AIM:

To compute descending order of an array
using 8085 processor.

ALGORITHM:

1) Initialize HL pair as memory pointer.

2) Get the count at memory and load it into C register

3) Copy it in D register (for bubble sort (N-1)) times
required).

4) Get the first value in A register.

5) Compare it with the value at next location.

6) If they are out of order, exchange the contents of A register
and memory.

7) Decrement D register content by 1

8) Repeat step 5 and 7 till the value in D register become zero.

9) Decrement the C register content by 1.

10) Repeat steps 3 to 9 till the value in C register becomes
zero.

PROGRAM:

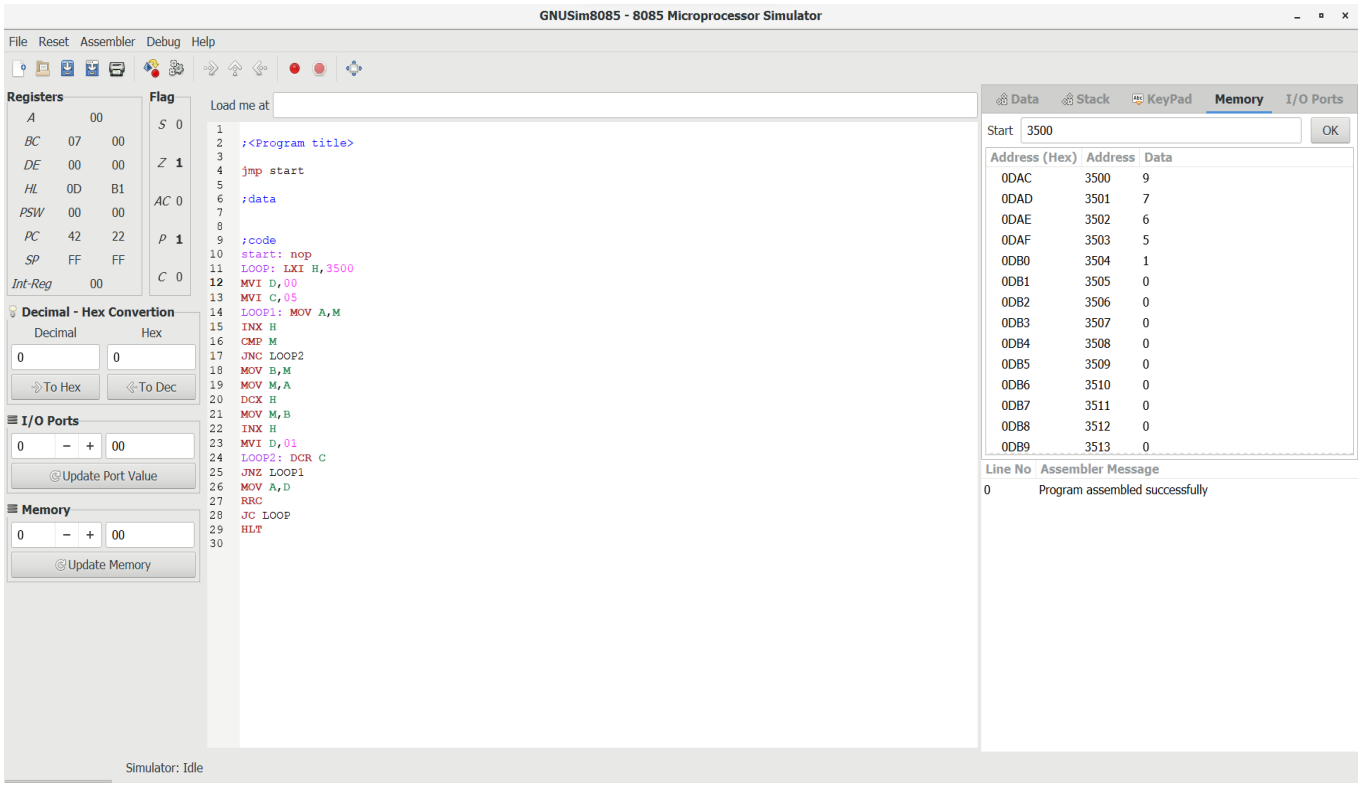
```
LOOP: LXI H,3500

MVI D,00

MVI C,05

LOOP1: MOV A,M

INX H

CMP M

JNC LOOP2

MOV B,M

MOV M,A

DCX H

MOV M,B

INX H
```

```
MVI D,01

LOOP2: DCR C

JNZ LOOP1

MOV A,D

RRC

JC LOOP

HLT
```

INPUT :

3500 : 5
3501 : 9
3502 : 7
3503 : 1
3504 : 6

OUTPUT:


GNUSim8085 - 8085 Microprocessor Simulator
File Reset Assembler Debug Help
Registers
Flag
Load me at
Data Stack KeyPad Memory I/O Ports
Start 3500 OK
Address (Hex) Address Data
0DAC 3500 9
0DAD 3501 7
0DAE 3502 6
0DAF 3503 5
0DB0 3504 1
0DB1 3505 0
0DB2 3506 0
0DB3 3507 0
0DB4 3508 0
0DB5 3509 0
0DB6 3510 0
0DB7 3511 0
0DB8 3512 0
0DB9 3513 0
Decimal - Hex Convertion
Decimal Hex
To Hex To Dec
I/O Ports
Update Port Value
Memory
Update Memory
;<Program title>
jmp start
;data
;code
start: nop
LOOP: LXI H,3500
MVI D,00
MVI C,05
LOOP1: MOV A,M
INX H
CMP M
JNC LOOP2
MOV B,M
MOV M,A
DCX H
MOV M,B
INX H
MVI D,01
LOOP2: DCR C
JNZ LOOP1
MOV A,D
RRC
JC LOOP
HLT
Line No Assembler Message
0 Program assembled successfully
Simulator: Idle

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