7.Write an assembly language program for multiplying two 16-bit data using 8086 processor.

AIM:

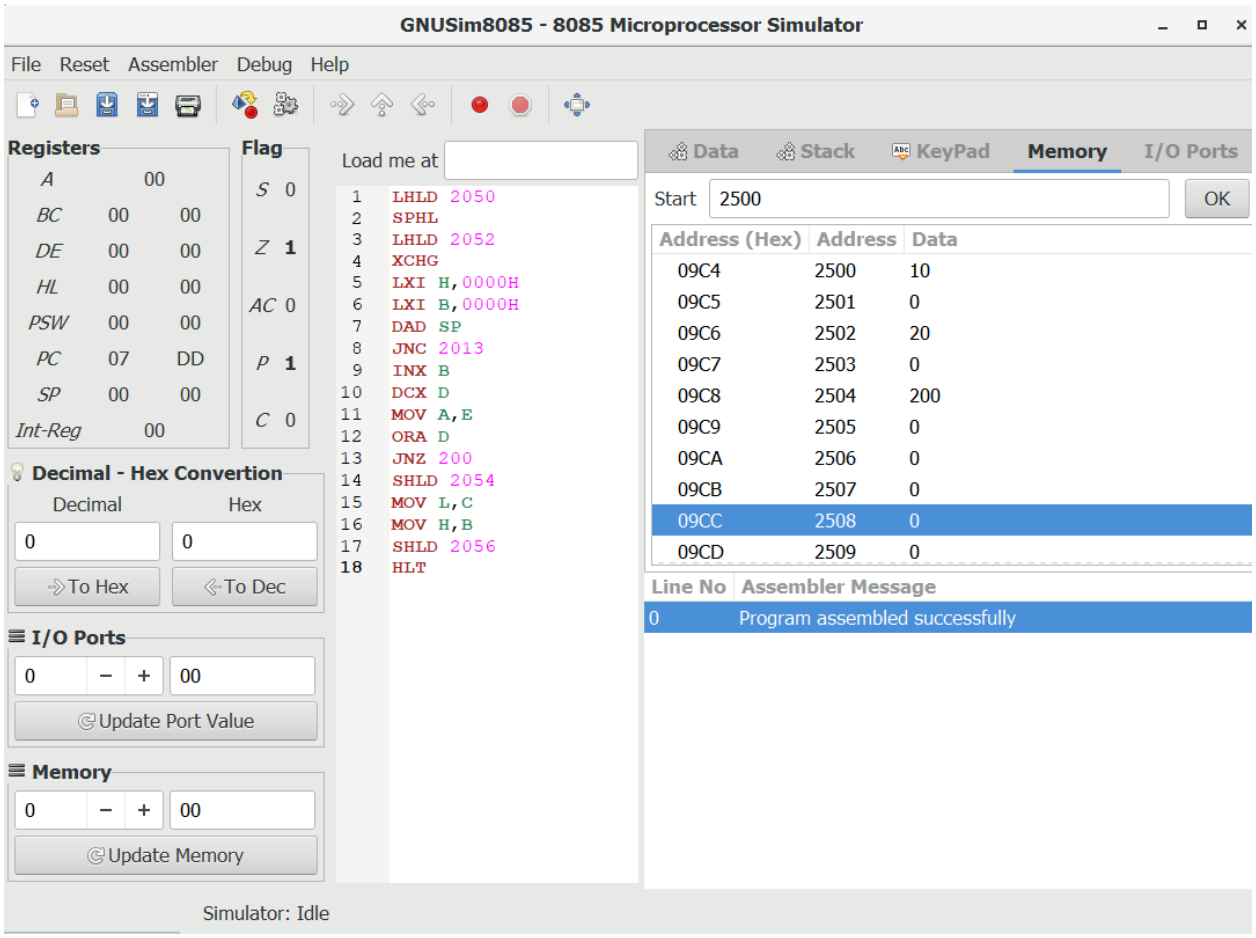
To perform multiplication of two 16 bit numbers using 8086 prosessor.

ALGORITHM:

1) Start the program by loading HL register pair with address of memory location.
2) Move the data to a register (B register).
3) Get the second data and load into Accumulator.
4) Add the two register contents. 5) Check for carry.
6) Increment the value of carry.
7) Check whether repeated addition is over and store the value of product and carry in memory location.
8) Terminate the program.

PROGRAM:

```
LHLD 2050
SPHL
LHLD 2052
XCHG
LXI H,0000H
LXI B,0000H
DAD SP
JNC 2013
INX B
DCX D
MOV A,E
ORA D
JNZ 200
SHLD 2054
MOV L,C
MOV H,B
SHLD 2056
HLT
```



OBSERVATION:

Input:

10 (2500)

20(2502)

Output:

200(2504)

RESULT:

Thus the program to multiply two 16-bit numbers was executed successfully.

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