
Algorithm Find the maximum profit by buying and selling stocks

Ensure: One Based Indexing for the array

```
1: function maxProfit(arr, len)  
  
2:   profit = 0  
3:   for i in len - 1 do  
4:     if arr[i] < arr[i + 1] then  
5:       profit += arr[i + 1] - arr[i]  
6:   return profit  
  
7: end function
```

Walkthrough

1. The parameter $arr[i]$ represents the array of all the stock prices from day one to day len .
 2. The variable $profit$ is the profit, i.e. the sum of all **differences** of two bought and sold stocks.
 3. In order to maximize the profit, we iterate linearly through the stock arr and always check, if the current index's stock is **cheaper**, than the succeeding index's stock. If so, this means that profit would be made, and the **difference** of the two prices is added to $profit$.
-