397. Integer Replacement

Difficulty : Medium

https://leetcode.com/problems/integer-replacement

Given a positive integer `n`, you can apply one of the following operations:

1. If `n` is even, replace `n` with `n / 2`.
2. If `n` is odd, replace `n` with either `n + 1` or `n - 1`.

Return *the minimum number of operations needed for* `n` *to become* `1`.

Example 1:

```
Input: n = 8
Output: 3
Explanation: 8 -> 4 -> 2 -> 1
```

Example 2:

```
Input: n = 7
Output: 4
Explanation: 7 -> 8 -> 4 -> 2 -> 1
or 7 -> 6 -> 3 -> 2 -> 1
```

Example 3:

```
Input: n = 4
Output: 2
```

Constraints:

- `1 <= n <= 2^31 - 1`