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1 // Simple solution for "Best Time to Buy and Sell Stock"
2 // Language: C++ (beginner friendly)
3
4 #include <iostream>
5 #include <vector>
6 using namespace std;
7
8 int maxProfit(const vector<int>& prices) {
9     if (prices.empty()) return 0;           // no days -> no profit
10
11     int minPrice = prices[0];               // smallest price we have seen so far
12     int bestProfit = 0;                    // best profit found so far
13
14     for (int i = 1; i < (int)prices.size(); ++i) {
15         int today = prices[i];
16
17         // If selling today gives more profit than before, update bestProfit
18         int profitIfSoldToday = today - minPrice;
19         if (profitIfSoldToday > bestProfit) {
20             bestProfit = profitIfSoldToday;
21         }
22
23         // If today's price is lower than any price we've seen, update minPrice
24         if (today < minPrice) {
25             minPrice = today;
26         }
27     }
28     return bestProfit;
29 }
30
31 int main() {
32     // Read input from user (first n, then n prices)
33     int n;
34     cout << "Enter number of days: ";
35     cin >> n;
36
37     vector<int> prices(n);
38     cout << "Enter prices separated by spaces:\n";
39     for (int i = 0; i < n; ++i) cin >> prices[i];
40
41     int answer = maxProfit(prices);
42     cout << "Maximum Profit: " << answer << "\n";
43     return 0;
44 }

```