**abstract**

**Exercise 1:***Create a class called Shape3D with the following method signatures alone, volume () and*

*surfaceArea (). Then create subclasses like Cylinder, Sphere, and Cube etc and implement*

*these methods.*

**Inheritance**

**Exercise 2:***Create a class called Vehicle. Create subclasses like Truck, Bus, Car etc. Add common methods*

*in the base class and specific methods in the corresponding class. Create a class called Road*

*and create objects for the Truck, Car, Bus etc and display the appropriate message.*

**Exercise 3:***In the Lab Exercise above, in the Vehicle class constructor initialize few variables like color, no of wheels, model etc. Give appropriate values for these variables from the invoking subclass.*

**Exercise 4:***In the Lab Exercise above, create another class called City which creates an object for the Car,*

*Truck and Bus class and displays the details through a display () method in the Vehicle class.*

*The other methods and data members should not be accessible by the City class.*

**Polymorphism**

**Exercise 5:***Create a class called Worker. Write classes DailyWorker and SalariedWorker that inherit from*

*Worker.Every worker has a name and a salaryrate. Write method Pay (int hours) to compute*

*the week pay of every worker. A Daily worker is paid on the basis of the number of days*

*she/he works.The salaried worker gets paid the wage for 40 hours a week no matter what the*

*actual hours are. Test this program to calculate the pay of workers.*