

## 1025. Divisor Game

Solved

Easy

Topics

Companies

Hint

Alice and Bob take turns playing a game, with Alice starting first.

Initially, there is a number  $n$  on the chalkboard. On each player's turn, that player makes a move consisting of:

- Choosing any  $x$  with  $0 < x < n$  and  $n \% x == 0$ .
- Replacing the number  $n$  on the chalkboard with  $n - x$ .

Also, if a player cannot make a move, they lose the game.

Return `true` if and only if Alice wins the game, assuming both players play optimally.

### Example 1:

**Input:**  $n = 2$

**Output:** `true`

**Explanation:** Alice chooses 1, and Bob has no more moves.

### Example 2:

**Input:**  $n = 3$

**Output:** `false`

**Explanation:** Alice chooses 1, Bob chooses 1, and Alice has no more moves.

The screenshot shows a code editor with the following code:

```
1 public class Solution {
2     public bool DivisorGame(int n) {
3         // Alice выигрывает, если число четное.
4         return n % 2 == 0;
5     }
6 }
7
```

The test result shows that the code is accepted for both test cases.

Testcase	Runtime
Accepted	39 ms

Case 1: Input:  $n = 2$ , Output: `true`

Case 2: Input:  $n = 3$ , Output: `false`

Код:

```
public class Solution
{
    public bool DivisorGame(int n)
    {
        // Alice выигрывает, если число четное.
        return n % 2 == 0;
    }
}
```

}