Krishna Sammirbhai Rao(N01687444)

Lab5.java

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package com.mycompany.lab5;

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\* @author krish

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public class Lab5 {

public static void main(String[] args) {

Car myCar = new Car("BMW-M5 CS", "Mercedese AMG", 2024, "Black");

myCar.displayCarInfo();

myCar.setColour("Navy Blue");

System.out.println("New Colour: " + myCar.getColour());

System.out.println("Current Status: " + (myCar.isRunning() ? "Running" : "Not Running"));

System.out.println("Current Speed: " + myCar.getCurrentSpeed());

myCar.start();

System.out.println("Current Status: " + (myCar.isRunning() ? "Running" : "Not Running"));

System.out.println("Current Speed: " + myCar.getCurrentSpeed());

myCar.accelerate(20);

System.out.println("Current Speed: " + myCar.getCurrentSpeed());

myCar.brake(20);

System.out.println("Current Speed: " + myCar.getCurrentSpeed());

myCar.stop();

System.out.println("Current Status: " + (myCar.isRunning() ? "Running" : "Not Running"));

System.out.println("Current Speed: " + myCar.getCurrentSpeed());

myCar.honk();

}

}

Car.java

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package com.mycompany.lab5;

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\* @author krish

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public class Car {

private String make;

private String model;

private int year;

private String colour;

private int currentSpeed;

private boolean isRunning;

public Car(String make, String model, int year, String colour) {

this.make = make;

this.model = model;

this.year = year;

this.colour = colour;

this.currentSpeed = 0;

this.isRunning = false;

}

public String getMake() {

return make;

}

public String getModel() {

return model;

}

public int getYear() {

return year;

}

public String getColour() {

return colour;

}

public void setColour(String colour) {

this.colour = colour;

}

public int getCurrentSpeed() {

return currentSpeed;

}

public boolean isRunning() {

return isRunning;

}

public void displayCarInfo() {

System.out.println("Make: " + make);

System.out.println("Model: " + model);

System.out.println("Year: " + year);

System.out.println("Colour: " + colour);

}

public void start() {

isRunning = true;

System.out.println("Car started.");

}

public void stop() {

isRunning = false;

currentSpeed = 0;

System.out.println("Car stopped.");

}

public void accelerate(int speedChange) {

if (isRunning) {

currentSpeed += speedChange;

System.out.println("Accelerated by " + speedChange + " units. Current speed: " + currentSpeed);

} else {

System.out.println("Start the car first!");

}

}

public void brake(int speedChange) {

if (isRunning) {

currentSpeed -= speedChange;

if (currentSpeed < 0) {

currentSpeed = 0; // Ensure speed does not go below 0

}

System.out.println("Braked by " + speedChange + " units. Current speed: " + currentSpeed);

} else {

System.out.println("Start the car first!");

}

}

public void honk() {

System.out.println("Honk! Honk!");

}

}

Output

A screenshot of a computer

Description automatically generated