ASSIGNMENT-6: STRINGS

1. Write a function areatriangle() that takes 3 sides as commandline arguments and calculate the area of the triangle.
2. Write a function that takes a string as a parameter and returns a string with every successive repetitive character replaced with a star(*). For example, 'hello' is returned as 'he**o'.

3. What will be the output on executing each of the statements, following the assignment statement:
   address = 'Plot-6, Nayapalli, Bhubaneswar '
   a. len(address)
   b. address[17:-1]
   c. address[-len(address): len(address)]
   d. address[:2] + address[-11:]
   e. address.find('bhubaneswar')
   f. address.swapcase()
   g. address.split(',')
   h. address.isalpha()

4. Examine the following string:
   greeting = 'hello students. How are you doing '
   What will be the output for the following function calls:
   a. greeting.count('you')
   b. greeting.find('s')
   c. greeting.rfind('s')
   d. greeting.capitalize()
   e. greeting.lower()
   f. greeting.upper()
   g. greeting.swapcase()
   h. greeting.istitle()
   i. greeting.replace('hello', 'hai')
   j. greeting.strip()
   k. greeting.split()
   l. greeting.partition('.')
   m. greeting.startswith('how')
   n. greeting.endswith('.')

5. Write a function that takes two strings and returns True if they are anagrams and False otherwise. A pair of strings is anagrams if the letters in one word can be arranged to form the second one.

6. Write a function that takes a sentence as an input parameter and displays the number of words starting with a vowel in the sentence.

7. Write a function that takes a sentence as an input parameter and replaces the first letter of every word with the corresponding uppercase letter and rest of the letters in the word by corresponding letters in lowercase without using built-in function.

8. Write a function that takes a string as an input and determines the count of the number of words.

9. Study the progr am segments given below. Give the output produced, if any .

1.

```
globalVar = 10
def test():
    localVar = 20
    print('Inside function test :globalVar =', globalVar)
    print('Inside function test : localVar=', localVar)
test()
print('Outside function test : globalVar=', globalVar)
print('Outside function test : localVar=', localVar)
```

2.

```
globalVar = 10
def test():
    localVar = 20
    globalVar = 30
    print('Inside function test :globalVar =', globalVar)
    print('Inside function test : localVar=', localVar)
test()
print('Outside function test : globalVar=', globalVar)
```

3.

```
globalVar = 10
def test():
    global globalVar
    localVar = 20
    globalVar = 30
    print('Inside function test :globalVar =', globalVar)
    print('Inside function test : localVar=', localVar)
test()
print('Outside function test : globalVar=', globalVar)
```

4.

```
globalVar = 10
def test():
    global globalVar
    localVar = 20
    globalVar = 30
    print('Inside function test :globalVar =', globalVar)
    print('Inside function test : localVar=', localVar)
test()
print('Outside function test : globalVar=', globalVar)
```

5.

```
a = 4
def f():
    a = 5
    def g():
        nonlocal a
        a = 10
        print('inside function g,', 'a = ',a)
        def h():
            nonlocal a
            a = 20
            print('inside function h,', 'a = ',a)
        h()
    g()
    print('inside function f,', 'a = ', a)
f()
```

6.

```
x = 2
def test():
    x = x + 1
    print(x)
print(x)
```

7.

```
x = 2
def test():
    global x
    x = x + 1
    print(x)
print(x)
```

10. Write code for the following

a. Check if a string is symmetric or asymmetric
b. Check if a string is palindrome.
c. Given a string s and index i, delete i^{th} value from s
d. Count the number of vowels and consonants in a string.
e. Find length of a string without using inbuilt function.
f. Check if a string contains at least one digit and one alphabet.
g. Remove duplicates from a string.
h. Count frequency of characters in a string.
i. Find the character having maximum frequency in a string.
j. Reverse a string without reversing the words. Example:
input : 'hello students'
output: 'students hello'
k. Counting the Number of Common Characters in a Pair of Strings