**Session 3 & 4 Self Practice Assignments**

1. **Write a program that accepts a sentence and calculate the number of letters and digits.**

**Suppose the following input is supplied to the program:**

**hello world! 123**

**Then, the output should be:**

**LETTERS 10**

**DIGITS 3**

1. **Write a Python program to add 'ing' at the end of a given string (length should be at least 3). If the given string already ends with 'ing' then add 'ly' instead. If the string length of the given string is less than 3, leave it unchanged.   
   Sample String : 'abc'  
   Expected Result : 'abcing'   
   Sample String : 'string'  
   Expected Result : 'stringly'**
2. **Write a Python function that takes a list of words and returns the length of the longest one.**
3. Write a Python program to check if a string contains all letters of the alphabet.
4. Write a Python program to count the number of characters (character frequency) in a string.
5. Write a Python program to get a string made of the first 2 and the last 2 chars from a given a string. If the string length is less than 2, return instead of the empty string.
6. Write a Python program to get a string from a given string where all occurrences of its first char have been changed to '$', except the first char itself.
7. Write a Python program to get a single string from two given strings, separated by a space and swap the first two characters of each string.
8. Write a Python program to find the first appearance of the substring 'not' and 'poor' from a given string, replace the whole 'not'...'poor' substring with 'good'. Return the resulting string.
9. Write a Python program to remove the nth index character from a nonempty string.
10. Write a Python program to change a given string to a new string where the first and last chars have been exchanged.
11. Write a Python program to remove the characters which have odd index values of a given string.
12. Write a Python script that takes input from the user and displays that input back in upper and lower cases.
13. Write a Python program that accepts a comma separated sequence of words as input and prints the unique words in sorted form (alphanumerically)
14. Write a Python function to get a string made of 4 copies of the last two characters of a specified string (length must be at least 2).
15. Write a Python function to convert a given string to all uppercase if it contains at least 2 uppercase characters in the first 4 characters.
16. Write a Python program to sort a string lexicographically.
17. Write a Python program to remove a newline in Python.
18. **Given a string containing uppercase characters (A-Z), compress the string using Run Length encoding. Repetition of character has to be replaced by storing the length of that run.**

**Write a python function which performs the run length encoding for a given String and returns the run length encoded String. Provide different String values and test your Program.**

**Sample Input Expected Output**

**AAAABBBBCCCCCCCC 4A4B8C**

**AABCCA 2A1B2C1A**

1. **Write a program to count and display the number of capital letters in a given string.**

**.**

1. **Write a program to check if the given string is Palindrome or not?**

**.**

1. **Write a program to count the number of each vowel in a string**
2. **Write a program to remove all punctuation from the string provided by the user**

**punctuations = '''!()-[]{};:'"\,<>./?@#$%^&\*\_~''‘**

1. **Write a Python program to accept a string and display the resultant string in reverse order .**

**The resultant string should contain all characters at the even position of accepted string ignoring blank spaces.**

**Accepted string: Anappleadaykeepsthedoctoraway**

**Resultant string: Aapedyepteotrwy**

**Expected\_output: ywrtoetpeydepaA**

1. **Given a string containing both upper and lower case letters. Write a Python program to count the number of repeated characters and display the maximum count of a character along with the character.**

**Sample Input: ABaBCbGc**

**Output:**

**2A**

**3B (three times B is repeated)**

**2C**

**1G**

1. Write a Python program to print the following floating numbers upto 2 decimal places with a sign.
2. Write a Python program to print the following floating numbers with no decimal places.
3. Write a Python program to print the following integers with zeros on the left of specified width.
4. Write a Python program to print the following integers with '\*' on the right of specified width.
5. Write a Python program to strip a set of characters from a string
6. Write apython program to count repeated characters in a string.