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**21SW084**

**LAB 09 TASKS**

Task#1

package pckg.Lab9;

interface vehicle{

private String color;

private String model;

private String weight;

public String getColor();

public String getModel();

public String getWeight();

public void setColor(String color) ;

public void setModel(String model) ;

public void setWeight(String weight);

public void accelerate();

public void decelerate();

}

interface Bus extends vehicle{

final int wheels=8;

}

interface Truck extends vehicle{

final int wheels=6;

}

interface Car extends vehicle{

final int wheels=4;

}

class SchoolBus implements Bus{

private String color= "yellow";

private String model="2003";

private String weight="7 tons";

public String getColor() {

return color;

}

public String getModel() {

return model;

}

public String getWeight() {

return weight;

}

public void setColor(String color) {

this.color = color;

}

public void setModel(String model) {

this.model = model;

}

public void setWeight(String weight) {

this.weight = weight;

}

public void accelerate() {

System.out.println("Accelerating 10km/h");

}

public void decelerate() {

System.out.println("Decelerating 10km/h");

}

}

class Vigotruck implements Truck{

private String color= "Black";

private String model="2021";

private String weight="2 tons";

public String getColor() {

return color;

}

public String getModel() {

return model;

}

public String getWeight() {

return weight;

}

public void setColor(String color) {

this.color = color;

}

public void setModel(String model) {

this.model = model;

}

public void setWeight(String weight) {

this.weight = weight;

}

public void accelerate() {

System.out.println("Accelerating 30km/h");

}

public void decelerate() {

System.out.println("Decelerating 30km/h");

}

}

class HondaCar implements Car{

private String color= "White";

private String model="2007";

private String weight="1 tons";

public String getColor() {

return color;

}

public String getModel() {

return model;

}

public String getWeight() {

return weight;

}

public void setColor(String color) {

this.color = color;

}

public void setModel(String model) {

this.model = model;

}

public void setWeight(String weight) {

this.weight = weight;

}

public void accelerate() {

System.out.println("Accelerating 40km/h");

}

public void decelerate() {

System.out.println("Decelerating 40km/h");

}

}

public class lab9task1 {

}

Task#2

package pckg.Lab9;

class mother{

public void display() {

System.out.println("Mother class display");

}

}

class daughter extends mother{

@Override

public void display() {

System.out.println("Daughter class display");

}

}

public class lab9task2 {

public static void main(String[] args) {

daughter xyz = new daughter();

xyz.display();

}

}

TASK#3

package pckg.Lab9;

interface BasicVehicle{

public void runs();//abstract method

}

class bike implements BasicVehicle{//implementing the interface of basicvehicle

public void runs() {

System.out.println("This bike runs without issues");//implementing the abstract method of vehicle

}

final int speedlimit= 40;//cannot change the value of final int speedlimit.

public void Ride() {

System.out.println("This bike can be taken for a ride");

}

}

class sportbike extends bike{//inheriting all the methods and attributes of bike

public void Ride() {

super.Ride();//calling method of superclass to check wether bike can be take for a ride

System.out.println("This bike is curising under the speed of "+ this.speedlimit+"kmph");

//using this keyword to run to get the value of speedlimit of the sportbike class

}

}

public class lab9task3 {

public static void main(String[] args) {

sportbike r1 = new sportbike();

r1.Ride();

}

}