Stock buy and sell

## Statement of the Questions

JAVA SOLUTION –

The cost of stock on each day is given in an array price[] of size n. Each day you may decide to either buy or sell the stock i at price[i], you can even buy and sell the stock on the same day, Find the maximum profit which you can get.

**Note:** You can only hold one stock at a time.

**Example 1:**

**Input:**  
n = 4  
a = {3, 4, 1, 5}  
**Output:**  
5  
**Explanation:**  
We can buy stock on day 1 (at price 3) and sell it on   
day 2 (at price 4) profit will be 4-3=1,   
We can buy another stock on day 3 (at price 1) and sell   
it on day 4 (at price 5) profit will be 5-1=4,   
which will give us maximum profit of 5.

### JAVA CODE

### import java.io.\*;

### import java.util.\*;

### class IntArray

### {

### public static int[] input(BufferedReader br, int n) throws IOException

### {

### String[] s = br.readLine().trim().split(" ");

### int[] a = new int[n];

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

### a[i] = Integer.parseInt(s[i]);

### return a;

### }

### public static void print(int[] a)

### {

### for(int e : a)

### System.out.print(e + " ");

### System.out.println();

### }

### public static void print(ArrayList<Integer> a)

### {

### for(int e : a)

### System.out.print(e + " ");

### System.out.println();

### }

### }

### class CodingMaxima {

### public static void main(String[] args) throws IOException {

### BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

### int t;

### t = Integer.parseInt(br.readLine());

### while(t-- > 0){

### 

### int n;

### n = Integer.parseInt(br.readLine());

### 

### int[] prices = IntArray.input(br, n);

### 

### Solution obj = new Solution();

### int res = obj.stockBuyAndSell(n, prices);

### 

### System.out.println(res);

### 

### }

### }

### }

### class Solution {

### public static int stockBuyAndSell(int n, int[] prices) {

### 

### int profit=0,buy=prices[0], sell=prices[0];

### for(int i=1;i<n;i++){

### if(prices[i]>=sell){

### sell=prices[i];

### }

### else{

### profit+=sell-buy;

### sell=buy=prices[i];

### }

### }

### profit+=sell-buy;

### return profit;

### }

### }

### 