C. Planning

time limit per test: 1 second
memory limit per test: 512 megabytes
input: standard input
output: standard output

Helen works in Metropolis airport. She is responsible for creating a departure schedule. There are n flights that must depart today, the i-th of them is planned to depart at the i-th minute of the day.

Metropolis airport is the main transport hub of Metropolia, so it is difficult to keep the schedule intact. This is exactly the case today: because of technical issues, no flights were able to depart during the first k minutes of the day, so now the new departure schedule must be created.

All n scheduled flights must now depart at different minutes between $(k+1)$-th and $(k+n)$-th, inclusive. However, it's not mandatory for the flights to depart in the same order they were initially scheduled to do so — their order in the new schedule can be different. There is only one restriction: no flight is allowed to depart earlier than it was supposed to depart in the initial schedule.

Helen knows that each minute of delay of the i-th flight costs airport c_i burles. Help her find the order for flights to depart in the new schedule that minimizes the total cost for the airport.

Input

The first line contains two integers n and k ($1 \le k \le n \le 300\,000$), here n is the number of flights, and k is the number of minutes in the beginning of the day that the flights did not depart.

The second line contains n integers $c_1, c_2, ..., c_n$ ($1 \le c_i \le 10^7$), here c_i is the cost of delaying the i-th flight for one minute.

Output

The first line must contain the minimum possible total cost of delaying the flights.

The second line must contain n different integers $t_1, t_2, ..., t_n$ ($k+1 \le t_i \le k+n$), here t_i is the minute when the i-th flight must depart. If there are several optimal schedules, print any of them.

Example

input

```
5 2
4 2 1 10 2
```

output

```
20
3 6 7 4 5
```

Note

Let us consider sample test. If Helen just moves all flights 2 minutes later preserving the order, the total cost of delaying the flights would be $(3 - 1)\cdot 4 + (4 - 2)\cdot 2 + (5 - 3)\cdot 1 + (6 - 4)\cdot 10 + (7 - 5)\cdot 2 = 38$ burles.

However, the better schedule is shown in the sample answer, its cost is $(3 - 1)\cdot 4 + (6 - 2)\cdot 2 + (7 - 3)\cdot 1 + (4 - 4)\cdot 10 + (5 - 5)\cdot 2 = 20$ burles.