itertools.combinations()

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itertools.combinations(iterable, r)

This tool returns the r length subsequences of elements from the input iterable.

Combinations are emitted in lexicographic sorted order. So, if the input iterable is sorted, the combination tuples will be produced in sorted order.

Sample Code

```
>>> from itertools import combinations
>>>
>>> print list(combinations('12345',2))
[('1', '2'), ('1', '3'), ('1', '4'), ('1', '5'), ('2', '3'), ('2', '4'), ('2',
'5'), ('3', '4'), ('3', '5'), ('4', '5')]
>>>
>>> A = [1,1,3,3,3]
>>> print list(combinations(A,4))
[(1, 1, 3, 3), (1, 1, 3, 3), (1, 1, 3, 3), (1, 3, 3, 3), (1, 3, 3, 3)]
```

Task

You are given a string S.

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

Input Format

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

Constraints

$0 < k \leq len(S)$

The string contains only *UPPERCASE* characters.

Output Format

Print the different combinations of string S on separate lines.

Sample Input

```
HACK 2
```

Sample Output

Author	DOSHI
Difficulty	Easy
Max Score	10
Submitted By	18086

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Suggest Edits

```
A
C
H
K
AC
AH
AK
CH
CK
HK
```

Current Buffer (saved locally, editable) Python 3

```
1  from itertools import combinations
2  s,n=input().split()
3  for j in range(1,int(n)+1):
4      print(*[''.join(i) for i in
combinations(sorted(s),int(j))],sep='\n')
```

Line: 3 Col: 28

Upload Code as File | Test against custom input | Run Code | Submit Code

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Next Challenge

Testcase 0 Testcase 1 Testcase 2 Testcase 3

6 Testcases

Input (stdin) Download

```
HACK 2
```

Expected Output Download

```
A
C
H
K
```

Compiler Message

```
Success
```