GNUSim8085 - 8085 Microprocessor Simulator

File Reset Assembler Debug Help

Registers

A	20	
BC	19	00
DE	00	00
HL	10	6A
PSW	00	00
PC	42	21
SP	FF	FF
Int-Reg	00	

Flag

S 0
Z 1
AC 0
P 1
C 0

Decimal - Hex Convertion

Decimal: 0 — To Hex
Hex: 0 — To Dec

I/O Ports

0 − + 00
Update Port Value

Memory

0 − + 00
Update Memory

Load me at

```
1  ;Name : Om Gharge
2  ;PRN : 2020BTEIT00041
3  ;Q) Program to arrange set of five numbers in descending order
4
5  ;<Program title>
6
7  jmp start
8
9  ;data
10
11
12 ;code
13 start: nop
14        LXI H,4200
15        MOV C,M
16         DCR C
17 REPEAT: MOV D,C
18         LXI H,4201
19 LOOP:   MOV A,M
20         INX H
21         CMP M
22         JNC SKIP
23         MOV B,M
24         MOV M,A
25         DCX H
26         MOV M,B
27         INX H
28 SKIP:   DCR D
29         JNZ LOOP
30        DCR C
31         JNZ REPEAT
32        HLT
```

Data | Stack | KeyPad | **Memory** | I/O Ports

Start 4200 OK

Address (Hex)	Address	Data
1068	4200	5
1069	4201	32
106A	4202	25
106B	4203	24
106C	4204	20
106D	4205	5
106E	4206	0
106F	4207	0
1070	4208	0
1071	4209	0
1072	4210	0
1073	4211	0
1074	4212	0
1075	4213	0
1076	4214	0

Line No	Assembler Message
0	Program assembled successfully

Simulator: Idle

Algorithm:

1] Load size of list in C register
2] Decrement C as for n elements 'n-1' comparisions occur.
3] Load the starting element of the list in Accumulator
4] Compare Accumulator and next element.
5] If accumulator is less than or eqval to next element jump to step 8
6] Swap two elements.
7] Set D register to 1.
8] Decrement C
9] If C>0 take next elment in Accumulator and go to point 4
10] If D=0, this means in the iteration, no exchange takes place consequently we know that it won't take place in further iterations so the loop in exited and program is stopped.
11] Jump to step 1 for further iterations.