Week-2 Lab Task:

1. Write a program to create a class for student data (student ID, name, marks, and percentage). Implement a method to calculate the percentage and grade (A, B, C, D) based on the percentage. Take the values as input at runtime.

2. Write a program to demonstrate parameterized constructors for employee data (employee ID, name, salary, date of joining). Implement a method to display employee details.

3. Write a program to count the number of objects created for a class and display the total count whenever an object is created.

4. Write a program to demonstrate built-in attributes of a class. Access and print the class name, object ID, and instance variables of an object.

5. Write a program for simple inheritance. Create a base class representing a person with basic details and a derived class representing a student that adds academic-related data.

6. Write a program to demonstrate multiple inheritance where one class represents a person and another represents a teacher. The derived class should inherit both functionalities and display teacher and person details.

7. Write a program to generate random numbers within a given range. Allow the user to specify the range and number of random numbers to be generated.

8. Write a program to use the math module to calculate the area and circumference of a circle. Take the radius as input from the user.

9. Write a program to validate a phone number using regular expressions. Ensure the number follows the format: XXX-XXX-XXXX.

10. Write a program that accepts a list of student scores and performs the following tasks:
    a. Sort the list in ascending order.
    b. Identify and remove duplicate scores.
    c. Calculate the average score.
11. Write a program to create a class representing a bank account. Implement methods to deposit, withdraw, and check the balance of the account.

12. Write a program to simulate a simple library system. Implement classes for Book and Member. Allow members to borrow and return books, and track which books are currently borrowed.