LAB -6

Q.1 WAP to arrange an array of data in ascending order.

Input: (2201H) = 05H (Array size)

(2202H) = 15H

(2203H) = 07H

(2204H) = 12H

(2205H) = 03H

(2206H) = 08H

Output: (2201H) = 05H (Array size)

(2202H) = 02H

(2203H) = 03H

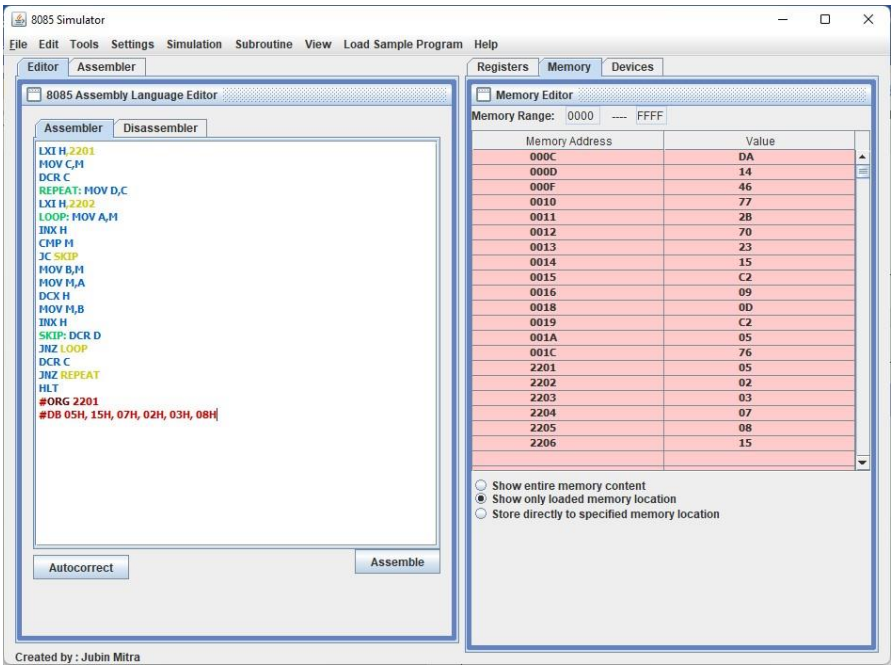
(2204H) = 07H

(2205H) = 08H

(2206H) = 15H

```
LXI H,2201
MOV C,M
DCR C
REPEAT: MOV D,C
LXI H,2202
LOOP: MOV A,M
INX H
CMP M
JC SKIP
MOV B,M
MOV M,A
DCX H
MOV M,B
INX H
SKIP: DCR D
JNZ LOOP
DCR C
JNZ REPEAT
```

