THE GEORGE WASHINGTON UNIVERSITY
WASHINGTON, DC

Natural Language Processing
DATS 6312
Due: *Sep-18-2023*

Homework 2:

- **Show ALL Work, Neatly and in Order.**
- **No** credit for Answers Without Work.
- For written questions, submit a single pdf file includes all of your solutions.
- **DO NOT** submit individual files or images.
- For coding questions, submit **ONE** .py file and include your comments.

E.1:

Write a python script that reads a string from the user input and print the following

i. Number of uppercase letters in the string.

ii. Number of lowercase letters in the string

iii. Number of digits in the string

iv. Number of whitespace characters in the string

E.2:

Write a python script that accepts a string then create a new string by shifting one position to left.

Example: input : class 2021 output: lass 2021c

E.3:

Write a python script that a user input his name and program display its initials.

Hint: Assuming, user always enter first name, middle name and last name.

E.4:

Write a python script that accepts a string to setup a passwords. The password must have the following requirements

- The password must be at least eight characters long.
- It must contain at least one uppercase letter.
- It must contain at least one lowercase letter.
- It must contain at least one numeric digit.

E.5:

Write a python script that reads a given string character by character and count the repeated characters then store it by length of those character(s).

E.6:

Write a python script to find all lower and upper case combinations of a given string.
Example: input: abc output: 'abc', 'abC', 'aBc', ...

E.7:

Write a python script that

i. Read first n lines of a file.

ii. Find the longest words.

iii. Count the number of lines in a text file.

iv. Count the frequency of words in a file.

Hint: first create a test.txt file and dump some textual data in it. Then test your code.

E.8:

Answer all the class exercise questions in the GitHub.