

### Classes-1 Homework-4

Do the following question and submit it on google classroom.

(Only CPP files)

(example) **Q1\_22\_1234.cpp**

**1. Simple Class:**

Create a class called Person with private data members name and age. Implement a constructor to initialize these members and a function to display the person's information.

**2. Constructor Overloading:**

Extend the Person class from the previous problem by overloading the constructor to allow initialization with and without specifying age.

**3. Destructor:**

Add a destructor to the Person class that displays a message when an object is destroyed.

**4. Rectangle Class:**

Create a class called Rectangle with private data members length and width. Implement constructors to initialize these members and functions to calculate the area and perimeter of the rectangle.

**5. Bank Account:**

Create a class called BankAccount with private data members accountNumber and balance. Implement constructors to initialize these members and functions to deposit and withdraw money.

**6. Student Class:**

Create a class called Student with private data members name, rollNumber, and grade. Implement a constructor to initialize these members and a function to display the student's information.

**7. Library Book:**

Create a class called LibraryBook with private data members title, author, and isAvailable. Implement constructors to initialize these members and a function to check if the book is available.

**8. Car Class:**

Create a class called Car with private data members make, model, and year. Implement constructors to initialize these members and a function to display the car's details.

**9. Employee Class:**

Create a class called Employee with private data members name, employeeID, and salary. Implement constructors to initialize these members and a function to give a raise to the employee.

**10. Circle Class:**

Create a class called Circle with private data members radius and a constant PI. Implement constructors to initialize these members and functions to calculate the area and circumference of the circle.