Problem 3370: Smallest Number With All Set Bits

Problem Information

Difficulty: Easy
Acceptance Rate: 80.34%
Paid Only: No
Tags: Math, Bit Manipulation

Problem Description

You are given a _positive_ number `n`.

Return the **smallest** number `x` **greater than** or **equal to** `n`, such that the binary representation of `x` contains only set bits

Example 1:

Input: n = 5

Output: 7

Explanation:

The binary representation of 7 is `"111"`.

Example 2:

Input: n = 10

Output: 15

Explanation:

The binary representation of 15 is `"1111"`.

Example 3:

Input: n = 3

Output: 3

Explanation:

The binary representation of 3 is `"11"`.

Constraints:

* `1 <= n <= 1000`

Code Snippets

C++:

```cpp
class Solution {
public:
int smallestNumber(int n) {

}
};
```

Java:

```java
class Solution {
public int smallestNumber(int n) {

}
}
```

Python3:

```python
class Solution:
def smallestNumber(self, n: int) -> int:
```