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CSE

Lab Assignment 8

TASK : Write a program to Find GCD Of Two Numbers using 8085 & verify

Code:

```
; <Program title>
jmp start
; data
; code
start: nop
LXI H, 000AH
MOV A, M
INX H
MOV B, M
CMP B
JZ down
JNC shift
MOV C, A
MOV A, B
MOV B, C
shift: SUB B
CMP B
JZ move
JNC shift
```

MOV C,A
MOV A,B
MOV B,C
JMP shift
move: MOV A,B
down: STA 000CH
hlt

After Execution:

Registers			Flag	
<i>A</i>	09		<i>S</i>	0
<i>BC</i>	09	00	<i>Z</i>	1
<i>DE</i>	00	00	<i>AC</i>	0
<i>HL</i>	00	0D	<i>P</i>	1
<i>PSW</i>	00	00	<i>C</i>	0
<i>PC</i>	42	27		
<i>SP</i>	FF	FF		
<i>Int-Reg</i>	00			

Address (Hex)	Address	Data
0000	0	0
0001	1	0
0002	2	0
0003	3	0
0004	4	0
0005	5	0
0006	6	0
0007	7	0
0008	8	0
0009	9	0
000A	10	0
000B	11	0
000C	12	18
000D	13	9
000E	14	9

Input:

00CH-> 18

00DH-> 9

Output:

00EH-> 9

Verification: GCD of 18 and 9 is 9. Hence , it verifies that answer on 00EH is 9 , which is true.

After Execution (2):

Start		
Address (Hex)	Address	Data
0000	0	0
0001	1	0
0002	2	0
0003	3	0
0004	4	0
0005	5	0
0006	6	0
0007	7	0
0008	8	0
0009	9	0
000A	10	0
000B	11	0
000C	12	7
000D	13	9
000E	14	1

Input:

00CH-> 7

00DH-> 9

Output:

00EH->1

