

Problem A

Maximum Subarray Problem

Time limit: 1 second
Memory limit: 2048 megabytes

Problem Description

Given an array of n integers a_1, a_2, \dots, a_n , find a non-empty and contiguous subarray with the largest sum.

Input Format

The first line of the input contains an integer n denoting the length of the array. The second line of the input contains n space-separated integers a_1, a_2, \dots, a_n .

Output Format

Output the maximum subarray sum s in the first line. Then in the second line, output two positive integers l, r , denoting the subarray itself. If there are multiple subarrays with the maximum sum, you can output any of them.

Specifically, your output would be considered correct if it satisfies all the following conditions:

- $1 \leq l \leq r \leq n$
- $\sum_{i=l}^r a_i = s$
- s is the maximum among all possible subarrays.

Technical Specification

- $1 \leq n \leq 3 \times 10^5$
- $-10^9 \leq a_i \leq 10^9$ for $i = 1, 2, \dots, n$

Sample Input 1

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

Sample Output 1

```
7
2 4
```

Sample Input 2

```
4
1000000000 1000000000 1000000000 1000000000
```

Sample Output 2

```
4000000000
1 4
```

Sample Input 3

```
7
-3 -5 -100 -2 -23 -15 -9
```

Sample Output 3

```
-2
4 4
```

Sample Input 4

```
8
25 -32 8 13 47 -44 45 -100
```

Sample Output 4

```
69
3 7
```

Hint

Note that the maximum subarray sum may not fit into 32-bit integers.