Problem L. Subsequence

Input file:	`subsequence.in`
Output file:	`subsequence.out`
Time limit:	1 second
Memory limit:	256 megabytes

Consider lexicographically ordered set $\mathcal{S}$ of different ascending subsequences of a given sequence of N integer numbers. Your task is to find K-th element of this set in lexicographical order.

Input

First line of input file contains two integer numbers: N and K ($1 \le N \le 60, 1 \le K \le |\mathcal{S}|$). On the second line there are N integer numbers in interval from 1 to 10^9, inclusive. Numbers in lines are separated by spaces. It is guaranteed that such subsequence exists.

Output

First line of output file must contain one integer number M — the number of elements in the resulting subsequence. Next line must contain M integers separated by spaces — the subsequence itself.

Example

subsequence.in	subsequence.out
3 2 1 1 2	2 1 2