itertools.permutations()

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itertools.permutations(iterable[, r])

This tool returns successive r length permutations of elements in an iterable.

If r is not specified or is `None`, then r defaults to the length of the iterable, and all possible full length permutations are generated.

Permutations are printed in a lexicographic sorted order. So, if the input iterable is sorted, the permutation tuples will be produced in a sorted order.

Sample Code

```
>>> from itertools import permutations
>>> print permutations(['1','2','3'])
<itertools.permutations object at 0x02A45210>
>>>
>>> print list(permutations(['1','2','3']))
[('1', '2', '3'), ('1', '3', '2'), ('2', '1', '3'), ('2', '3', '1'), ('3',
'1', '2'), ('3', '2', '1')]
>>>
>>> print list(permutations(['1','2','3'],2))
[('1', '2'), ('1', '3'), ('2', '1'), ('2', '3'), ('3', '1'), ('3', '2')]
>>>
>>> print list(permutations('abc',3))
[('a', 'b', 'c'), ('a', 'c', 'b'), ('b', 'a', 'c'), ('b', 'c', 'a'), ('c',
'a', 'b'), ('c', 'b', 'a')]
```

Task

You are given a string S.

Your task is to print all possible permutations of size k of the string in lexicographic sorted order.

Input Format

A single line containing the space separated string S and the integer value k.

Constraints

$0 < k \leq len(S)$

The string contains only *UPPERCASE* characters.

Output Format

Print the permutations of the string S on separate lines.

Sample Input

Author	DOSHI
Difficulty	Easy
Max Score	10
Submitted By	20771

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```
HACK 2
```

Sample Output

```
AC
AH
AK
CA
CH
CK
HA
HC
HK
KA
KC
KH
```

Explanation

All possible size **2** permutations of the string "**HACK**" are printed in lexicographic sorted order.

Current Buffer (saved locally, editable) Python 3

```
1  from itertools import permutations
2  s,k=[i for i in input().split()]
3  k=int(k)
4  l=list(permutations(s,k))
5  l1=[]
6  for i in l:
7      s=""
8      for j in i:
9          s=s+j
10     l1.append(s)
11 l1.sort()
12 for i in l1:
13     print(i)
```

Line: 4 Col: 24

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Testcase 0 Testcase 1 Testcase 2 Testcase 3

6 Testcases

Input (stdin) Download

```
HACK 2
```

Expected Output Download

```
AC
AH
AK
CA
```

Compiler Message

```
Success
```