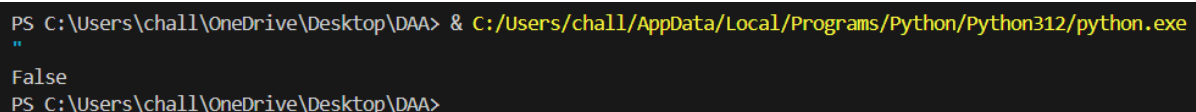


**38. Check If a String Can Break Another String** Given two strings: s1 and s2 with the same size, check if some permutation of string s1 can break some permutation of string s2 or vice-versa. In other words s2 can break s1 or vice-versa. A string x can break string y (both of size n) if  $x[i] \geq y[i]$  (in alphabetical order) for all i between 0 and n-1. Example 1: Input: s1 = "abc", s2 = "xya" Output: true Explanation: "ayx" is a permutation of s2="xya" which can break to string "abc" which is a permutation of s1="abc".

**PROGRAM:**

```
def checkIfCanBreak(s1, s2):  
    s1_sorted = sorted(s1)  
    s2_sorted = sorted(s2)  
    if all(s1_char >= s2_char for s1_char, s2_char in zip(s1_sorted, s2_sorted))  
    or all(s2_char >= s1_char for s1_char, s2_char in zip(s1_sorted, s2_sorted)):  
        return True  
    else:  
        return False  
  
s1 = "abe"  
s2 = "acd"  
print(checkIfCanBreak(s1, s2))
```

**OUTPUT:**



```
PS C:\Users\chall\OneDrive\Desktop\DAA> & C:/Users/chall/AppData/Local/Programs/Python/Python312/python.exe  
False  
PS C:\Users\chall\OneDrive\Desktop\DAA>
```

**TIME COMPLEXITY:**

Time complexity for the above code is

$$F(n)=O(n\log n)$$