

Ramaiah Institute of Technology (Autonomous Institute, Affiliated to VTU)

**Department of Computer Science & Engineering**

**Data Visualization with Python Lab(CSL48)**

**USN:**

**Week #: 01**

**Semester:**

**Section:**

**Date:**

**Instructions:**

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* **Implement the following programs using python language.**

**Topic:** **Course Introduction, Deep dive into lists, sets, dictionaries, and tuples; Time**

**complexity analysis. Control Structures**

**Programs:**

1. a. Write a Python program to check whether a given number is even or odd.

b. Write a Python program to calculate the factorial of a number using recursion.

1. Write a Python program to remove duplicates from a list while maintaining order.
2. Write a Python program to remove all duplicate elements from a given list using sets.
3. Write a Python program to count the occurrences of each character in a given string using a dictionary.
4. Write a Python program to find the index of an element in a tuple
5. Write a Python program to generate the first N Fibonacci numbers using both recursion and iteration. Compare their time complexity.
6. a. Write a Python program to find the largest of three numbers using if-else statements.

b. Write a Python program to print the multiplication table of a given number.

1. Write a Python program that prints numbers from 1 to 50, but skips multiples of 5 using the continue statement.
2. Write a Python program that stops execution if it encounters a negative number in a list using the break statement.
3. Write a Python program using the pass statement inside a loop.