



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

$0 < k \leq \text{len}(S)$

The string contains only UPPERCASE characters.

Output Format

Print the permutations of the string S on separate lines.

Sample Input

```
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.

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Python 3



```
1  from itertools import permutations
2
3  if __name__ == '__main__':
4      s, k = input().split()
5      k = int(k)
6
7      result = list(permutations(s, r=k))
8      result = [''.join(p) for p in result]
9      result = sorted(result)
10
11     for p in result:
12         print(p)
13
```

Line: 13 Col: 1

Upload Code as File ☐ Test against custom input

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37%



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Test case 0

Compiler Message

✔ Test case 1 🔒

✔ Test case 2 🔒

✔ Test case 3 🔒

✔ Test case 4 🔒

✔ Test case 5 🔒

Success

Input (stdin)

1 | HACK 2

Expected Output

1 | AC

2 | AH

3 | AK

4 | CA

5 | CH

6 | CK

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