Badge Progress  (Details)

Points: 126   Rank: 270330

# The Maximum Subarray 🔖

by sh4d0wkn1ght

| Problem | Submissions | Leaderboard | Discussions | Editorial 🔒 | Topics |

Given an array $A = [a_0, a_1, a_2, \ldots, a_{N-1}]$ of $N$ elements, find the maximum possible sum among

1. all nonempty subarrays.

2. all nonempty subsequences.

We define a *subarray* as a *contiguous subsequence*. Note that empty subarrays/subsequences should not be considered.

**Input Format**

The first line of input contains a single integer $T$ denoting the number of test cases.

The first line of each test case contains a single integer $N$. The second line contains $N$ space-separated integers $a_0, a_1, \ldots, a_{N-1}$ denoting the elements of $A$.

**Constraints**

- $1 \leq T \leq 10$
- $1 \leq N \leq 10^5$
- $-10^4 \leq a_i \leq 10^4$

*The subarray and subsequences you consider should have at least one element.*

**Output Format**

Print two space-separated integers denoting the maximum sums of nonempty subarrays and nonempty subsequences, respectively.

**Sample Input 0**

```
2
4
1 2 3 4
6
2 -1 2 3 4 -5
```

**Sample Output 0**

```
10 10
10 11
```

**Explanation 0**

*In the first case:* The maximum sum for both types of subsequences is just the sum of all the elements since they are all positive.

*In the second case:* The subarray $[2, -1, 2, 3, 4]$ is the subarray with the maximum sum, and $[2, 2, 3, 4]$ is the subsequence with the maximum sum.

**Submissions:**50658

**Max Score:**50

**Difficulty:** Medium

---

**Rate This Challenge:**

☆ ☆ ☆ ☆ ☆

---

**Need Help?**

Dynamic Programming Basics

---

More

---

Current Buffer (saved locally, editable)   🎋 🕓                    Java 7        ⌄      ⛶  ⚙

```
 1 ▾ import java.io.*;
 2   import java.util.*;
 3   import java.text.*;
 4   import java.math.*;
 5   import java.util.regex.*;
 6
 7 ▾ public class Solution {
 8 ▾     public static void main(String args[] ) throws Exception {
 9 ▾         /* Enter your code here. Read input from STDIN. Print output to STDOUT */
10         }
11   }
12
```

                                                                    Line: 1 Col: 1

⬆ Upload Code as File      ☐ Test against custom input              Run Code    Submit Code

---

Join us on IRC at #hackerrank on freenode for hugs or bugs.

Contest Calendar | Blog | Scoring | Environment | FAQ | About Us | Support | Careers | Terms Of Service | Privacy Policy | Request a Feature