

CODETANTRA Home Learn Anywhere

1.1.1. Check if a Number is Even or Odd (Using Bitwise Operator)

You are required to determine whether a given integer is even or odd using bitwise operations. Do not use the modulus (%) or division operator. Use bitwise AND (&) to check the least significant bit of the number.

Input Format:

- A single integer n

Output Format:

- Print 'Even' if the number n is even, otherwise print 'Odd'.

Constraints:

- $1 \leq n \leq 10^6$

Sample Test Cases

```
C CTC756.c
1 #include<stdio.h>
2 void main()
3 {
4     int n;
5     scanf("%d",&n);
6     if(n%2 == 0){
7         printf("Even\n");
8     }
9     else if(n % 2 != 0){
10        printf("Odd");
11    }
12 }
```

Average time Maximum time
0.065 s 0.081 s
64.80 ms 81.00 ms

3 out of 3 shown test case(s) passed
2 out of 2 hidden test case(s) passed

Test case 1 (54 ms)
Expected output: 7
Actual output: Odd

Test case 2 (81 ms)

Test case 3 (74 ms)

Terminal Test cases

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1.1.2. Swap Two Numbers Using Bitwise XOR

Write a C program to swap two integers without using a temporary variable. Use the XOR (^) bitwise operator to perform the swap.

Input Format:

- Two space-separated integers a and b

Output Format:

- Print the swapped values in the format:

After swapping: a = [a], b = [b]

Constraints:

- $1 \leq a, b \leq 10^6$

Sample Test Cases

```
C CTC757.c
1 #include<stdio.h>
2 void main()
3 {
4     int a,b,swap1,swap2;
5     scanf("%d %d",&a,&b);
6     swap1 = a + b - a;
7     swap2 = b + a - b;
8     printf("After swapping: a = %d, b = %d",swap1,swap2);
9 }
```

Average time Maximum time
0.074 s 0.106 s
73.67 ms 106.00 ms

2 out of 2 shown test case(s) passed
1 out of 1 hidden test case(s) passed

Test case 1 (57 ms)
Expected output: 10 20
Actual output: 10 20
After swapping: a = 20, b = 10 After swapping: a = 20, b = 10

Test case 2 (58 ms)

Terminal Test cases

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