

Problem 1018: Binary Prefix Divisible By 5

Problem Information

Difficulty: Easy

Acceptance Rate: 47.39%

Paid Only: No

Tags: Array, Bit Manipulation

Problem Description

You are given a binary array `nums` (**0-indexed**).

We define `xi` as the number whose binary representation is the subarray `nums[0..i]` (from most-significant-bit to least-significant-bit).

* For example, if `nums = [1,0,1]`, then `x0 = 1`, `x1 = 2`, and `x2 = 5`.

Return _an array of booleans_ `answer` _where_ `answer[i]` _is_ `true` _if_ `xi` _is divisible by_ `5` .

Example 1:

Input: nums = [0,1,1] **Output:** [true,false,false] **Explanation:** The input numbers in binary are 0, 01, 011; which are 0, 1, and 3 in base-10. Only the first number is divisible by 5, so answer[0] is true.

Example 2:

Input: nums = [1,1,1] **Output:** [false,false,false]

Constraints:

* `1 <= nums.length <= 105` * `nums[i]` is either `0` or `1`.

Code Snippets

C++:

```
class Solution {  
public:  
vector<bool> prefixesDivBy5(vector<int>& nums) {  
  
}  
};
```

Java:

```
class Solution {  
public List<Boolean> prefixesDivBy5(int[] nums) {  
  
}  
}
```

Python3:

```
class Solution:  
def prefixesDivBy5(self, nums: List[int]) -> List[bool]:
```