HLT
#ORG 2201
#DB 05H, 15H, 07H, 02H, 03H, 08H



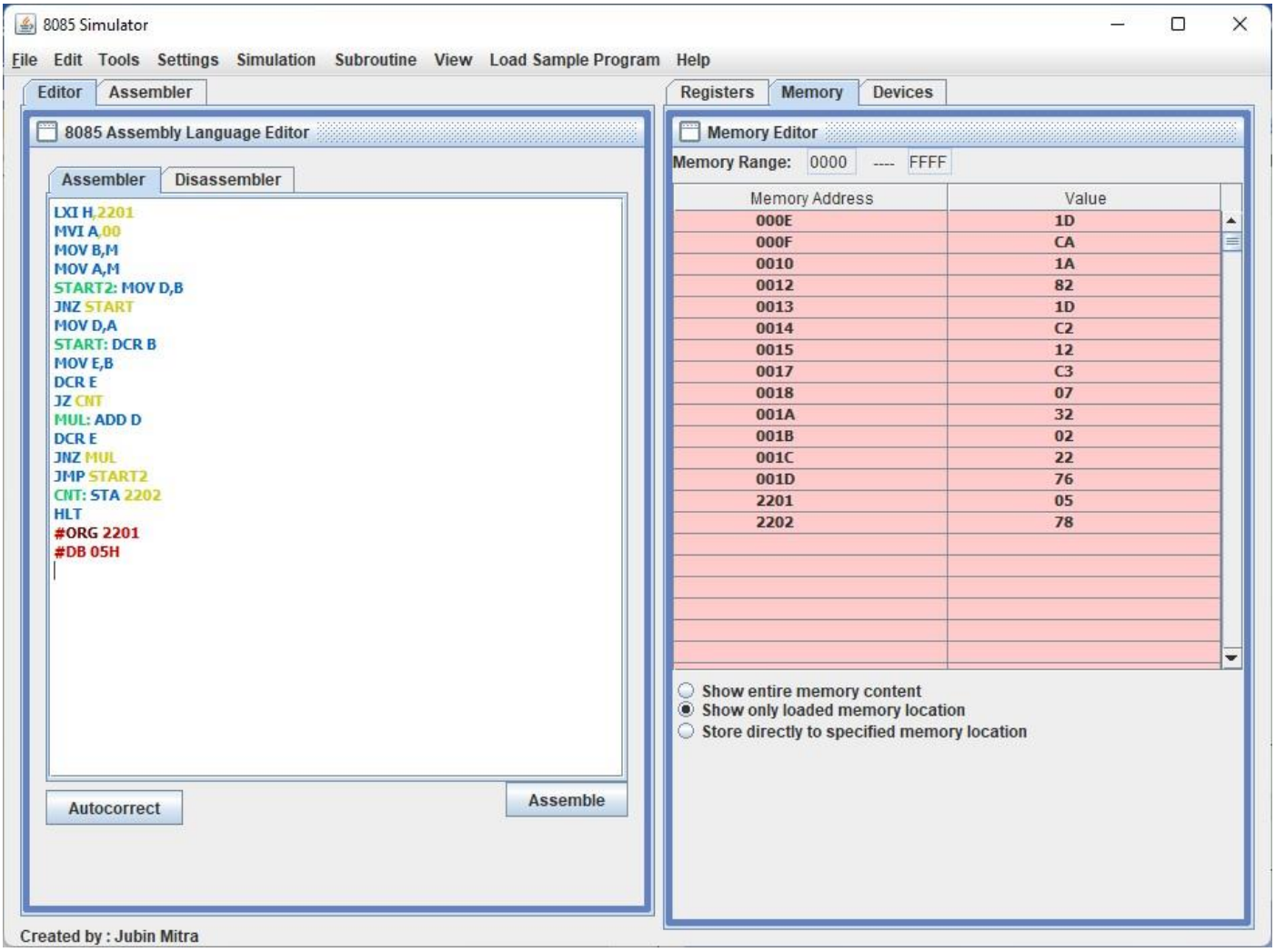
Q.2 WAP to find the factorial of a number.

