Python Programming Lab Assignment-2

# Part A: Strings (1–7)

1. Write a Python program to count the number of vowels and consonants in a given string.

2. Given a string, write a program to check whether it is a palindrome or not.

3. Write a Python program to find the frequency of each character in a string.

4. Write a program that accepts a sentence and prints the words in reverse order. (Example: 'I love Python' → 'Python love I')

5. Write a Python function that takes a string and returns it without any duplicate characters.

6. Write a program to find the longest word in a sentence entered by the user.

7. Write a Python program to check whether two strings are anagrams of each other.

# Part B: Lists (8–14)

8. Write a Python program to find the second largest number in a list.

9. Write a program to remove all duplicate elements from a list.

10. Write a Python program to reverse a list without using built-in reverse() method.

11. Write a program to find the sum and average of elements in a list.

12. Write a program that takes a list of numbers and creates a new list with only the even numbers.

13. Write a Python program to merge two lists and sort the result.

14. Write a program to find the intersection (common elements) of two lists without using set operations.

# Part C: Tuples (15–20)

15. Write a program to create a tuple with different data types and display each element with its type.

16. Write a Python program to find the maximum and minimum values in a tuple.

17. Write a program that converts a tuple into a string.

18. Write a Python program to check whether an element exists within a tuple or not.

19. Write a program to swap two tuples in Python.

20. Write a program to find the index of an element in a tuple and count its occurrence.