Problem 932: Beautiful Array

Problem Information

Difficulty: Medium
Acceptance Rate: 67.60%
Paid Only: No
Tags: Array, Math, Divide and Conquer

Problem Description

An array `nums` of length `n` is **beautiful** if:

* `nums` is a permutation of the integers in the range `[1, n]`. * For every `0 <= i < j < n`, there is no index `k` with `i < k < j` where `2 * nums[k] == nums[i] + nums[j]`.

Given the integer `n`, return _any**beautiful** array _`nums` _of length_`n`. There will be at least one valid answer for the given `n`.

Example 1:

Input: n = 4 **Output:** [2,1,4,3]

Example 2:

Input: n = 5 **Output:** [3,1,2,5,4]

Constraints:

* `1 <= n <= 1000`

Code Snippets

C++:

```
class Solution {
public:
vector<int> beautifulArray(int n) {

}
};
```

Java:

```
class Solution {
public int[] beautifulArray(int n) {

}
}
```

Python3:

```
class Solution:
def beautifulArray(self, n: int) -> List[int]:
```