

Practice Exercise #40: N Choose K

http://www.comp.nus.edu.sg/~cs1020/4_misc/practice.html

Objective:

- Using recursion

Task statement:

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.

Input

The input consists two lines. The first line contains an integer K and the second line contains N distinct lowercase letters listed in alphabetical order.

(In your program, you should use more descriptive variable names instead of K and N and follow Java naming convention.)

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