

N Choose K

Objective

The objective of this problem is to test the students' understanding on **Recursion**.

Problem Description

Find out all possible combinations of choosing **K** letters out of an input string of **N** distinct letters. The input consists of an integer, **K** and a string of **N** distinct lowercase letters listed in alphabetical order.

Assume that $1 \leq N \leq 16$ and $1 \leq K \leq N$. Print out all distinct letter combinations in alphabetical order: every combination can be represented as a string consisting of **K** letters listed in alphabetical order.

Note: The constraint of **N** is changed due to limitation in CodeCrunch. If **N** = 26 and **K** = 13, then the output size will be very big.

Input

The input consists of an integer **K** and **N** distinct letters listed in alphabetical order.

Output

Output all distinct letter combinations in alphabetical order.

Sample Input 1

2 abcd

Sample Output 1

ab
ac
ad
bc
bd
cd

Sample Input 2

4 abcd

Sample Output 2

abcd

Sample Input 3

1 abcd

Sample Output 3

a
b
c
d