# Longest Increasing Subsequence

Try to solve the Longest Increasing Subsequence problem.

**We'll cover the following**



## Statement

Given an integer array, `nums`, return the length of the longest strictly increasing subsequence.

**Constraints:**

- $1 \leq$ `nums.length` $\leq 2500$
- $-10^4 \leq$ `nums[i]` $\leq 10^4$

## Examples

### Sample example 1

**Input**

| nums | 10 | 9 | 2 | 5 | 3 | 7 | 101 | 18 |
|---|---|---|---|---|---|---|---|---|

**Output**

4

The longest increasing subsequence is [2, 3, 7, 101], therefore the length is 4.

**1** of 2

### Sample example 1

**Input**

| nums | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
|---|---|---|---|---|---|---|---|

**Output**

1

The longest increasing subsequence is [7], therefore the length is 1.

## Understand the problem

Let's take a moment to make sure you've correctly understood the problem. The quiz below helps you check if you're solving the correct problem:

Longest Increasing Subsequence

1 Given the array below, find the length of the longest increasing subsequence:

nums = [4, 4, 4, 4, 4, 4]

A) 0

B) 1

C) 2

D) 3

Submit Answer

Question 1 of 2
0 attempted

Reset Quiz

## Try it yourself

Implement your solution in the following coding playground:

Java

usercode > LongestSubsequence.java

```
1  import java.util.*;

5          // Your code will replace the placeholder return statement.
6
7          return -1;
8      }
9  }
```

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Submit

Test Cases | Results

Case 1 | Case 2 | Case 3

Input #1

[10,9,2,5,3,7,101,18]

Longest Increasing Subsequence

Hide Hint

You might want to go over the Dynamic Programming pattern again.

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Sum of Two Integers

Mark as Completed