

16-BIT ADDITION

EXP NO: 5

AIM: To write an assembly language program to implement 16-bit addition using 8085 processor.

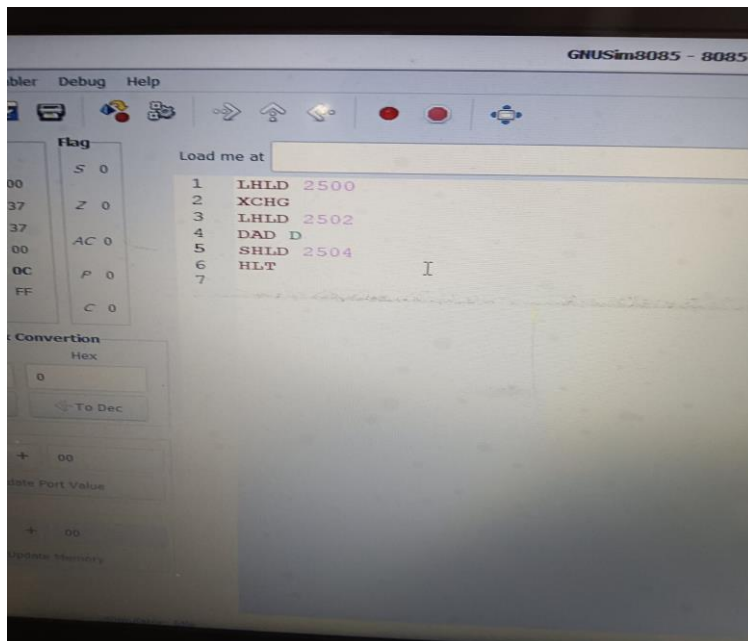
ALGORITHM:

- 1) Start the program by loading a register pair with address of 1st number.
- 2) Copy the data to another register pair.
- 3) Load the second number to the first register pair.
- 4) Add the two register pair contents.
- 5) Store the result in memory locations.
- 6) Terminate the program.

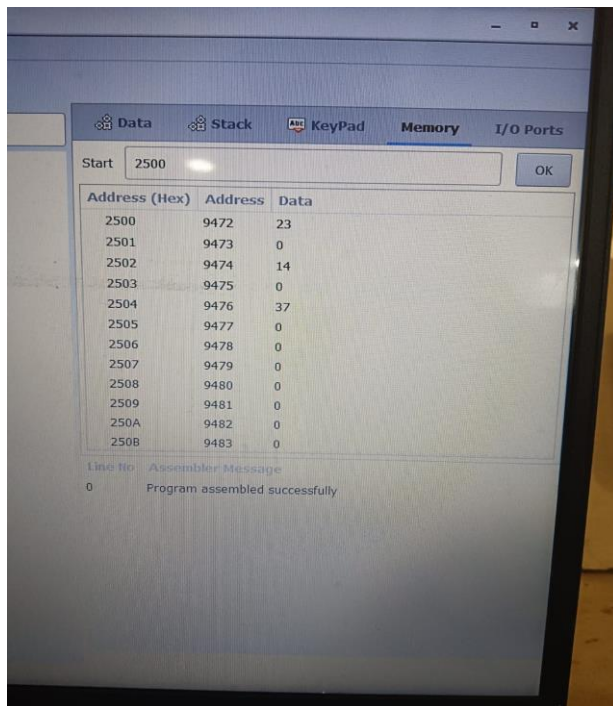
PROGRAM:

```
LHLD 2500
XCHG
LHLD 2502
DAD D
SHLD 2504
HLT
```

INPUT:



OUTPUT:



The screenshot shows the Memory window of an 8085 processor simulator. The window has tabs for Data, Stack, Keypad, Memory, and I/O Ports. The Memory tab is active, showing a table of memory addresses and data. The Start address is set to 2500. The table lists addresses from 2500 to 250B in hexadecimal, with corresponding data values. Below the table, there is a section for assembler messages.

Address (Hex)	Address	Data
2500	9472	23
2501	9473	0
2502	9474	14
2503	9475	0
2504	9476	37
2505	9477	0
2506	9478	0
2507	9479	0
2508	9480	0
2509	9481	0
250A	9482	0
250B	9483	0

Line No.	Assembler Message
0	Program assembled successfully

RESULT: Thus the program was executed successfully using 8085 processor simulator.