**STRING MANIPULATIONS**

Instructions:

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

Please ensure you update all the details:

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**Batch Id: 23012024**

**Topic: Data Pre-Processing**

**Problem Statement:**

It is obvious that as part of data analysis, we encounter a lot of text data which is a collection of strings that in turn is a sequence of characters. Access the text data and manipulate it 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?

my\_string = "Grow Gratitude"

a)

first\_G = my\_string[0]

print("The first letter 'G' in 'Grow Gratitude' is:", first\_G)

b)

string\_length = len(my\_string)

print("The length of the string is:", string\_length)

c)

count\_G = my\_string.count("G")

print("The count of 'G' in 'Grow Gratitude' is:", count\_G)

output: The first letter 'G' in 'Grow Gratitude' is: G

The length of the string is: 14

The count of 'G' in 'Grow Gratitude' is: 2

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.

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

num\_characters = len(my\_string)

print("The number of characters in the string is:", num\_characters)

output: The number of characters in the string is: 108

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

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

a)

char\_at\_index\_10 = my\_string[10]

print("One character of the word at index 10 is:", char\_at\_index\_10)

b)

first\_three\_chars = my\_string[:3]

print("The first three characters are:", first\_three\_chars)

c)

last\_three\_chars = my\_string[-3:]

print("The last three characters are:", last\_three\_chars)

output:

One character of the word at index 10 is: t

The first three characters are: Ide

The last three characters are: th.

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”

my\_string = "stay positive and optimistic"

split\_string = my\_string.split()

print("Split string:", split\_string)

a)

starts\_with\_H = my\_string.startswith("H")

print("Does the string start with 'H'?", starts\_with\_H)

b)

ends\_with\_d = my\_string.endswith("d")

print("Does the string end with 'd'?", ends\_with\_d)

c)

ends\_with\_c = my\_string.endswith("c")

print("Does the string end with 'c'?", ends\_with\_c)

output:

Split string: ['stay', 'positive', 'and', 'optimistic']

Does the string start with 'H'? False

Does the string end with 'd'? True

Does the string end with 'c'? False

1. Write a code to print " 🪐 " one hundred and eight times.

print("🪐 " \* 108)

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

my\_string = "Grow Gratitude"

new\_string = my\_string.replace("Grow", "Growth of")

print(new\_string)

output: Growth of Gratitude

1. 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 the correct order.

# Split the story into sentences

sentences = reversed\_story.split(" .")

# Reverse the order of the sentences

reversed\_sentences = sentences[::-1]

# Join the reversed sentences and reverse each sentence's characters

correct\_order\_story = ""

for sentence in reversed\_sentences:

correct\_order\_story += sentence[::-1] + ". "

print(correct\_order\_story)

output:

A lion was oncesleepinginthejunglewhen a mousestartedrunningupanddownhisbodyjustforfun. Thisdisturbedthelion’s sleep, and he wokeupquiteangry. He was abouttoeatthemousewhenthemousedesperatelyrequestedtheliontosethimfree. “I promiseyou, I will be ofgreathelptoyousomeday if yousaveme.” Thelionlaughed at themouse’sconfidenceandlethimgo. One day, a fewhunterscameintotheforestandtookthelionwiththem. Theytiedhimupagainst a tree. Thelion was strugglingtogetoutandstartedtowhimper. Soon, themousewalkedpastandnoticedthelionintrouble. Quickly, he ranandgnawed on theropestosetthelionfree. Bothofthem sped offintothejungle..