

### LAB 3

1. Create a class Student having data member roll (int), name (string), address (string), gender (string), faculty (string) and method setData() to set the value of data member and display method that display the data of student. Now create two object of Student and invoke set and display method.
2. Create a class Calculate which contains data member num1 and num2 both in integer and methods setCalc() to set the data, calcSum() that calculate the sum of num1 and num2 and display the result, calcMulti() that calculate the multiplication of num1 and num2 and returns the result, calcDifference that calculate the difference between num1 and num2 and display the result. Now, create some instance of Calculate and invoke all the methods.
3. Create a class Number having instance variable x and y both in integer, default constructor that set the value of x and y to 0, parameterized constructor that sets the value of x and y, method findOdd() that calculates the even no. occurring between x and y and display the result, findEven() that calculates the odd no. occurring between x and y and display the results. Now, create some instance of Number and invoke all the methods.
4. Create a class Rectangle with attributes length and breadth. The class contains method computeArea() and displayArea(). Now, create two object of Rectangle and find area and display the area.
5. Create a class Numbers with three integer instance variables x, y and z. the class will have one constructor to set the value of instance variable and method getMax() that find the greatest number between x, y and z and return the results. Create one object of Number and invoke the method to find greatest number.
6. Create a class Box with attributes length, breadth and height. The class contains method computeVolume() that computes the volume of box and return the volume. Now, create two object of box and find volume and display it.
7. Create a class Product with name, qty and price. Create a parameterized constructor to set the product details. Provide the method getName(), getQty() and getPrice() that return product name, qty and price. Also create method getTotal() that returns the total price. Then create a class ProductDemo with main method that creates two object of Product and find the total price of both products.
8. Create a class Shape that contains instance variable length, breadth and height. Create a default constructor that sets the value of instance variable to zero, constructor with two parameter that will sets the value of length and breadth only and constructor with three parameter that will sets the value of length, breadth and height. After this create calcAreaRectangle() that calculates the area of rectangle, calcVolumeBox() that calculates volume of box and display the result. Now create first object of Shape which will have name rectangle and calls constructor with two parameter and calAreaRectangle() method, create second object of Shape that will have name Box which will call constructor with three parameter and calcVolumeBox() method.