

JAVA ASSIGNMENT 2

Paper code: MCAN 293

Purpose: To know the use of inheritance concepts, code reusability, and anonymous class concepts.

1. Write a Java Program that creates a Base class named Person which contains attribute Name (data type String) and Aadhar Number (string type data). These two data types with access specifier protected. You should over load the constructor. These two classes are defined under mypackage. The class has a display function which is used to print the value of the instance of the class.

Now we create a Child class Student (inherits from the Person Class) with attribute roll and Registration Number. These attributes are defined with protected access specifier. The Student class override the display function to show the value of the instance variable.

[Note : Please also check the order of the constructor calling]

2. Write a Java Program that creates a Base class named Teacher which contains attribute Name (data type String) and College Name (string type data). These two data types with access specifier private. You should over load the constructor. The class has a display function which is used to print the value of the instance of the class.

Now we create a Child class MathTeacher (inherits from the teacher) with attribute subjectOfInterest. These attributes are defined with private access specifier. The child class override the display function to show the value of the instance variable. These two classes are defined under mypackage.

Now create a Child class Object and assign it to the base Class reference. Now call the display function.

3. Write a Java program that define the ShapeDemo class which contains the main function.

Now createsa Shape class with draw method with public access specifier. The method has no definition. It is defined under mypackage.

Create the two child class named Circle and Square. These two class override the draw method of the base class. These are defined under mypackage.

Now user gives the input for the shape type and according to the given shape type you have the call the draw function of that instance type.

4. Create a base class called Vehicle that stores of wheels and speed. Create the derived classes:

- Car that inherits Vehicle and also stores number of passengers.
- Truck that inherits Vehicle and also stores the load limit.

Write a main () function to create objects of these classes and display all the information about the car and truck. Then compare the speed of the two vehicles (car and truck), and return the proper vehicle whose speed is larger than another one. It should display a “faster “or “slower” message if the car is faster or slower than the truck.