

292. Nim Game

Description

You are playing the following Nim Game with your friend:

- Initially, there is a heap of stones on the table.
- You and your friend will alternate taking turns, and **you go first**.
- On each turn, the person whose turn it is will remove 1 to 3 stones from the heap.
- The one who removes the last stone is the winner.

Given `n`, the number of stones in the heap, return `true` *if you can win the game assuming both you and your friend play optimally, otherwise return false*.

Example 1:

Input: `n = 4`

Output: `false`

Explanation: These are the possible outcomes:

1. You remove 1 stone. Your friend removes 3 stones, including the last stone. Your friend wins.
2. You remove 2 stones. Your friend removes 2 stones, including the last stone. Your friend wins.
3. You remove 3 stones. Your friend removes the last stone. Your friend wins.

In all outcomes, your friend wins.

Example 2:

Input: `n = 1`

Output: `true`

Example 3:

Input: `n = 2`

Output: `true`

Constraints:

- `1 <= n <= 231 - 1`

