**Packages User defined packages**

Create a package called com.automobile. Define an abstract class called Vehicle. Vehicle class has the following abstract methods:

public String getModelName()

public String getRegistrationNumber()

public String getOwnerName()

Create TwoWheeler subpackage under Automobile package

Hero class extends com.automobile.vehicle

class public int getSpeed()

– Returns the current speed of the vehicle.

public void radio()

– provides facility to control the radio device

Honda class extends com.automobile.vehicle

class public int getSpeed()

– Returns the current speed of the vehicle.

public void cdplayer()

– provides facility to control the cd player device which is available in the car.

Create a test class to test the methods available in all these child class.

**Solution:**

**package** com.automobile;

**abstract** **public** **class** Vehicle {

**public** String ModelName;

**public** String RegistrationNumber;

**public** String OwnerName;

**public** Vehicle() {

}

**public** Vehicle(String mn, String rn, String on) {

**this**.ModelName = mn;

**this**.RegistrationNumber = rn;

**this**.OwnerName = on;

}

**abstract** **public** String getModelName();

**abstract** **public** String getRegistrationNumber();

**abstract** **public** String getOwnerName() ;

}

**package** com.automobile.twowheeler;

**import** com.automobile.Vehicle;

**public** **class** Hero **extends** Vehicle{

**int** speed;

**boolean** isRadio;

**public** Hero() {

// **TODO** Auto-generated constructor stub

}

Hero(String mn, String rn, String on, **int** speed, **boolean** radio ){

**super**(mn, rn, on);

**this**.speed = speed;

**this**.isRadio = radio;

}

**public** **int** getSpeed() {

//– Returns the current speed of the vehicle.

**return** speed;

}

**public** **void** radio() {

//– provides facility to control the radio device

System.***out***.println("Radio ? = " + isRadio);

}

@Override

**public** String getModelName() {

**return** ModelName;

}

@Override

**public** String getRegistrationNumber() {

**return** RegistrationNumber;

}

@Override

**public** String getOwnerName() {

**return** OwnerName;

}

}

**package** com.automobile.twowheeler;

**import** com.automobile.Vehicle;

**public** **class** Honda **extends** Vehicle{

**int** speed;

**boolean** isCdPlayer;

**public** Honda() {

// **TODO** Auto-generated constructor stub

}

**public** Honda(String mn, String rn, String on, **int** speed, **boolean** cdplayer ){

**super**(mn, rn, on);

**this**.speed = speed;

**this**.isCdPlayer = cdplayer;

}

**public** **int** getSpeed() {

//– Returns the current speed of the vehicle.

**return** speed;

}

**public** **void** cdplayer() {

//– provides facility to control the cd player device which is available in the car

System.***out***.println("CdPlayer?= " + isCdPlayer);

}

@Override

**public** String getModelName() {

**return** ModelName;

}

@Override

**public** String getRegistrationNumber() {

**return** RegistrationNumber;

}

@Override

**public** String getOwnerName() {

**return** OwnerName;

}

}

**package** com.automobile.twowheeler;

**public** **class** TestVehicle {

**public** **static** **void** main(String[] args) {

Hero hero = **new** Hero("Passion","Aw123","Rahul",80,**true**);

System.***out***.println("Details:");

System.***out***.println(hero.getModelName()+"/"+

hero.getRegistrationNumber()+"/"+

hero.getOwnerName()+"/"+

hero.getSpeed());

hero.radio();

Honda honda = **new** Honda("Deftor", "QW1234", "Parteek", 100, **false**);

System.***out***.println("\nDetails:");

System.***out***.println(honda.getModelName()+"/"+

honda.getRegistrationNumber()+"/"+

honda.getOwnerName()+"/"+

honda.getSpeed());

honda.cdplayer();

}

}