

PMR: This assignment was honeslty relatively hard to build. I feel like ive been having a hard time with this module. I had to rely on the internet to help and used the car example again.

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\* Project title: 08.07 Arrays of Objects

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\* Purpose of Project: Calculate gas used.

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\* @version 11/26/2019

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\* @author Anika Jallipalli

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import java.util.Scanner;

public class CarV7

{

public class OptCar{

//initialize variables

String name;

public int milesAtStart, milesWhenEnd;

public double gallonsUsed, pricePGallon;

public OptCar(String name, int startMiles, int endMiles, double gallonsUsed, double pricePerGallon)

{

this.name= name;

this.milesAtStart= startMiles;

this.milesWhenEnd = endMiles;

this.gallonsUsed = gallonsUsed;

this.pricePGallon = pricePerGallon;

}

}

public static int calcDistance(int sMiles, int eMiles) //given code

{

return eMiles-sMiles;

}

public static double calcMPG(int dist, double gals) //given code

{

return dist/gals;

}

public static double calcCost(double pricePerGallon, double gals) //given static method

{

return pricePerGallon\*gals;

}

public static double calcGPM(int dist, double gals) //given static method

{

return gals/dist;

}

}

**TESTER**

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\* Project title: 08.07

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\* Purpose of Project: Calculate gas used.

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\* @version 11/26/2019

\*

\* @author Anika Jallipalli

\*/

public class CarV7Tester

{

public static void main(String[] args)

{

//CarV7 car1 = new CarV7(name, endMiles, startMiles, gallonsUsed, pricePerGallon);

CarV7 carV7 = new CarV7();

CarV7.OptCar car1 = carV7.new OptCar("Tesla SP90D", 2000, 8450, 222, 3.5);

CarV7.OptCar car2 = carV7.new OptCar("BMW X8", 4000, 10450, 280, 3.5);

CarV7.OptCar car3 = carV7.new OptCar("Toyota Prius", 6000, 12450, 320, 3.5);

//Stats for cars

int dist1 = CarV7.calcDistance(car1.milesAtStart,car1.milesWhenEnd), dist2 = CarV7.calcDistance(car2.milesAtStart,car2.milesWhenEnd), dist3 = CarV7.calcDistance(car3.milesAtStart,car3.milesWhenEnd);

double mpg1 = CarV7.calcMPG(dist1,car1.gallonsUsed), mpg2 = CarV7.calcMPG(dist2,car2.gallonsUsed), mpg3 = CarV7.calcMPG(dist3,car3.gallonsUsed);

double totalCost1 = CarV7.calcCost(car1.pricePGallon,car1.gallonsUsed), totalCost2 = CarV7.calcCost(car2.pricePGallon,car2.gallonsUsed), totalCost3 = CarV7.calcCost(car3.pricePGallon,car3.gallonsUsed);

double totalGPM1 = CarV7.calcGPM(dist1,car1.gallonsUsed), totalGPM2 = CarV7.calcGPM(dist2,car2.gallonsUsed), totalGPM3 = CarV7.calcGPM(dist3,car3.gallonsUsed);

System.out.printf("%20s%20s%20s%20s%20s%20s%20s%20s%20s\n","Type of Car","Start Miles","End Miles","Distance","Gallons","Price","Cost","Miles/Gal","Gal/Mile");

System.out.print("=========================================================================================================================================================================================\n");

System.out.printf("%20s%20d%20d%20d%20.1f%20.1f%20.1f%20.1f%20.3f\n",car1.name, car1.milesAtStart, car1.milesWhenEnd, dist1, car1.gallonsUsed, car1.pricePGallon, totalCost1, mpg1 ,totalGPM1);

System.out.printf("%20s%20d%20d%20d%20.1f%20.1f%20.1f%20.1f%20.3f\n",car2.name, car2.milesAtStart, car2.milesWhenEnd, dist2, car2.gallonsUsed, car2.pricePGallon, totalCost2, mpg2, totalGPM2);

System.out.printf("%20s%20d%20d%20d%20.1f%20.1f%20.1f%20.1f%20.3f\n",car3.name, car3.milesAtStart, car3.milesWhenEnd, dist3, car3.gallonsUsed, car3.pricePGallon, totalCost3, mpg3, totalGPM3);

}

}