**STRING MANIPULATIONS**

Instructions:

Please share your answers filled inline in the word document. Submit Python code and R code files wherever applicable.

Please ensure you update all the details:

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**Topic: Preliminaries for Data Analysis**

**Problem Statement:**

It is obvious that as part of data analysis we encounter a lot of text data which is a collection of strings which in turn is a sequence of characters. Access the text data and manipulate as per our requirements. you can go through this link for further assistance:

<https://360digitmg.com/mindmap-data-science>

1. Create a string “Grow Gratitude”.

Code for the following tasks:

1. How do you access the letter “G” of “Growth”?
2. How do you find the length of the string?
3. Count how many times “G” is in the string.

**Ans(a,b&c):-**

**Python code**

import re

import random

### Question.1

w = "Grow Gratitude"

print(w)

## a) Access the letter 'G'

print("accesing 'G' ",w[0]) ## accesing lesster 'G' by calling zeroth position of string 'w'

## or ##

print( re.findall('G',w))

## b) How do you find the length of the string?

print('length of the string "w" is',len(w))

## c) Count how many times “G” is in the string.

print(len(re.findall('G',w)))

## or ##

print(w.count("G"))

1. Create a string “Being aware of a single shortcoming within yourself is far more useful than being aware of a thousand in someone else.”

Code for the following

1. Count the number of characters in the string.

**Ans:-**

#Quention2

import re

import random

s1 = "Being aware of a single shortcoming within yourself is far more useful than being aware of a thousand in someone else."

a = re.findall("\s",s1) ## a=> set of total white spaces in s1 ## '\s'=> white space

print("number of characters in s1 is:",len(s1)-len(a))

1. Create a string "Idealistic as it may sound, altruism should be the driving force in business, not just competition and a desire for wealth"

Code for the following tasks:

1. get one char of the word
2. get the first three char
3. get the last three char

**Ans(a,b &c):-**

import re

import random

#Slicing

s2 = "Idealistic as it may sound, altruism should be the driving force in business, not just competition and a desire for wealth"

l = len(s2)

## print randomly any one of the character in the string

def charac(s):

chara=[]

chara = [x for x in s2 if x!=" "]

l= len(chara)

return chara[random.randint(0,l)]

print(charac(s2))

re.findall("^\s",s1)

print (s2[0:3]) #get the first three char

print (s2[:3]) #get the first three char

print (s2[-3:]) #get the last three char

1. create a string "stay positive and optimistic". Now write a code to split on whitespace.

Write a code to find if:

1. The string starts with “H”
2. The string ends with “d”
3. The string ends with “c”

**Ans(a,b &c):-**

import re

# spliting

w3 = "stay positive and optimistic"

w3.split(' ') # Split on whitespace

# Startswith / Endswith

w3.startswith("H") # False

w3.endswith("d") # False

w3.endswith("c") #True

1. Write a code to print " 🪐 " one hundred and eight times. (only in python)

Ans:-

import re

# repeat string

for x in range(108): # prints 108 times

print("🪐")

1. Write a code to print " o " one hundred and eight times. (only in R)

**Ans:-**

for(i in 1:5)

{

print("o")

}

1. Create a string “Grow Gratitude” and write a code to replace “Grow” with “Growth of”

**Ans:-**

import re

# replacing

w4 = "Grow Gratitude"

w4.replace("Grow", "Growth of")

A story was printed in a pdf, which isn’t making any sense. i.e.:

“.elgnujehtotniffo deps mehtfohtoB .eerfnoilehttesotseporeht no dewangdnanar eh ,ylkciuQ .elbuortninoilehtdecitondnatsapdeklawesuomeht ,nooS .repmihwotdetratsdnatuotegotgnilggurts saw noilehT .eert a tsniagapumihdeityehT .mehthtiwnoilehtkootdnatserofehtotniemacsretnuhwef a ,yad enO .ogmihteldnaecnedifnocs’esuomeht ta dehgualnoilehT ”.emevasuoy fi yademosuoyotplehtaergfo eb lliw I ,uoyesimorp I“ .eerfmihtesotnoilehtdetseuqeryletarepsedesuomehtnehwesuomehttaeottuoba saw eH .yrgnaetiuqpuekow eh dna ,peels s’noilehtdebrutsidsihT .nufroftsujydobsihnwoddnapugninnurdetratsesuom a nehwelgnujehtnignipeelsecno saw noil A”

You have noticed that the story is printed in a reversed order. Rectify the same and write a code to print the same story in a correct order.

**Ans:-**

import re

s3 = "elgnujehtotniffo deps mehtfohtoB .eerfnoilehttesotseporeht no dewangdnanar eh ,ylkciuQ .elbuortninoilehtdecitondnatsapdeklawesuomeht ,nooS .repmihwotdetratsdnatuotegotgnilggurts saw noilehT .eert a tsniagapumihdeityehT .mehthtiwnoilehtkootdnatserofehtotniemacsretnuhwef a ,yad enO .ogmihteldnaecnedifnocs’esuomeht ta dehgualnoilehT ”.emevasuoy fi yademosuoyotplehtaergfo eb lliw I ,uoyesimorp I“ .eerfmihtesotnoilehtdetseuqeryletarepsedesuomehtnehwesuomehttaeottuoba saw eH .yrgnaetiuqpuekow eh dna ,peels s’noilehtdebrutsidsihT .nufroftsujydobsihnwoddnapugninnurdetratsesuom a nehwelgnujehtnignipeelsecno saw noil A"

print (''.join(reversed(s3)))

**Hints:**

For each assignment, the solution should be submitted in the below format

1. Research and perform all possible steps for obtaining solution

3. All the codes (executable programs) should execute without errors

4. Code modularization should be followed

5. Each line of code should have comments explaining the logic and why you are using that function