Best time to buy and sell stock

example: 7, 1, 5, 3, 6, 4

buy on day 2, price = 1, sell at day 5, price = 6
profit = 6 - 1 = 5

example: 7, 6, 4, 3, 1
profit = 0, no transactions.

example: 2, 4, 1
buy at day 1, p = 2, sell at day 2, p = 4
profit = 4 - 2 = 2

Solution analytics:

we should ask questions
when we sell? when we buy?

if you are selling on i^{th} day, you have to buy
on minimum price from day $1^{st} \longrightarrow i-1$

7, 1, 5, 3, 6, 4

i=0, minP=7

minP=7>1

i=1, 1-7<0 => dont sell, minP=1

i=2, 5-1>0 => can sell, profit 4>0, => p=4

i=3, 3-1>0 => can sell but p=4>2, do sell

i=4, 6-1=5>0 => can sell, 6>4 => sell profit=5

end.

```
class Solution {
public:
    int maxProfit(vector<int> &prices) {
        int minP = prices[0];
        int maxProfit = 0;
        for (int i = 1; i < prices.size(); i++) {
            int profit = prices[i] - minP;
            if (profit > 0) {
                // we can sell
                if (profit > maxProfit) {
                    maxProfit = profit;
                }
            } else {
                minP = prices[i];
            }
        }
        return maxProfit;
    }
};
```