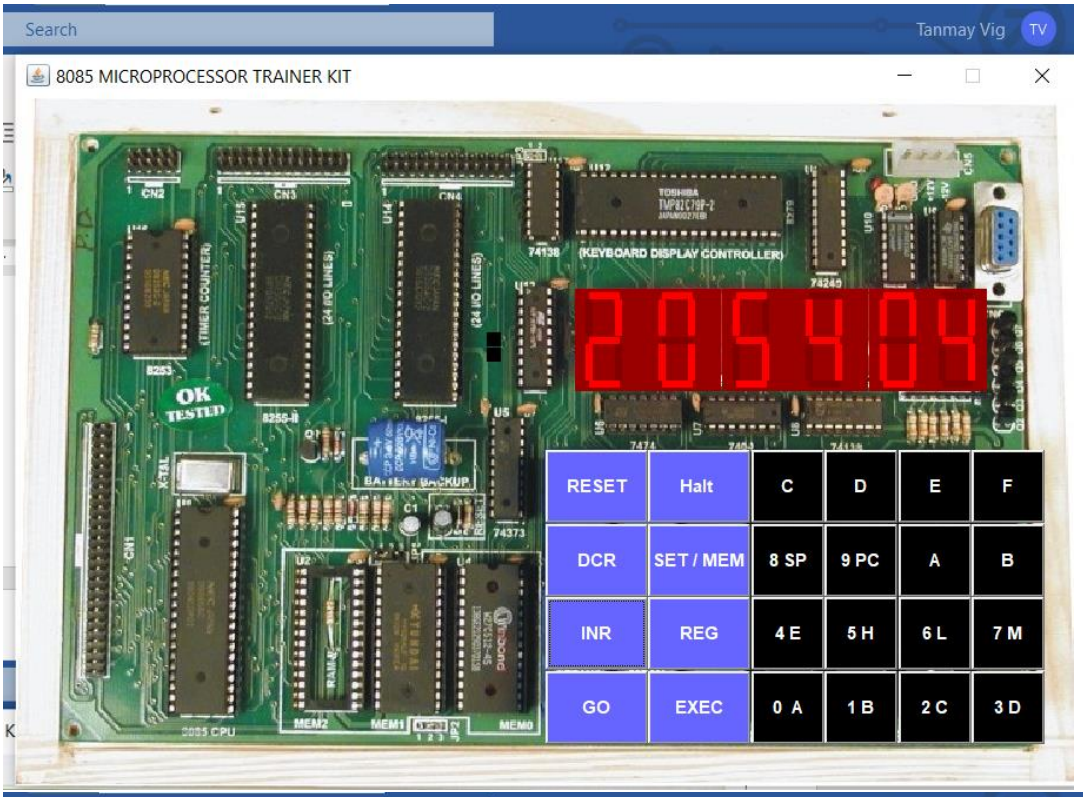



Search
Tanmay Vig
TV
8085 MICROPROCESSOR TRAINER KIT
(KEYBOARD DISPLAY CONTROLLER)
OK TESTED
RESET
Halt
C
D
E
F
DCR
SET / MEM
8 SP
9 PC
A
B
INR
REG
4 E
5 H
6 L
7 M
GO
EXEC
0 A
1 B
2 C
3 D


Search
Tanmay Vig
TV
8085 MICROPROCESSOR TRAINER KIT
(KEYBOARD DISPLAY CONTROLLER)
OK TESTED
RESET
Halt
C
D
E
F
DCR
SET / MEM
8 SP
9 PC
A
B
INR
REG
4 E
5 H
6 L
7 M
GO
EXEC
0 A
1 B
2 C
3 D


Search
Tanmay Vig
TV
8085 MICROPROCESSOR TRAINER KIT
(KEYBOARD DISPLAY CONTROLLER)
2052 02
OK TESTED
RESET
Halt
C
D
E
F
DCR
SET / MEM
8 SP
9 PC
A
B
INR
REG
4 E
5 H
6 L
7 M
GO
EXEC
0 A
1 B
2 C
3 D


Search
Tanmay Vig
TV
8085 MICROPROCESSOR TRAINER KIT
(KEYBOARD DISPLAY CONTROLLER)
2053 03
OK TESTED
RESET
Halt
C
D
E
F
DCR
SET / MEM
8 SP
9 PC
A
B
INR
REG
4 E
5 H
6 L
7 M
GO
EXEC
0 A
1 B
2 C
3 D


Search
Tanmay Vig
TV
8085 MICROPROCESSOR TRAINER KIT
(KEYBOARD DISPLAY CONTROLLER)
(TIMER COUNTER)
(24 I/O LINES)
OK
TESTED
RESET
Halt
C
D
E
F
DCR
SET / MEM
8 SP
9 PC
A
B
INR
REG
4 E
5 H
6 L
7 M
GO
EXEC
0 A
1 B
2 C
3 D


Search
Tanmay Vig
TV
8085 MICROPROCESSOR TRAINER KIT
(KEYBOARD DISPLAY CONTROLLER)
(TIMER COUNTER)
(24 I/O LINES)
OK
TESTED
RESET
Halt
C
D
E
F
DCR
SET / MEM
8 SP
9 PC
A
B
INR
REG
4 E
5 H
6 L
7 M
GO
EXEC
0 A
1 B
2 C
3 D


Search
Tanmay Vig
TV
8085 MICROPROCESSOR TRAINER KIT
(KEYBOARD DISPLAY CONTROLLER)
(TIMER COUNTER)
(24 I/O LINES)
(24 I/O LINES)
OK
TESTED
8085 CPU
MEM2
MEM1
MEM0
RESET
Halt
C
D
E
F
DCR
SET / MEM
8 SP
9 PC
A
B
INR
REG
4 E
5 H
6 L
7 M
GO
EXEC
0 A
1 B
2 C
3 D