Problem 962: Maximum Width Ramp

Problem Information

Difficulty: Medium
Acceptance Rate: 55.79%
Paid Only: No
Tags: Array, Two Pointers, Stack, Monotonic Stack

Problem Description

A **ramp** in an integer array `nums` is a pair `(i, j)` for which `i < j` and `nums[i] <= nums[j]`. The **width** of such a ramp is `j - i`.

Given an integer array `nums`, return _the maximum width of a**ramp** in _`nums`. If there is no **ramp** in `nums`, return `0`.

Example 1:

Input: nums = [6,0,8,2,1,5] **Output:** 4 **Explanation:** The maximum width ramp is achieved at (i, j) = (1, 5): nums[1] = 0 and nums[5] = 5.

Example 2:

Input: nums = [9,8,1,0,1,9,4,0,4,1] **Output:** 7 **Explanation:** The maximum width ramp is achieved at (i, j) = (2, 9): nums[2] = 1 and nums[9] = 1.

Constraints:

* `2 <= nums.length <= 5 * 104` * `0 <= nums[i] <= 5 * 104`

Code Snippets

C++:

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

}
};
```

Java:

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

}
}
```

Python3:

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