

Experiment NO. 2: Write a program to add two 16 bits integers stored at memory locations 2050H and 2052H respectively and stored their 16 bit sum at 2054H location.

<u>ASSEMBLY LANGUAGE</u>	<u>HEX CODE</u>
LDA 2050	3A 50 20
MOV B A	47
LDA 2052H	3A 52 20
ADD B	80
STA 2054H	32 54 20
LDA 2051H	3A 51 20
MOV B A	47
LDA 5053H	3A 53 20
ADC B	80
STA 2055H	32 55 20
HLT	76

Procedure :

RESET SET/MEM
PUT 4000
PRESS ENTER
PUT 3A

PRESS ENTER
PUT 50
PRESS ENTER
PUT 20
PRESS ENTER
PUT 47
PRESS ENTER
PUT 3A
PRESS ENTER
PUT 52
PRESS ENTER
PUT 20
PRESS ENTER
PUT 80
PRESS ENTER
PUT 32
PRESS ENTER
PUT 54
PRESS ENTER
PUT 20
PRESS ENTER
PUT 3A
PRESS ENTER
PUT 51
PRESS ENTER
PUT 20
PRESS ENTER
PUT 47
PRESS ENTER
PUT 3A
PRESS ENTER
PUT 53
PRESS ENTER
PUT 20
PRESS ENTER
PUT 80
PRESS ENTER
PUT 32
PRESS ENTER
PUT 55
PRESS ENTER
PUT 20
PRESS ENTER
PUT 76

SET/MEM
PUT 2050
PRESS ENTER
PUT 03
PRESS ENTER

PUT 04
PRESS ENTER
PUT 05
PRESS ENTER
PUT 06

FOR EXECUTION :-

RESET
GO
4000
EXEC

Output:

The screenshot shows the 8085 Simulator software interface. On the left, the '8085 Assembly Language Editor' window displays assembly code. The code starts with a series of labels and addresses, followed by several instructions. On the right, the 'Memory Editor' window shows a table of memory addresses and their corresponding values. The memory range is set from 0000 to FFFF. The values for addresses 2050 through 3016 are listed.

Memory Address	Value
2050	03
2051	04
2052	04
2053	03
2054	07
2055	07
3000	3A
3001	50
3002	20
3003	47
3004	3A
3005	52
3006	20
3007	80
3008	32
3009	54
300A	20
300B	3A
300C	51
300D	20
300E	47
300F	3A
3010	53
3011	20
3012	88
3013	32
3014	55
3015	20
3016	76

At the bottom of the Memory Editor window, there are three radio buttons:

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

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205003

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

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285104

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

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205204

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



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