PS-2 PRACTICAL

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AIM:

1.Program to check input string is palindrome or not(Don't use inbuilt functions)
If input string is palindrome find and display count of Vowels and consonants
(Define Class and Methods in Class as per need)

2. Create a tuple, store the values, and counts the number of occurrences of item from a tuple.

Algorithm:

1.

1.Define a string.

2.If any character in string matches with vowels (a, e, i, o, u) then increment the count by 1.

3. If any character lies between 'a' and 'z' except vowels, then increment the count for count by 1.

4.Print both the counts

5. Check if the index first and index last letters are the same; if not same return false

6.Repeat step 2 by incrementing the first index and decrementing the last index

7. Repeat step 3 while first < last If(first > last) then return True

2.

1. Start
2. Define a function to increment count the number of times a element is present in the tuple
3. Define a tuple
4. Call function
5. End

Code :

1.Program to check input string is palindrome or not(Don’t use inbuilt functions) If input string is palindrome find and display count of Vowels and consonants (Define Class and Methods in Class as per need)

Code:

```
vowels = ['a', 'e', 'i', 'o', 'u']
class PalindromeCheck:
    def __init__(self):
        s = input("Enter string: ")
        self.s = s
    def palin(self):
        p = True
        for i in range(len(self.s)//2+1):
            p &= self.s[i] == self.s[len(self.s)-i-1]
        if (p):
            print("String is palindrome.")
            v, c = 0,0
            for x in self.s:
                if (x.isalpha()):
                    if x in vowels:
                        v += 1
                    else:
                        c += 1
            print("Vowels", v, "Consonants", c)
        else:
            print("String is not palindrome.")

val = PalindromeCheck()
val.palin()
```

output:

In [5]:
```
vowels = ['a', 'e', 'i', 'o', 'u']
class PalindromeCheck:
    def __init__(self):
        s = input("Enter string: ")
        self.s = s
    def palin(self):
        p = True
        for i in range(len(self.s)//2+1):
            p &= self.s[i] == self.s[len(self.s)-i-1]
        if (p):
            print("String is palindrome.")
            v, c = 0,0
            for x in self.s:
                if (x.isalpha()):
                    if x in vowels:
                        v += 1
                    else:
                        c += 1
            print("Vowels", v, "Consonants", c)
        else:
            print("String is not palindrome.")

val = PalindromeCheck()
val.palin()
```

```
Enter string: abbba
String is palindrome.
Vowels 2 Consonants 3
```

```
                        c += 1
            print("Vowels", v, "Consonants", c)
        else:
            print("String is not palindrome.")

val = PalindromeCheck()
val.palin()
```

```
Enter string: abcd
String is not palindrome.
```

2. Create a tuple, store the values, and counts the number of occurrences of item from a tuple.

Code:

```
1. n = int(input("Enter number of items: "))
2. l = []
3. for i in range(n):
4.     s=input("Enter item" + str(i+1) + ":")
5.     l.append(s)
6.
7. t = tuple(l)
8. cnts = {}
9. for x in t:
10.    cnts[x] = t.count(x)
```

11. **for x in cnts:**
12. **print(x,":",cnts[x])**

output:

```
In [7]: n = int(input("Enter number of items: "))
        l = []
        for i in range(n):
            s=input("Enter item" + str(i+1) + ":")
            l.append(s)

        t = tuple(l)
        cnts = {}
        for x in t:
            cnts[x] = t.count(x)
        for x in cnts:
            print(x,":",cnts[x])

        Enter number of items: 5
        Enter item1:mango
        Enter item2:apple
        Enter item3:apple
        Enter item4:orange
        Enter item5:orange
        mango : 1
        apple : 2
        orange : 2
```

RESULT AND CONCLUSION:

1. We have implemented both the program successfully and get the output.
2. We have checked string is palindrome or not.
3. We have learnt to implement tuples in python and counted the item in tuple using functions.