

## **121. Best Time to Buy and Sell Stock**

- You are given an array prices where prices[i] is the price of a given stock on the ith day.
- You want to maximize your profit by choosing a single day to buy one stock and choosing a different day in the future to sell that stock.
- Return the maximum profit you can achieve from this transaction. If you cannot achieve any profit, return 0.

### **Example 1:**

**Input:** prices = [7,1,5,3,6,4]

**Output:** 5

**Explanation:** Buy on day 2 (price = 1) and sell on day 5 (price = 6), profit = 6-1 = 5.

Note that buying on day 2 and selling on day 1 is not allowed because you must buy before you sell.

### **Example 2:**

**Input:** prices = [7,6,4,3,1]

**Output:** 0

**Explanation:** In this case, no transactions are done and the max profit = 0.

### **Constraints:**

- $1 \leq \text{prices.length} \leq 105$
- $0 \leq \text{prices}[i] \leq 104$