

**AIM:**

To find the largest number from an array using 8085 processor.

**ALGORITHM:**

- 1) Load the address of the first element of the array in HL pair.
- 2) Move the count to B register.
- 3) Increment the pointer.
- 4) Get the first data in A register.
- 5) Decrement the count.
- 6) Increment the pointer.
- 7) Compare the content of memory addressed by HL pair with that of A register.
- 8) If carry=0, go to step 10 or if carry=1 go to step 9
- 9) Move the content of memory addressed by HL to A register.
- 10) Decrement the count.

**PROGRAM:**

LXI H,2050

MOV C,M

DCR C

INX H

MOV A,M

LOOP1: INX H

CMP M

JNC LOOP

MOV A,M

LOOP: DCR C

JNZ LOOP1

STA 2058

HLT

Start 2050

| Address (Hex) | Address | Data |
|---------------|---------|------|
| 0802          | 2050    | 11   |
| 0803          | 2051    | 6    |
| 0804          | 2052    | 89   |
| 0805          | 2053    | 12   |
| 0806          | 2054    | 33   |
| 0807          | 2055    | 77   |
| 0808          | 2056    | 66   |
| 0809          | 2057    | 2    |

INPUT:

OUTPUT:

File

Reset

Assembler

Debug

Help

Registers

A

59

S

0

BC

00

00

Z

1

DE

00

80

HL

08

0D

AC

0

PSW

00

00

PC

42

19

P

1

SP

FF

FF

C

0

Int-Reg

00

Flag

S

0

Z

1

AC

0

P

1

C

0

Decimal - Hex Conversion

Decimal

Hex

0

0

To Hex

To Dec

I/O Ports

0

+

00

Update Port Value

Memory

0

+

00

Update Memory

Load me at

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

jmp start

;data

;code

start: nop

LXI H,2050

MOV C,M

DCR C

INX H

MOV A,M

LOOP1: INX H

CMP M

JNC LOOP

MOV A,M

LOOP: DCR C

JNZ LOOP1

STA 2050

HLT

Data

Stack

KeyPad

Memory

I/O Ports

Start

2050

OK

| Address (Hex) | Address | Data |
|---------------|---------|------|
| 0802          | 2050    | 11   |
| 0803          | 2051    | 6    |
| 0804          | 2052    | 89   |
| 0805          | 2053    | 12   |
| 0806          | 2054    | 33   |
| 0807          | 2055    | 77   |
| 0808          | 2056    | 66   |
| 0809          | 2057    | 2    |
| 080A          | 2058    | 89   |
| 080B          | 2059    | 0    |
| 080C          | 2060    | 0    |
| 080D          | 2061    | 0    |
| 080E          | 2062    | 0    |
| 080F          | 2063    | 0    |

Line No

Assembler Message

0

Program assembled successfully

Simulator: Idle