

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

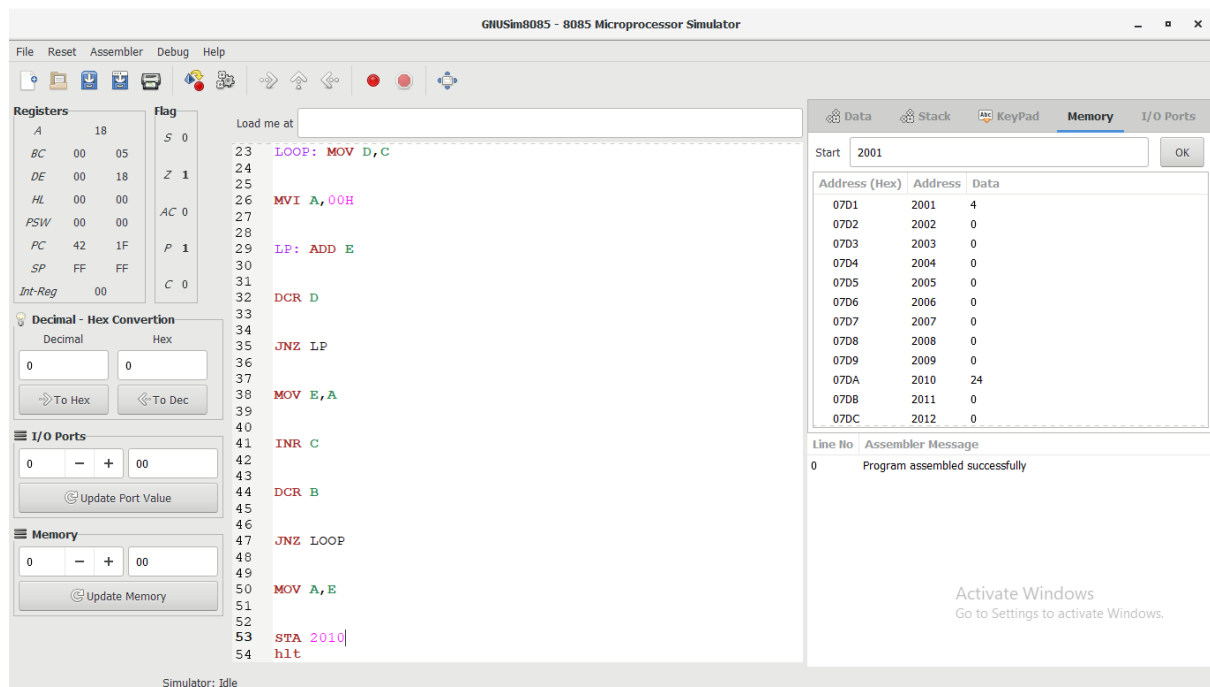
STA 2010

HLT

INPUT:

Data Stack KeyPad Memory I/O Ports			
Start	2001		OK
Address (Hex)	Address	Data	
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	
07DC	2012	0	

OUTPUT:



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