

# **AIML Training G10X**

## **Assignment 1**

1. Familiarize any 15 List Functions.
2. Write a program to read n strings and print the string along with its length and the ending character  
  
eg : apple - 5 - e
3. Develop a program to read a string containing numbers separated by space and find the largest, second largest and smallest numbers.  
  
Input format : 2 5 4 7 3 8 9 1  
  
Out put expected : 9 8 1
4. A program to rotate elements in a list by 'n' position to right  
  
Input format  
  
list : 2 5 4 7 3 8 9 1  
  
No of position to move : 3  
  
Output Expected: 8 9 1 2 5 4 7 3
5. A program to read n strings and print the strings which are palindrome
6. Write a program to read a string, then sort each word alphabetically and the entire string by considering words alphabetically. Write a program to check whether a number is ending with a prime digit.
7. Write a program to print all prime numbers between lower and upper limits (inclusive).
8. Write a Python program to add 'ing' at the end of each word of a given string. If the given word already ends with 'ing' then add 'ly' instead. If the string length of the given string is less than 3, leave it unchanged.

9. Write a Python program to get a list, sorted in increasing order by the last element in each tuple from a given list of non-empty tuples.
- a. Sample List : [(2, 5), (1, 2), (4, 4), (2, 3), (2, 1)]
  - b. Expected Result : [(2, 1), (1, 2), (2, 3), (4, 4), (2, 5)]
- 10.
11. Write a program to create a dictionary called literatures and it should contain several key value pairs where key is an author and value is a list of books written by the author. Provide provision to search a book to get its author.
12. Write a Python program to create an intersection of list of sets.
13. Write a Python program that accepts a hyphen-separated sequence of words as input and prints the words in a hyphen-separated sequence after sorting them alphabetically.
14. Write a program to create a class Animal with the members name, color, legs and sound. Provide constructors and proper methods. Create a list of 5 animal objects, sort the list according to no of legs, and print all details.
15. Write a program to create a 3x3 matrix as coefficient matrix and 1x3 matrix and coefficient matrix using NumPy array. First find the consistency of the solution and then find the solution. (Given  $AX = B$  the  $X = A^{-1}B$ )