

### 1. Control Statements:

- a) Write a Python program to check if a given number is positive, negative, or zero.
- b) Write a Python program to find the largest of three numbers using control statements.
- c) Write a Python program to check if a year is a leap year or not.

### 2. Types of Loops:

- a) Write a Python program to print all the even numbers from 1 to 100 using a for loop.
- b) Write a Python program to calculate the sum of all the numbers from 1 to 100 using a while loop.
- c) Write a Python program to find the factorial of a number using a do-while loop.

### 3. Functions (Methods):

- a) Write a Python function to check if a given number is prime or not.
- b) Write a Python function to calculate the area of a circle given its radius.
- c) Write a Python function to reverse a string.

### 4. Recursion:

- a) Write a recursive Python function to calculate the factorial of a number.
- b) Write a recursive Python function to find the Fibonacci sequence up to a given number of terms. (0, 1, 1, 2, 3, 5, 8...)
- c) Write a recursive Python function to calculate the sum of all the elements in a list.