Practical 7

Aim: Lapindrome is defined as a string which when split in the middle, gives two halves having the same characters and same frequency of each character. If there are odd number of characters in the string, we ignore the middle character and check for lapindrome. For example gaga is a lapindrome, since the two halves ga and ga have the same characters with same frequency. Also, abccab, rotor and xyzxy are a few examples of lapindromes. Note that abbaab is NOT a lapindrome. The two halves contain the same characters but their frequencies do not match. Your task is simple. Given a string, you need to tell if it is a lapindrome.

Code:

```python
def lapindrome(string): # Function to check if a string is a lapindrome
    string = [item for item in string] # Convert string to list
    string_front = string[0:len(string)//2] # Split string into two halves
    if len(string) % 2 == 0: # If string is even
        string_back = string[len(string)//2:]
    else: # If string is odd
        string_back = string[len(string)//2+1:]
    string_front.sort() # Sort the front half
    string_back.sort() # Sort the back half
    if string_front == string_back: # If the two halves are equal
        return True # Return True
    else: # If the two halves are not equal
        return False # Return False

t = int(input()) # Number of Test Cases

li = [] # Empty List

for i in range(t): # Input String in List
    li.append(input())

for i in li: # Check if lapindrome
    if lapindrome(i):
        print("YES")
    else:
        print("NO")

# Student ID: 20CE123
# Student Name: Shubham Sareliya
# Aim: Lapindrome is defined as a string which when split in the middle,
gives two halves having the same
```

```
#   characters and same frequency of each character. If there are odd
number of characters in the string, we
#   ignore the middle character and check for lapindrome. For example gaga
is a lapindrome, since the two
#   halves ga and ga have the same characters with same frequency. Also,
abccab, rotor and xyzxy are a few
#   examples of lapindromes. Note that abbaab is NOT a lapindrome. The two
halves contain the same characters
#   but their frequencies do not match. Your task is simple. Given a
string, you need to tell if it is a
#   lapindrome.
# Github Repo Link: https://github.com/s-shubham-22/20CE123_CE259_PIP
```

Output:

```
PS E:\College\Sem 4\CE259_Pyth
6
gaga
abcde
rotor
xyzxy
abbaab
ababc
YES
NO
YES
YES
NO
NO
```