Object Oriented Programming with Java
Practical-3

Introduction to Objects and Classes in Java

1) Write a java program which has the following features.
   a) Create a class named ArithmeticIntOp which has one member, one constructor and two methods as given below.
      int result
      ArithmeticIntOp() // constructor which sets the value of result to zero.
      int getArithmeticIntOpResult() // to get the value of result through an object.
      void calculate(int a, int b, char op) // performs operation and stores in result

   b) Create a class named RelationalOp which has one member, one constructor and two methods as given below.
      boolean result
      RelationalOp() // constructor which sets the value of result to false.
      int getRelationalOpResult() // to get the value of result through an object.
      void calculate(int a, int b, String op) // performs operation and stores in result

   c) Create a class named BitwiseOp which has one member, one constructor and methods as given below.
      int result
      BitwiseOp() // constructor which sets the value of result to 0.
      int getBitwiseOpResult() // to get the value of result through an object.
      void calculate(int a, int b, String op) // performs operation and stores in result

   d) Create a main method class named Operator which provides the user a menu through which the user can perform all Arithmetic, Relational and Bitwise operations with help of two operands.

2) Write a Java program which calculates the area of Circle, Triangle and Rectangle. Create three different classes which call the Constructors of Rectangle, Triangle and Circle by passing parameters to the constructors.
   Create a main method class named Shape which provides the user a menu through which the user can calculate the area of the respected shape using the area() method of that class.

3) Write a Java program which takes string values from the user. Make use of different constructors of String Class to initialize string and demonstrate the implementation of minimum 10 methods of String class.