8-BIT MULTIPLICATION

EXP NO: 3

AIM: To write an assembly language program to implement 8-bit multiplication using 8085 processor.

ALGORITHM:

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

PROGRAM:

```
LDA 8500
MOV B, A
LDA 8001
MOV C, A
CPI 00
JZ LOOP
XRA A
LOOP1: ADD E
DCR C
JZ LOOP
JMP LOOP1
LOOP: STA 8002
RST 1
```

INPUT:

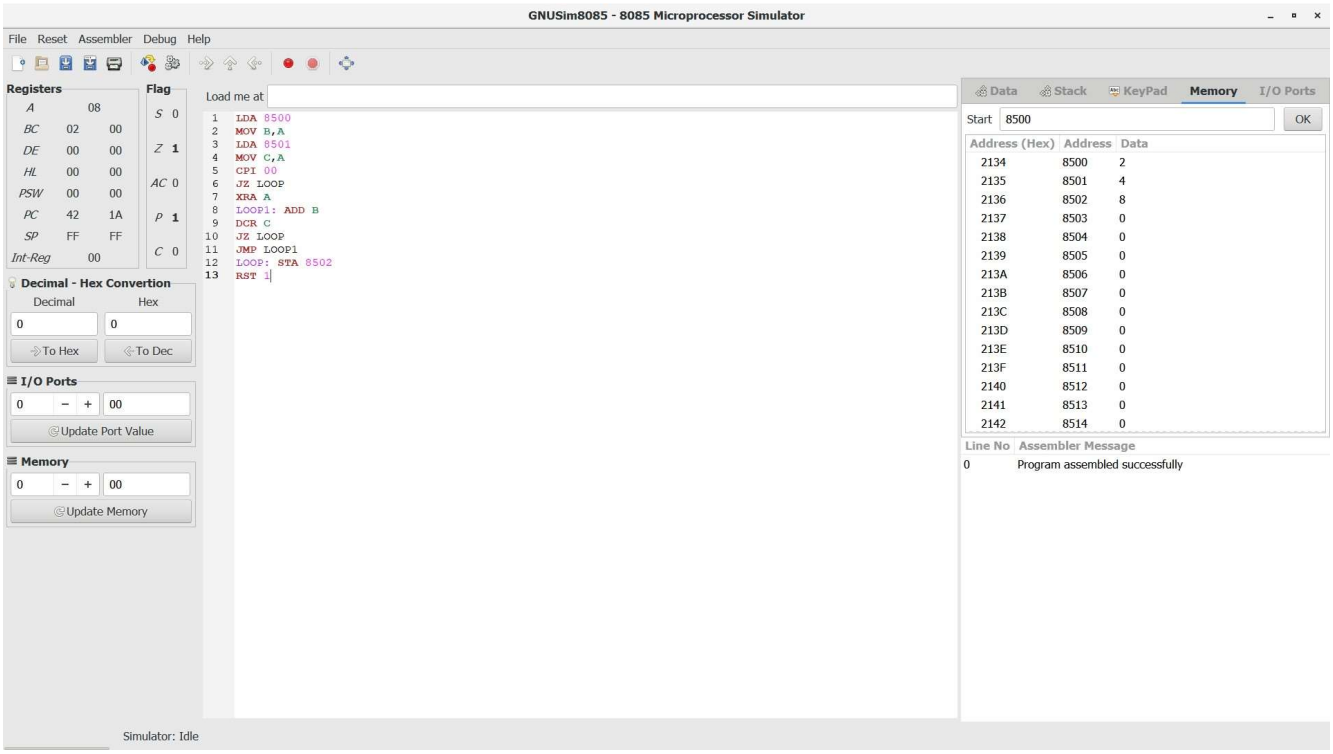
Data | Stack | KeyPad | Memory | I/O Ports

Start 8500 OK

Address (Hex)	Address	Data
2134	8500	2
2135	8501	4
2136	8502	8
2137	8503	0
2138	8504	0
2139	8505	0
213A	8506	0
213B	8507	0
213C	8508	0
213D	8509	0
213E	8510	0
213F	8511	0
2140	8512	0
2141	8513	0
2142	8514	0

Line No	Assembler Message
0	Program assembled successfully

OUTPUT:



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