Algorithm

The location of the numbers is moved into Source Index (SI) & the location to store the result is moved into Destination Index (DI). The numbers is moved from the location in SI to AX. DX is initialized to 0000 & BX is initialized to 0002. DX:AX is divided by BX. Now quotient is in AX & remainder is in DX. DX is compared with 0000. If it is greater than 0000, jump to location 041BH. Otherwise 0E is moved to location in DI. If remainder is greater than 0000, 00 is moved to location in DI. Then the program ends with the HLT instruction.

Input

0600/01 0602/03

1 2 1 2

Output

0500/01

0 E

Experiment Name / No.: 13. ODD OR EVEN

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Date 25 / 02 / 2020

Aim

To find whether a given number is odd or even.

Program

Address	Instruction	Comment
0400	MOV DI, 0500	Set destination index to 0500H
0403	MOV SI, 0600	Set source index to 0600H
0406	MOV AX, [SI]	Move number from SI to AX
0408	MOV DX, 0000	Set DX to 0000
040B	MOV BX, 0002	Set BX to 0002
040E	DIV BX	Divide the number DX:AX by BX
0410	CMP DX, 0000	Compare DX with 0000
0414	JG 041B	Jump to 041BH if greater than 0
0416	MOV [DI], 0E	Move 0E to destination index
0419	JMP 041E	Jump to 041EH
041B	MOV [DI], 00	Move 00 to destination index
041E	HLT	

Result

Found whether a given number is odd or even.

Teacher's Signature: