

21) 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.

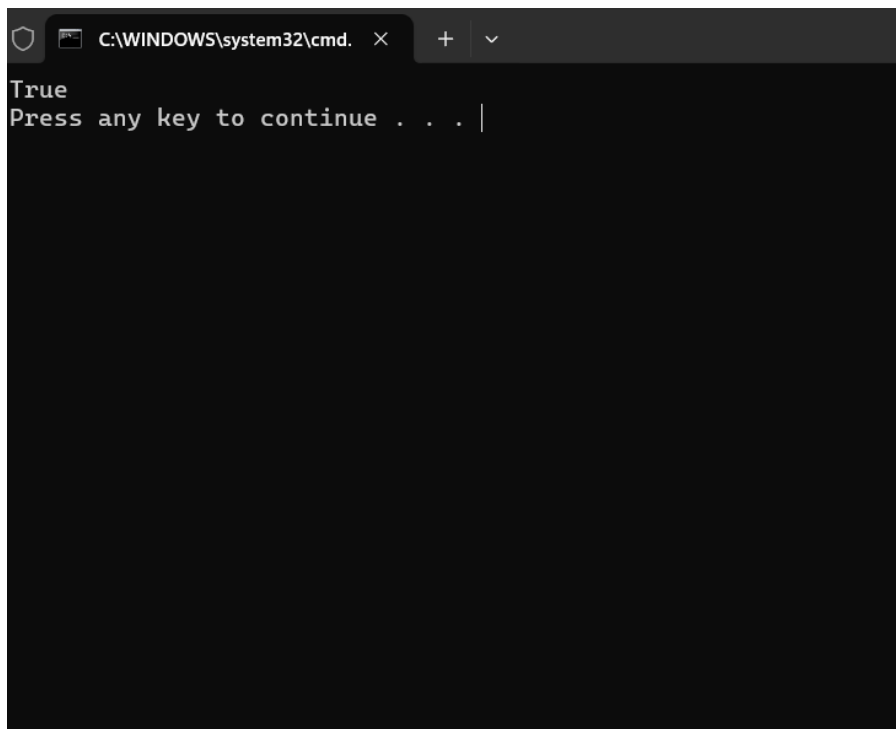
CODE:

```
def check_permutation_break(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 = "adc"
s2 = "xbz"
result = check_permutation_break(s1, s2)
print(result)
```

OUTPUT :

A screenshot of a Windows command prompt window. The title bar shows the path 'C:\WINDOWS\system32\cmd.' and standard window controls. The command prompt displays the output 'True' on the first line and 'Press any key to continue . . . |' on the second line, with a cursor at the end of the second line.

TIME COMPLEXITY :  $O(n \log n)$

