

Problem statement[Send feedback](#)

Ninja is given an array '**Arr**' of size '**N**'. You have to help him find the longest subarray of 'Arr', whose sum is 0. You must return the length of the longest subarray whose sum is 0.

For Example:

For N = 5, and Arr = {1, -1, 0, 0, 1},

We have the following subarrays with zero sums:

{{1, -1}, {1, -1, 0}, {1, -1, 0, 0}, {-1, 0, 0, 1}, {0}, {0, 0}, {0}}

Among these subarrays, {1, -1, 0, 0} and {-1, 0, 0, 1} are the longest subarrays with their sum equal to zero. Hence the answer is 4.

Detailed explanation (Input/output format, Notes, Images)**Sample Input 1:**

```
4
1 0 -1 1
```

Sample Output 1:

```
3
```

Explanation of Sample Input 1:

The subarrays with sums equal to zero are: {{1, 0, -1}, {0}, {0, -1, 1}, {-1, 1}}. Among these, {1, 0, -1} and {0, -1, 1} are the longest with length equal to 3. Hence the answer is 3.

Sample Input 2:

```
2
1 1
```

Sample Output 2:

```
0
```

Constraints:

```
1 <= N <= 10^5
-10^9 <= Arr[i] <= 10^9
```

The sum of 'N' over all test cases is less than or equal to 10^5 .
Time Limit: 1 sec.