Problem E
Best k-Interval Approximation
Time limit: 5 seconds
Memory limit: 256 megabytes

Problem Description

In this problem, we ask you to compute an approximation of a given sequence $s_1, \ldots, s_n$ of n integers. A k-interval approximation of $s_1, \ldots, s_n$ is a sequence $(L_1, R_1, v_1), \ldots, (L_k, R_k, v_k)$ of k triples such that the following conditions are satisfied.

- $L_1 = 1$ and $R_k = n$

- $R_i + 1 = L_{i+1}$ for $i \in [1, k)$

- $v_1, \ldots, v_k$ are integers.

The approximation performace index of $(L_1, R_1, v_1), \ldots, (L_k, R_k, v_k)$ is defined as

$$\max_{j=1}^{k} \max_{i=L_i}^{R_i} |s_i - v_j|$$

And the best approximation minimizes the value above.

Write a program to compute the best k-interval approximation.

Input Format

There is only one test case in each input file. The first line contains two integers n, k ($k \leq n \leq 10^5$) separated by blanks, and the second line contains n 32-bit signed integers $s_1, \ldots, s_n$ separated by blanks.

Output Format

Output the best k-interval approximation on k lines. The i-th line should contains 3 integers L_i, R_i, v_i separated by a blank. If there are multiple solutions, you may output any of them.

Sample Input 1

```
3 3
1 2 3
```

Sample Output 1

```
1 1 1
2 2 2
3 3 3
```

Sample Input 2

```
3 2
1 2 4
```

Sample Output 2

```
1 1 1
2 3 3
```

Sample Input 3

```
3 1
1 2 3
```

Sample Output 3

1 3 2