Input: (2201H) = 05H

Output: (2202H) = 78H

LXI H,2201
MVI A,00
MOV B,M
MOV A,M
START2: MOV D,B
JNZ START
MOV D,A
START: DCR B
MOV E,B
DCR E JZ
CNT
MUL: ADD D

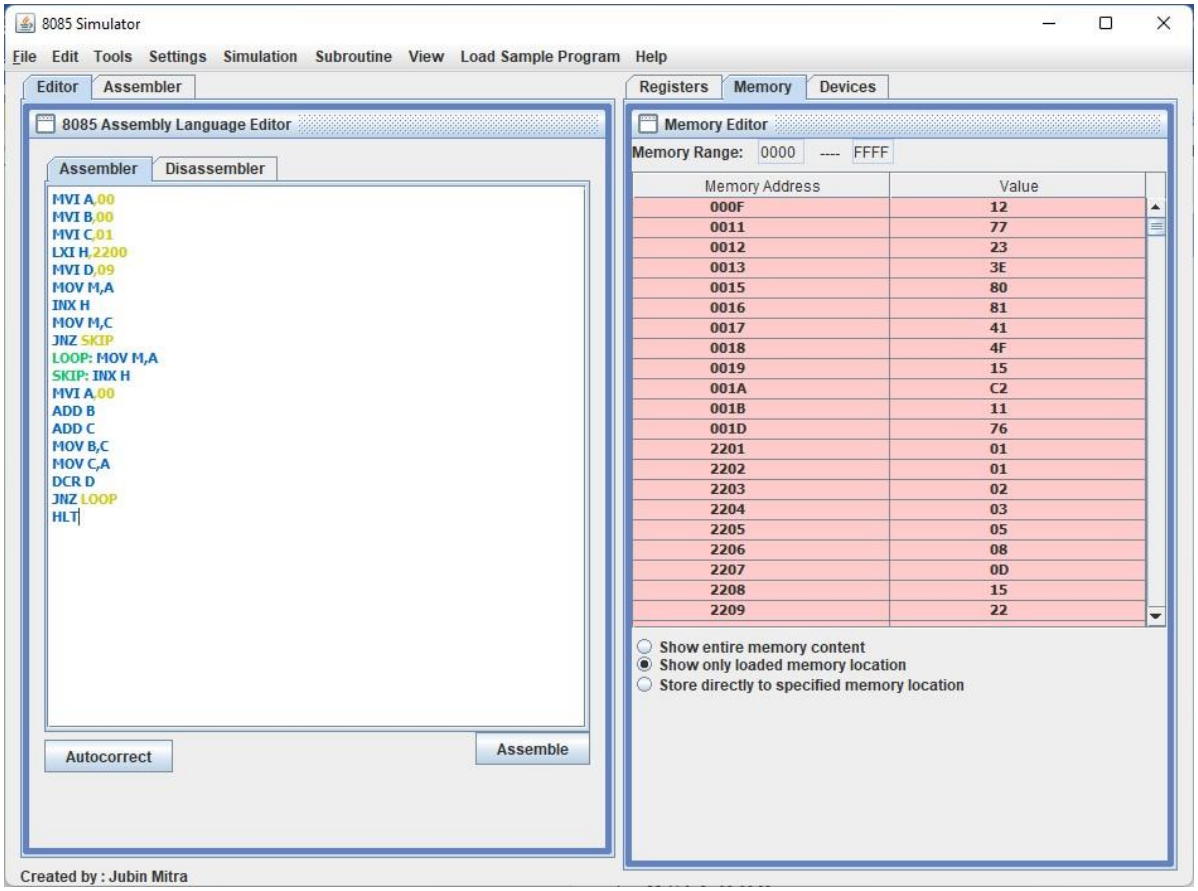
DCR E
JNZ MUL
JMP START2
CNT: STA 2202
HLT
#ORG 2201
#DB 05H



Q.3 WAP to generate Fibonacci Series having ten elements.
After Execution
Output: (2200H): 00H
(2201H): 01H
(2202H): 01H
(2203H): 02H

(2204H): 03H
(2205H): 05H
(2206H): 08H
(2207H): 0DH
(2208H): 15H
(2209H): 22H

```
MVI A,00
MVI B,00
MVI C,01
LXI H,2200
MVI D,09
MOV M,A INX
H
MOV M,C
JNZ SKIP
LOOP: MOV M,A
SKIP: INX H
MVI A,00
ADD B
ADD C
MOV B,C
MOV C,A
DCR D
JNZ LOOP
HLT
```


8085 Simulator
File Edit Tools Settings Simulation Subroutine View Load Sample Program Help
Editor Assembler
8085 Assembly Language Editor
Assembler Disassembler
MVI A,00
MVI B,00
MVI C,01
LXI H,2200
MVI D,09
MOV M,A
INX H
MOV M,C
JNZ SKIP
LOOP: MOV M,A
SKIP: INX H
MVI A,00
ADD B
ADD C
MOV B,C
MOV C,A
DCR D
JNZ LOOP
HLT
Autocorrect
Assemble
Registers Memory Devices
Memory Editor
Memory Range: 0000 ---- FFFF
Memory Address Value
000F 12
0011 77
0012 23
0013 3E
0015 80
0016 81
0017 41
0018 4F
0019 15
001A C2
001B 11
001D 76
2201 01
2202 01
2203 02
2204 03
2205 05
2206 08
2207 0D
2208 15
2209 22
Show entire memory content
Show only loaded memory location
Store directly to specified memory location
Created by : Jubin Mitra