Jahir is a student of NSU (*Nice Students' University*). He hates the chapter Permutation & Combination of the subject Discrete Math. But his teacher give him a assignment to generate all the r combination of a string. But he is too busy with his new girlfriend to do the assignment himself. So he went to Shabuj, a student of CSE (*Calculation Science and Engineering*) in BUET (*Bangladesh University of Extraordinary Talents*). He asked him to make a program to generate the combinations. But Shabuj is always lazy. He wants your help.

Your task is to print all different r combinations of a string s (a r combination of a string s is a collection of exactly r letters from different positions in s).

There may be different permutations of the same combination; consider only the one that has its r characters in non-decreasing order.

The string consists of only lowercase letters. Any letter can occur more than once.

Input

The input is consist of several test cases. Each test case consists of a string s (the length of s is between 1 and 30) and an integer r ($0 < r \leq length\ of\ s$).

Output

For each test case you have to print all different r combinations of s in lexicographic order in separate line. You can assume there are at most 1000 different ones.

Sample Input

```
abcde 2
abcd 3
aba 2
```

Sample Output

```
ab
ac
ad
ae
bc
bd
be
cd
ce
de
abc
abd
acd
bcd
aa
ab
```