WORKSHEET - 1.4

Student Name: Udit Gupta   **UID: 21BCS9091**

Branch: CSE   **Section/Group: 720 - B**

Semester: 4TH   **Date of Performance: 10/03/2023**

Subject Name: PROGRAMMING IN PYTHON   Subject Code: 21CSP-259

1. **Aim**: Program to demonstrate the various kind of operations that can be applied to the string.
   - Python program to check whether the string is Symmetrical or Palindrome.
   - WAP to check whether the string inputted by user, check the length, if it is above 5 and ends with 'ing' add 'ly', if ending without 'ing' add 'ing' to the string, else leave it.

2. **Source Code:**

#Python program to check whether the string is Symmetrical or Palindrome.

```python
def palin(text):                        # Function to check if string is Palindrome or not
    length = len(text)
    i = 0
    j = length-1
    while(i < length/2 or j>length/2):              # Two pointer approach running from front and back
        if(text[i] == text[j]):
            i += 1
            j -= 1
            continue
        else:
            return False
    return True

def Symm(text):                         # Function to check if string is Symmetrical or not
    mid = len(text)//2
    i = 0
    if(len(text)%2):
        j = mid+1
    else:
        j = mid
    while(i < mid and j < len(text)):
        if(text[i] == text[j]):
```

```
        i += 1
        j += 1
        continue
    else:
        return False
return True


# Taking input from user
abc = input("Enter string: ")

print("This program is programmed by Udit Gupta (21BCS9091)")

# Running the functions and giving the outputs
if(palin(abc)):
    print("The given string is Palindrome")
else:
    print("The given string is not Palindrome")

if(Symm(abc)):
    print("The given string is Symmetrical")
else:
    print("The given string is Non Symmetrical")
```

Outputs

```
Enter string: nitin
This program is programmed by Udit Gupta (21BCS9091)
The given string is Palindrome
The given string is Non Symmetrical
```

```
Enter string: Runner
This program is programmed by Udit Gupta (21BCS9091)
The given string is not Palindrome
The given string is Non Symmetrical
```

#WAP to check whether the string inputted by user, check the length, if it is above 5 and ends with 'ing' add 'ly, if ending without 'ing' add 'ing' to the string, else leave it.

```
def checkStr(abc):               # Function to perform required operations
    if(len(abc) < 5):            # Checking if string's length is greater than 5 or not
        return abc
    else:
        n = len(abc)
        # Checking if string ends with 'ing'
        if(abc[n-3] == 'i' and abc[n-2] == 'n' and abc[n-1] == 'g'):
            abc = abc + 'ly'        #adding 'ly' at the end
```

```
        return abc
    else:
        abc = abc + 'ing'
        return abc

#main
print("This program is programmed by Udit Gupta (21BCS9091)")
abc = input("Enter a string: ")
print("String after required changes is: ", checkStr(abc))
```

#Outputs

```
This program is programmed by Udit Gupta (21BCS9091)
Enter a string: interesting
String after required changes is:  interestingly
```

```
This program is programmed by Udit Gupta (21BCS9091)
Enter a string: hello
String after required changes is:  helloing
```

```
This program is programmed by Udit Gupta (21BCS9091)
Enter a string: bing
String after required changes is:  bing
```