Leetcode Problem 2. (Easy)

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 <= prices.length <= 105
* 0 <= prices[i] <= 104

Link: <https://leetcode.com/problems/best-time-to-buy-and-sell-stock/>

class Solution {

public int maxProfit(int[] prices) {

int minPrice = Integer.MAX\_VALUE;

int maxProfit = 0;

for (int i = 0; i < prices.length; i++) {

if (prices[i] < minPrice) {

minPrice = prices[i];

} else if (prices[i] - minPrice > maxProfit) {

maxProfit = prices[i] - minPrice;

}

}

return maxProfit;

}

}

