121. Best Time to Buy and Sell Stock

Solved

Easy | Topics | Companies

You are given an array `prices` where `prices[i]` is the price of a given stock on the i^{th} 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 <= prices.length <= 10^5`
- `0 <= prices[i] <= 10^4`