OOP Lab Assignment – 02

Question 01:

Create a class with a method that prints "This is parent class" and its subclass with another method that prints "This is child class". Now, create an object for each of the class and call

1 - method of parent class by object of parent class

2 - method of child class by object of child class

3 - method of parent class by object of child class

Question 02:

In the above example, declare the method of the parent class as private and then repeat the first two operations (You will get error in the third).

Question 03:

Create a class named 'Member' having the following members: Data members

1 - Name

2 - Age

3 - Phone number

4 - Address

5 - Salary

It also has a method named 'printSalary' which prints the salary of the members. Two classes 'Employee' and 'Manager' inherits the 'Member' class. The 'Employee' and 'Manager' classes have data members 'specialization' and 'department' respectively. Now, assign name, age, phone number, address and salary to an employee and a manager by making an object of both of these classes and print the same.

Question 04:

Create a class named 'Rectangle' with two data members 'length' and 'breadth' and two methods to print the area and perimeter of the rectangle respectively. Its constructor having parameters for length and breadth is used to initialize length and breadth of the rectangle. Let class 'Square' inherit the 'Rectangle' class with its constructor having a parameter for its side (suppose s) calling the constructor of its parent class as 'super(s,s)'. Print the area and perimeter of a rectangle and a square.

Question 05:

Now repeat the above example to print the area of 10 squares.

Hint-Use array of objects.

Question 06:

Write a program in Java to implement a calculator having four functions such addition, multiplication, division, and subtraction, where the four said functions are defined in four different packages. Inputs are user defined and use the concept of inheritance for the division operation.

Question 07:

It is known that we can create any number of objects for a given class, But from the requirement analysis of a project you come to know that only 5 objects are required for a class. Now, the task is to implement a java program to create a class and if more than 5 objects are created to the class, print some appropriate message.