Assignment – 05
(Abstract Classes, Interfaces and Packages)

1) Define an **abstract class** ColdDrinks. Define classes CocaCola, Pepsi and ThumsUp as the subclasses of ColdDrinls. Define non abstract methods addSugar(), addColour() and addSoda() in the ColdDrinks class. Add abstract methods getManufacturerName() and addSecretFormula() in the ColdDrinks class.

2) Create an **abstract class** called Polygon having abstract methods area() and perimeter() and non abstract method printMyName() that will prints the name of the class. Class Polygon is extended by classes Rectangle, Square, Rhombus. Define methods area() and perimeter(). And display the output.

3) Write a program that illustrates **interface inheritance**. Interface p is extended by P1 and P2. Interface p12 inherits from both P1 and P2. Each interface declares one constant and one method. Class Q implements P12. Instantiate Q and invoke each of its methods. Each method Displays one of the constants.

4) Write a Java class "**Balance**" and place it in package MyPack. The instance variables name and bal are used to store the name of the account holder and the account balance respectively. Write a method show() to display the values of the instance variables. Another class "**AccountBalance**" is used to create the object of class Balance and display the details(name and account balance) of three different users.

5) Write a Java class "Human" and place it in **package** dataobject. In the Human class add attributes "name" and "favouriteFood". Write a constructor which accepts two input values and assigns them to attributes name and favouriteFood. Write a java class Treat in the **package** info. It should have a main method which instantiates the class Human. The main method should print the following. It is <name>'s b'day and we are having <favouriteFood>.- where <name> and <favouriteFood> are the attribute values of the object of class Human.