Practice Exercise #37: 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
```