

1.2 check Permutation - Given Two strings write a method to determine if one is a permutation of the other.

# Permutation  $\rightarrow$  if the string has the same characters but diff order.

# Simplest

IN - "a" "a" or "a" "b"

OUT - True False

# V2

IN - "ab" "ba" "cd" "ab"

OUT - True False

Solutions

\* Sort and check each index is equal -  $n \log(n)$

- Set - check if sets are equal -  $n^2$  python checks all elements in set

# Edge cases  
lengths different

```
def isPermutation(s1, s2):
```

```
    l1 = sorted(s1)  $\# \rightarrow$  list of ['a' 'b' 'c']  $\leftarrow$  Python's
```

```
    l2 = sorted(s2)  $\# \rightarrow$  list of ['a' 'b' 'c']
```

```
    if len(s1) != len(s2):
```

```
        return False
```

```
    return True
```

Tim sort  
- runs  $n \log(n)$   
- best case  $n$

Notes

- You could also create an array of ints. Loop through first array and add 1 to each index then minus 1 to each index.  $\rightarrow$  The array should sum to 0 at the end.  
 $\hookrightarrow$  if it ever goes negative return false.