Ordered Subsequence

https://vjudge.net/problem/HDU-4991

A numeric sequence of a_i is ordered if $a_1<a_2<.....<a_N$. Let the subsequence of the given numeric sequence (a_1, a_2,....., a_N) be any sequence (a_{i1}, a_{i2},....., a_{iK}), where $1<=i_1<i_2<.....<i_K<=N$. For example, sequence (1, 7, 3, 5, 9, 4, 8) has ordered subsequences, eg. (1, 7), (3, 4, 8) and many others.

Your program, when given the numeric sequence, must find the number of its ordered subsequence with exact m numbers.

Input

Multi test cases. Each case contain two lines. The first line contains two integers n and m, n is the length of the sequence and m represent the size of the subsequence you need to find. The second line contains the elements of sequence - n integers in the range from 0 to 987654321 each.
Process to the end of file.
[Technical Specification]
1<=n<=10000
1<=m<=100

Output

For each case, output answer % 123456789.

Sample

Input	Output
3 2 1 1 2 7 3 1 7 3 5 9 4 8	2 12