Problem 3231: Minimum Number of Increasing Subsequence to Be Removed

Problem Information

Difficulty: Hard
Acceptance Rate: 45.67%
Paid Only: Yes
Tags: Array, Binary Search

Problem Description

Given an array of integers `nums`, you are allowed to perform the following operation any number of times:

* Remove a **strictly increasing** subsequence from the array.

Your task is to find the **minimum** number of operations required to make the array **empty**.

Example 1:

Input: nums = [5,3,1,4,2]

Output: 3

Explanation:

We remove subsequences `[1, 2]`, `[3, 4]`, `[5]`.

Example 2:

Input: nums = [1,2,3,4,5]

Output: 1

Example 3:

Input: nums = [5,4,3,2,1]

Output: 5

Constraints:

* `1 <= nums.length <= 105` * `1 <= nums[i] <= 105`

Code Snippets

C++:

```
class Solution {
public:
int minOperations(vector<int>& nums) {

}
};
```

Java:

```
class Solution {
public int minOperations(int[] nums) {

}
}
```

Python3:

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