#include <iostream>

#include <vector>

int calculateMaxProfit(std::vector<int>& prices) {

int maxProfit = 0;

int minPrice = prices[0];

for (int i = 1; i < prices.size(); i++) {

if (prices[i] < minPrice) {

minPrice = prices[i];

} else {

int profit = prices[i] - minPrice;

maxProfit = std::max(maxProfit, profit);

}

}

return maxProfit;

}

int main() {

int n;

std::cout << "Enter the number of days: ";

std::cin >> n;

std::vector<int> prices(n);

std::cout << "Enter the prices for each day: ";

for (int i = 0; i < n; i++) {

std::cin >> prices[i];

}

int maxProfit = calculateMaxProfit(prices);

std::cout << "Maximum profit: " << maxProfit << std::endl;

return 0;

}