

Natural Language Processing DATS 6312

**Due**: *Sep-20-2022* 

### 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 and submit it (Check the instructions).