

121. Best time to buy & sell stocks :-

- $prices[i]$ represents the price of the stock on i^{th} day.
- You can buy only one stock on a single day & sell it later.
- Buy when the stock price is the cheapest & sell only when max profit is available

* Examples :-

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

Output: 5

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

Output: 5

* Solution :-

- We can only buy when the stock price is the cheapest.
- Assume the first element to be the cheapest price because we haven't seen other elements.
- Iterate over the array from the second element.
- If the current price is cheaper compared to the previous, then the cheapest price = current element. This is when we buy the stock.
- If the current price is greater than the cheapest price, it can be a possible day to sell. provided we get the maximum possible profit.
- So, initially the maximum profit will be 0.
- Calculate the profit = $currentPrice - currentMinPrice$.
- Check if this is the maximum possible profit.

Time Complexity :- $O(n)$

Space complexity :- $O(1)$