Nth String Permutation

A permutation is a shuffling of the order of a sequence of elements. You are given a sequence of the first **L** alphabets starting from the letter 'a'. You have to write a program which generates the permutation of these alphabets in a lexicographic order, i.e. similar to the ordering in a dictionary.

For example, given that L=3, the resulting sequence being {a,b,c}, the lexicographic permutation produced would be

1. abc
2. acb
3. bac
4. bca
5. cab
6. cba

The 4th permutation from this sequence would then be: "bca".

Input specification:

The input consists of 2 integers. The first integer L indicates that the first L alphabets starting with the letter 'a' have to be considered. The second integer N specifies the index corresponding to which the permutation should be output. Assume that the permutations are indexed starting from 1.

Output specification:

The output contains the Nth permutation of the set.

Sample Input and Output:

Input 3 4 Output bac	Input 4 8 Output badc
Input 3 3 Output bac	Input 4 1 Output abcd
Input 4 24 Output dcba	Input 8 200 Output abdgechf