

## ASCENDING ORDER

### EXP NO: 12

**AIM:** To compute ascending 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
```

```
JC 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
```

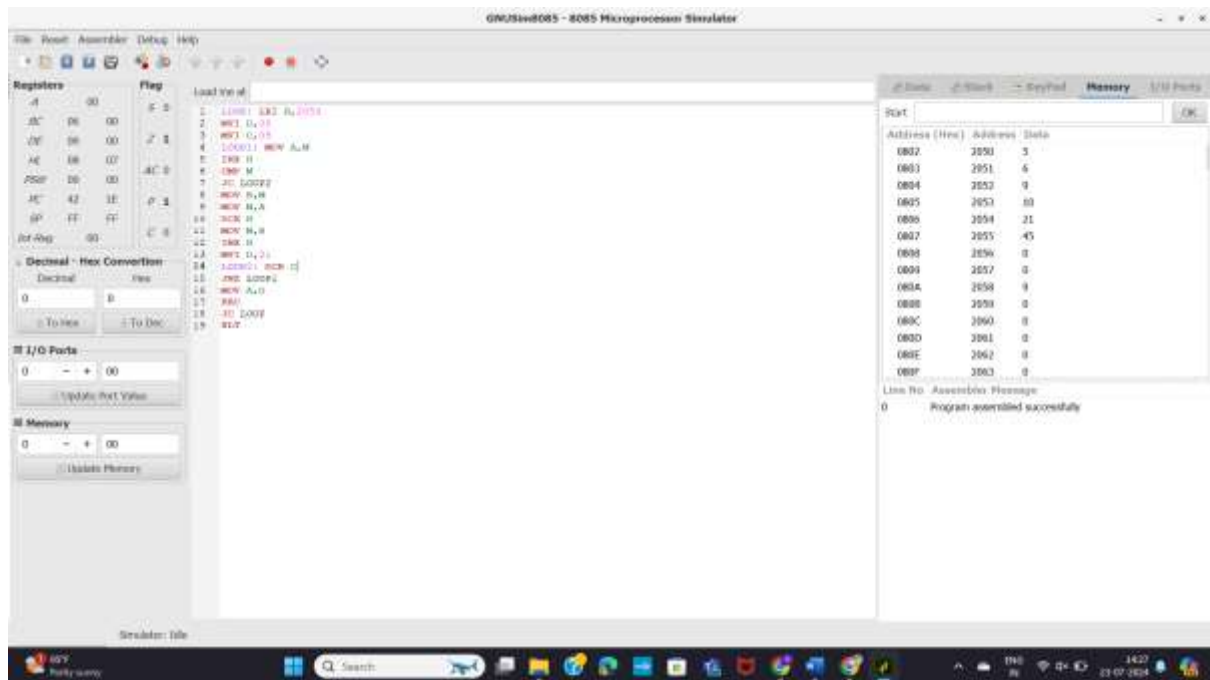
```
JC LOOP
```

```
HLT
```

### INPUT:

Address (Hex)	Address	Data
0802	2050	5
0803	2051	21
0804	2052	45
0805	2053	9
0806	2054	10
0807	2055	6

OUTPUT:



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