

### 38. 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.

#### Code:

```
def checkIfCanBreak(s1, s2):  
    s1_sorted = sorted(s1)  
    s2_sorted = sorted(s2)  
  
    def can_break(s1, s2):  
        return all(c1 >= c2 for c1, c2 in zip(s1, s2))  
    return can_break(s1_sorted, s2_sorted) or can_break(s2_sorted, s1_sorted)  
s1 = "abc"  
s2 = "xya"  
print(checkIfCanBreak(s1, s2))
```

#### Output:

```
= RESTART: C  
True  
|
```

#### Time Complexity:

- $T(n) = O(n \log n)$