

Problem – 8 :Social Network (easy version)

You are messaging in one of the popular social networks via your smartphone. Your smartphone can show at most k most recent conversations with your friends. Initially, the screen is empty (i.e. the number of displayed conversations equals 0).

Each conversation is between you and some of your friends. There is at most one conversation with any of your friends. So each conversation is uniquely defined by your friend.

You (suddenly!) have the ability to see the future. You know that during the day you will receive n messages, the i -th message will be received from the friend with ID i ($1 \leq i \leq 10^9$).

If you receive a message from i in the conversation which is currently displayed on the smartphone then nothing happens: the conversations of the screen do not change and do not change their order, you read the message and continue waiting for new messages.

Otherwise (i.e. if there is no conversation with i on the screen):

- Firstly, if the number of conversations displayed on the screen is k , the last conversation (which has the position k) is removed from the screen.
- Now the number of conversations on the screen is guaranteed to be less than k and the conversation with the friend i is not displayed on the screen.
- The conversation with the friend i appears on the first (the topmost) position on the screen and all the other displayed conversations are shifted one position down.

Your task is to find the list of conversations (in the order they are displayed on the screen) after processing all n messages.

Input

The first line of the input contains two integers n and k ($1 \leq n, k \leq 200$) — the number of messages and the number of conversations your smartphone can show.

The second line of the input contains n integers i_1, i_2, \dots, i_n ($1 \leq i_i \leq 10^9$), where i_i is the ID of the friend which sends you the i -th message.

Output

In the first line of the output print one integer m ($1 \leq m \leq \min(n, k)$) — the number of conversations shown after receiving all n messages.

In the second line print m integers s_1, s_2, \dots, s_m , where s_i should be equal to the ID of the friend corresponding to the conversation displayed on the position i after receiving all n messages.

Examples

input

```
7 2
1 2 3 2 1 3 2
```