

LARGEST NUMBER IN AN ARRAY

EXP NO: 10

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

INPUT:

Start	2050	
Address (Hex)	Address	Data
0802	2050	5
0803	2051	78
0804	2052	10
0805	2053	6
0806	2054	18
0807	2055	25

OUTPUT:

GNUSim8085 - 8085 Microprocessor Simulator

File Reset Assembler Debug Help

Registers

Register	Value
A	4E
BC	00 00
DE	00 78
HL	08 07
PSW	00 00
PC	42 19
SP	FF FF
Int-Reg	00

Flag

Flag	Value
S	0
Z	1
AC	0
P	1
C	0

Decimal - Hex Conversion

Decimal: 0 Hex: 0

To Hex To Dec

I/O Ports

0 - + 00

Update Port Value

Memory

0 - + 00

Update Memory

Load me at

```

1  ;<Program title>
2  jmp start
3
4  ;data
5
6  ;code
7  start: nop
8
9  ;data
10 start: nop
11 LXI H,2050
12 MOV C,M
13 DCR C
14 INX H
15 MOV A,M
16 LOOP1: INX H
17 CND M
18 JNC LOOP
19 MOV A,M
20 LOOP: DCR C
21 JNZ LOOP1
22 STA 2055
23 hit

```

Address (Hex) Address Data

Address (Hex)	Address	Data
0802	2050	5
0803	2051	78
0804	2052	10
0805	2053	6
0806	2054	18
0807	2055	25
0808	2056	0
0809	2057	0
080A	2058	78
080B	2059	0
080C	2060	0
080D	2061	0
080E	2062	0
080F	2063	0

Line No Assembler Message

0 Program assembled successfully

Start 2050

Address (Hex) Address Data

Address (Hex)	Address	Data
0802	2050	5
0803	2051	78
0804	2052	10
0805	2053	6
0806	2054	18
0807	2055	25

Snipping Tool

Screenshot copied to clipboard and saved

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Simulator: Idle

27°C Mostly cloudy

Search

ENG IN

09:01 AM 17-10-2023

RESULT: Thus

the program was executed successfully using 8086 processor simulator.