

Yash Verma
B.tech 19075083
CSE

Lab Assignment 7

TASK : Write a program to check number of 1's and 0's in given number using 8085 & verify

Code:

```
; <Program title>
jmp start
; data
; code
start: nop
MVI C,00
MVI D,00
LXI H,000CH
MOV A,M
MVI B,08
up: RLC
JNC down
INR D
JMP shift
down: INR C
shift: DCR B
JNZ up
INX H
```

MOV M,C

INX H

MOV M,D

hlt

Input:

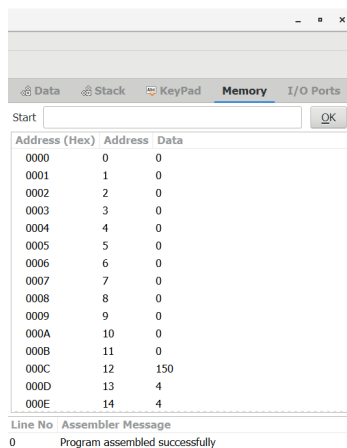
00CH->150

Output:

00DH->4

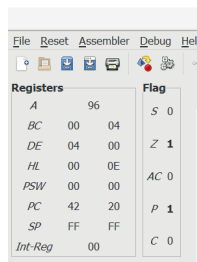
00EH->4

Execution:



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	150
000D	13	4
000E	14	4

Line No Assembler Message
0 Program assembled successfully



Registers	Flag
A 96	S 0
BC 00 04	Z 1
DE 04 00	AC 0
HL 00 0E	P 1
PSW 00 00	C 0
PC 42 20	
SP FF FF	
Int-Reg 00	

Verification: binary representation of 150 is given as : 10010110.
Therefore the number of 0's in the binary representation are 4 and the number of 1's is 4. The same output is given by our program hence verifying that the program is able to successfully find the total number of ones and zeros in a given number