

Problem H. Hills And Valleys

Input file: standard input
Output file: standard output
Time limit: 1 second
Memory limit: 256 megabytes

Tauren has an integer sequence A of length n (1-based). He wants you to invert an interval $[l, r]$ ($1 \leq l \leq r \leq n$) of A (i.e. replace $A_l, A_{l+1}, \dots, A_r$ with $A_r, A_{r-1}, \dots, A_l$) to maximize the length of the longest non-decreasing subsequence of A . Find that maximal length and any inverting way to accomplish that mission.

A non-decreasing subsequence of A with length m could be represented as $A_{x_1}, A_{x_2}, \dots, A_{x_m}$ with $1 \leq x_1 < x_2 < \dots < x_m \leq n$ and $A_{x_1} \leq A_{x_2} \leq \dots \leq A_{x_m}$.

Input

The first line contains one integer T , indicating the number of test cases.

The following lines describe all the test cases. For each test case:

The first line contains one integer n .

The second line contains n integers $A_1, A_2, \dots, A_n$ without any space.

$1 \leq T \leq 100$, $1 \leq n \leq 10^5$, $0 \leq A_i \leq 9$ ($i = 1, 2, \dots, n$).

It is guaranteed that the sum of n in all test cases does not exceed $2 \cdot 10^5$.

Output

For each test case, print three space-separated integers m, l and r in one line, where m indicates the maximal length and $[l, r]$ indicates the relevant interval to invert.

Example

standard input	standard output
2	5 1 8
9	6 1 2
864852302	
9	
203258468	

Note

In the first example, 864852302 after inverting $[1, 8]$ is 032584682, one of the longest non-decreasing subsequences of which is 03588.

In the second example, 203258468 after inverting $[1, 2]$ is 023258468, one of the longest non-decreasing subsequences of which is 023588.