D Coin Change

Time limit: 2s

Description

Store$ is a vending machine selling several items with distinct prices. For each non-negative integer z, there is an item costing z dollars (or $100 \times z$ cents) with a usefulness value of z.

You have $\boldsymbol{N}$ coins in your wallet, numbered 1 to $\boldsymbol{N}$. Coin i is worth $\boldsymbol{K}_i$ cents.

You want to buy one item from the vending machine using as many coins as possible. The vending machine accepts at most $\boldsymbol{M}$ coins in one purchase. Therefore, you will choose exactly $\boldsymbol{M}$ coins from $\boldsymbol{N}$ coins in your wallet and insert them into the vending machine.

You want to buy the item with the largest usefulness value you can buy. Define V as the largest usefulness value of an item you can buy by choosing exactly $\boldsymbol{M}$ coins. Since the vending machine only gives change in 1 cent coins, you want to minimise the change you receive for buying an item with a usefulness value of V.

For example, if $\boldsymbol{N} = 6$, $\boldsymbol{M} = 2$, and $\boldsymbol{K} = [110, 180, 200, 130, 9, 9]$, then $V = 3$. To buy an item with a usefulness value of 3 with the minimum change, you can either:

- Choose coins 1 and 3 having the sum of $110 + 200 = 310$ cents, so you get the change of 10 cents.
- Choose coins 2 and 4 having the sum of $180 + 130 = 310$ cents, so you get the change of 10 cents.

Determine the set of $\boldsymbol{M}$ coins you choose to buy an item with a usefulness value of V with the minimum change.

Input

The first line contains two integers $\boldsymbol{N}$ and $\boldsymbol{M}$ ($1 \leq \boldsymbol{M} \leq \boldsymbol{N} \leq 200\,000$) separated by a space. The second line contains $\boldsymbol{N}$ integers $\boldsymbol{K}_1, \boldsymbol{K}_2, \ldots, \boldsymbol{K}_{\boldsymbol{N}}$ ($0 \leq \boldsymbol{K}_i \leq 10^9$) separated by spaces.

Output

The first line contains two integers V and C separated by a space, where C is the minimum change you can get for buying an item with a usefulness value of V using $\boldsymbol{M}$ coins. The second line contains $\boldsymbol{M}$ integers $A_1, A_2, \ldots, A_{\boldsymbol{M}}$ separated by spaces. This means you choose coins $A_1, A_2, \ldots, A_{\boldsymbol{M}}$. The indices of the coins must be increasing. In other words, $A_j < A_{j+1}$ for each $1 \leq j < \boldsymbol{M}$. If there is more than one solution, you can print any solution.

Sample Input 1	Sample Output 1
6 2 110 180 200 130 9 9	3 10 1 3

Sample Input 2	Sample Output 2
3 3 200 1 0	2 1 1 2 3

Explanation of samples

Sample input 1 matches the example in the description above. The following output is also allowed.

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3 10
2 4
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