Problem 3133: Minimum Array End

Problem Information

Difficulty: Medium
Acceptance Rate: 55.44%
Paid Only: No
Tags: Bit Manipulation

Problem Description

You are given two integers `n` and `x`. You have to construct an array of **positive** integers `nums` of size `n` where for every `0 <= i < n - 1`, `nums[i + 1]` is **greater than** `nums[i]`, and the result of the bitwise `AND` operation between all elements of `nums` is `x`.

Return the **minimum** possible value of `nums[n - 1]`.

Example 1:

Input: n = 3, x = 4

Output: 6

Explanation:

`nums` can be `[4,5,6]` and its last element is 6.

Example 2:

Input: n = 2, x = 7

Output: 15

Explanation:

`nums` can be `[7,15]` and its last element is 15.

Constraints:

* `1 <= n, x <= 108`

Code Snippets

C++:

```
class Solution {
public:
long long minEnd(int n, int x) {

}
};
```

Java:

```
class Solution {
public long minEnd(int n, int x) {

}
}
```

Python3:

```
class Solution:
def minEnd(self, n: int, x: int) -> int:
```