FACTORIAL OF A GIVEN NUMBER

EXP NO: 9

AIM: To find the factorial of a given number using 8085 microprocessor.

ALGORITHM:

1) Load the data into register B
2) To start multiplication set D to 01H
3) Jump to step 7
4) Decrements B to multiply previous number
5) Jump to step 3 till value of B>0
6) Take memory pointer to next location and store result
7) Load E with contents of B and clear accumulator
8) Repeatedly add contents of D to accumulator E times
9) Store accumulator content to D
10) Go to step 4

PROGRAM:

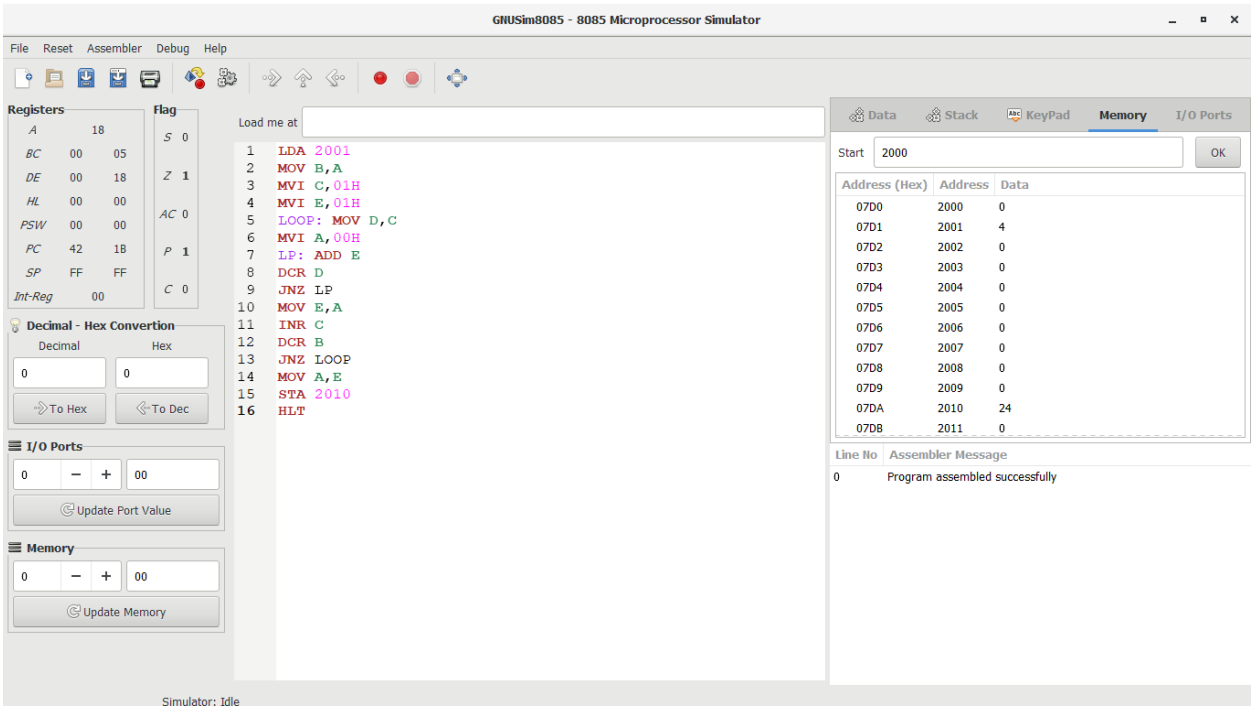
```
LDA 2001
MOV B,A
MVI C,01H
MVI E,01H
LOOP: MOV D,C
MVI A,00H
LP: ADD E
DCR D
JNZ LP
MOV E,A
INR C
DCR B
JNZ LOOP
MOV A,E
STA 2010
HLT
```

INPUT & OUTPUT

Start 2000

Address (Hex)	Address	Data
07D0	2000	0
07D1	2001	4
07D2	2002	0
07D3	2003	0
07D4	2004	0
07D5	2005	0
07D6	2006	0
07D7	2007	0
07D8	2008	0
07D9	2009	0
07DA	2010	24
07DB	2011	0

Line No	Assembler Message



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