

```
1 //Kevin Lopez 12/9/2019 Week 3 Lab 04 "Classes"
2 //This project demonstrates the use of classes and objects and getters/setters
3
4 public class Driver {
5
6     public static void main(String[] args) {
7         //creating an instance of the Car class and giving the car the name of "Lola"
8         Car Lola = new Car("Lola");
9         System.out.println("Lola has a current speed of " + Lola.getSpeed() + " and has gone a distance of " + Lola.getDistance());
10        Lola.setSpeed(50);
11        //System.out.println("speed: " + Lola.getSpeed());
12        Lola.travel(1.5);
13        System.out.println("Lola has a current speed of " + Lola.getSpeed() + " and has gone a distance of " + Lola.getDistance());
14        Lola.decelerate(15);
15        Lola.travel(1);
16        System.out.println("Lola has a current speed of " + Lola.getSpeed() + " and has gone a distance of " + Lola.getDistance());
17    }
18 }
19
20
21 }
22
```

```

1 public class Car {
2
3     //default constructor
4     public Car(String name){
5         this.name = name;
6     }
7
8
9     private double speed= 0;
10    private String name;
11    private double distanceTraveled = 0;
12
13    //car speed getter
14    public double getSpeed() {
15        return this.speed;
16    }
17
18    //speed setter
19    public void setSpeed(double num) {
20        this.speed = num;
21    }
22
23    //car name getter
24    public String getName() {
25        return name;
26    }
27
28    //car name setter
29    public void setName(String n) {
30        name = n;
31    }
32    //get distance
33    public double getDistance() {
34        return distanceTraveled;
35    }
36
37    //set the distance that it traveled
38    public void setDistanceTraveled(double m) {
39        distanceTraveled = m * speed;
40    }
41
42    //only accelerate if the number is > 0
43    public void accelerate(double number) {
44        if(number > 0) {
45            speed = speed + number;
46        }
47    }
48
49    //only decelerate if the number is > 0
50    public void decelerate(double number) {
51        if(number > 0) {
52            double num = this.speed - number;
53            setSpeed(num);
54        }
55    }
56
57    //receives a number of hours traveled
58    public void travel(double hours) {
59        distanceTraveled = distanceTraveled + (speed * hours);
60    }
61 }

```

Lola has a current speed of 0.0 and has gone a distance of 0.0
 Lola has a current speed of 50.0 and has gone a distance of 75.0
 Lola has a current speed of 35.0 and has gone a distance of 110.0