CMPUT 275 - Tangible Computing **Winter 2018**
Morning Problem: Maximum Subarray Sum

Description

You are given an array of integers, which may be positive or negative (or zero). Find the maximum possible total sum of a consecutive subsequence of numbers.

An example with an array of length 8 follows:

```
-1  -2  4  -1  3  2  -8  1
```

Starting at index $i = 2$ we can see we have a subarray length 4 with $j = 5$ consisting of:

```
4  -1  3  2
```

which sums to 8. This is the largest sum of any subsequence. Notice we are required to take the `-1` in this subsequence as we are only interested in finding the maximum total sum of *consecutive* subsequences.

Input

The first line consists of an integer n. $1 \leq n \leq 100,000$.

The second line consists of n space seperated integers a_i where $-10^9 \leq a_i \leq 10^9$.

Output

Output a single number being the largest positive sum of a consecutive subsequence. No consecutive subsequence has positive value, simply output 0.

Sample Input 1

```
8
-1  -2  4  -1  3  2  -8  1
```

Sample Output 1

```
8
```

Sample Input 2

```
10
-1 -2 -3 -4 -5 -6 -7 -8 -9 -10
```

Sample Output 2

```
0
```