

Problem 3616: Number of Student Replacements

Problem Information

Difficulty: Medium

Acceptance Rate: 86.48%

Paid Only: Yes

Tags: Array, Simulation

Problem Description

You are given an integer array `rank` where `rank[i]` represents the rank of the `i`th student arriving **in order**. A lower number indicates a **better** rank.

Initially, the first student is **selected** by default.

A **replacement** occurs when a student with a **strictly** better rank arrives and **replaces** the current selection.

Return the total number of replacements made.

Example 1:

Input: `rank = [4,1,2]`

Output: 1

Explanation:

* The first student with `rank[0] = 4` is initially selected. * The second student with `rank[1] = 1` is better than the current selection, so a replacement occurs. * The third student has a worse rank, so no replacement occurs. * Thus, the number of replacements is 1.

Example 2:

****Input:**** ranks = [2,2,3]

****Output:**** 0

****Explanation:****

* The first student with `ranks[0] = 2` is initially selected. * Neither of `ranks[1] = 2` or `ranks[2] = 3` is better than the current selection. * Thus, the number of replacements is 0.

****Constraints:****

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

Code Snippets

C++:

```
class Solution {
public:
    int totalReplacements(vector<int>& ranks) {

    }
};
```

Java:

```
class Solution {
    public int totalReplacements(int[] ranks) {

    }
}
```

Python3:

```
class Solution:
    def totalReplacements(self, ranks: List[int]) -> int:
```