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Question (a)

public class Car {

private int speed;

private double regularPrice;

private String color;

public Car(int speed, double regularPrice, String color) {

this.speed = speed;

this.regularPrice = regularPrice;

this.color = color;

}

public double getSalePrice() {

return regularPrice;

}

}

Question(b)

public class Truck extends Car {

private int weight;

public Truck(int speed, double regularPrice, String color, int weight) {

super(speed, regularPrice, color);

this.weight = weight;

}

@Override

public double getSalePrice() {

if (weight > 2000) {

return regularPrice \* 0.9;

} else {

return regularPrice \* 0.8;

}

}

}

Question(c)

public class Ford extends Car {

private int year;

private int manufacturerDiscount;

public Ford(int speed, double regularPrice, String color, int year, int manufacturerDiscount) {

super(speed, regularPrice, color);

this.year = year;

this.manufacturerDiscount =

manufacturerDiscount;

}

@Override

public double getSalePrice() {

return super.getSalePrice() - manufacturerDiscount;

}

}

Question(d)

public class Sedan extends Car {

private int length;

public Sedan(int speed, double regularPrice, String color, int length) {

super(speed, regularPrice, color);

this.length = length;

}

@Override

public double getSalePrice() {

if (length > 20) {

return regularPrice \* 0.95;

} else {

return regularPrice \* 0.9;

}

}

}

Question(e)

public class MyOwnAutoShop {

public static void main(String[] args) {

Sedan sedan = new Sedan(100, 20000, "red", 25);

Ford ford1 = new Ford(120, 25000, "blue", 2019, 1000);

Ford ford2 = new Ford(110, 30000, "white", 2020, 1500);

Car car = new Car(90, 15000, "black");

System.out.println("Sedan sale price: " + sedan.getSalePrice());

System.out.println("Ford 1 sale price: " + ford1.getSalePrice());

System.out.println("Ford 2 sale price: " + ford2.getSalePrice());

System.out.println("Car sale price: " + car.getSalePrice());

}

}