

AIM:

To find the smallest 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=1, go to step 10 or if carry=0 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

JC LOOP

MOV A,M

LOOP: DCR C

JNZ LOOP1

STA 2058

HLT

INPUT:

Data Stack KeyPad Memory I/O Ports			
Start	4200		OK
Address (Hex)	Address	Data	
1068	4200	5	
1069	4201	4	
106A	4202	3	
106B	4203	1	
106C	4204	2	
106D	4205	8	
106E	4206	1	
106F	4207	0	

OUTPUT:

GNUSim8085 - 8085 Microprocessor Simulator

File Reset Assembler Debug Help

Registers

Flag

Load me at

Decimal - Hex Conversion

I/O Ports

Memory

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

<Program title>

jmp start

/data

/code

start: nop

LXI H, 4200

MOV B, H

INX H

MOV A, H

DCR B

NEXT: INX H

CMP B

JC LOOP

MOV A, H

LOOP: DCR B

JNZ NEXT

STA 4206

HLT

Address (Hex) Address Data

1068 4200 5

1069 4201 4

106A 4202 3

106B 4203 1

106C 4204 2

106D 4205 8

106E 4206 1

106F 4207 0

1070 4208 0

1071 4209 0

1072 4210 0

1073 4211 0

Line No Assembler Message

0 Program assembled successfully

Simulator: Idle

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

