

Lab Assignments

Object Orientation Concepts

- 1 Create a base class called Shape. It should contain two methods getCoord() and showCoord() to accept x and y coordinates and to display the same respectively.

Create a sub class called Rect. It should also contain a method to display the length and breadth of the rectangle called showCoord().

Execute the showCoord() method of the Rect class

- 2 Create a base class, Telephone, and derive a class ElectronicPhone from it. In Telephone, create a protected string member phonetype, and a public method Ring() that outputs a text message like this: "Ringing the <phonetype>." In ElectronicPhone, the constructor should set the phonetype to "Digital." In the Run() method, call Ring() on the ElectronicPhone to test the inheritance.
 - a) The derived class override the Ring() method to display a different message.
 - b) Change the Telephone class to abstract, and make Ring() an abstract method. Derive two new classes from Telephone: DigitalPhone and TalkingPhone. Each derived class should set the phonetype, and override the Ring() method.
- 3 Create an interface called VariableTest which contains a method called disp() and two variables x, y which are integers and whose value is set as 10 and 20. Create a class called VarIntTest which implements this interface. The disp() method should display a message "Inside Interface – VariableTest and method disp". Write a method called display() within VarIntTest class which prints the value of x.
- 4 Create a class called "Car" with two data members namely :No of doors" and "No of wheels". Create two methods to accept the values of the said data mebers and to display the values on the screem. Create an object to test the above class
- 5 Create an interface called "Ifunction" and put signature of two methods namely "getfueltype" and "setfueltype". "getfueltype" function will return the fueltype of the car such as petrol, diesl etc. and "setfueltype" function will set the fueltype of the car. After creating the interface modify the above car class to implement the interface.
- 6 Create a bus class to implement the functions in Ifunction interface created in question 5.