

Q)..Check If a String Can Break Another String
Given two strings: s1 and s2 with the same size,
check if some permutation of string s1
can break some permutation of string s2 or vice-
versa. In other words s2 can break s1 or
vice-versa.

A string x can break string y (both of size n) if
 $x[i] \geq y[i]$ (in alphabetical order) for all i
between 0 and n-1.

Example 1:

Input: s1 = "abc" , s2 = "xya"

Output: true

Program:

```
def canBreak(s1, s2):  
    s1_sorted = sorted(s1)  
    s2_sorted = sorted(s2)  
    s1_can_break_s2 = all(s1_char >= s2_char for  
        s1_char, s2_char in zip(s1_sorted, s2_sorted))  
    s2_can_break_s1 = all(s2_char >= s1_char for  
        s1_char, s2_char in zip(s1_sorted, s2_sorted))  
    return s1_can_break_s2 or s2_can_break_s1  
s1 = "abc"  
s2 = "xya"  
print(canBreak(s1, s2))
```

Output:

```
C:\Users\srika\Desktop\CSA0863\pythonProject\.venv\Scripts\python.exe C:\Users\srika\Desktop\CSA0863\pythonProject\problem.py
True

Process finished with exit code 0
```

Time complexity: $O(n \log n)$