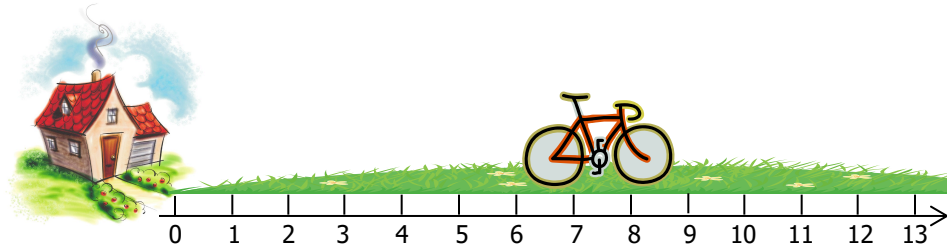


Bicycle



Start off by creating a new package called `bicycle`. Everything for this lab goes inside that package.

Write a class that will model a bicycle. The `Bicycle` class has the following:

1. Three instance variables (fields):

```
String color        //bicycle object's color
double location     //bicycle's distance from home, in miles
double speed        //speed of bicycle, in miles per hour
```

2. One constructor that takes a single parameter, a `String c`. The constructor should do the following:

Set the instance variable `color` equal to the value of the `c` parameter.

Initializes the `location` to 0.

Initializes the `speed` to 0.

3. The following public methods:

```
public void setSpeed(double newSpeed)
```

- This method takes one parameter, a `double newSpeed`.
- It sets its instance variable `speed` equal to `newSpeed`.
- The `speed` can be positive or negative.
- This method returns nothing (`void`).

```
public void increaseSpeed(double deltaSpeed)
```

- This method takes one parameter, a `double deltaSpeed`.
- The bicycle's `speed` is increased by `deltaSpeed`, meaning that `deltaSpeed` is added to its `speed`.
- This method returns nothing (`void`).

```
public double travel(double hours)
```

- This method takes one parameter, a `double for hours`.
- This method calculates the number of miles traveled at its current `speed` for the specified number of `hours`.
- This method updates its `location` by adding the number of miles traveled to its `location`.
- This method **returns** the number of miles traveled (**not** its `location`).

After, you've written your Bicycle class, test it by making the following class called BicycleTester:

```
public class BicycleTester
{
    public static void main(String args[])
    {
        Bicycle bike = new Bicycle("blue"); // make a new Bicycle object

        bike.setSpeed(10);
        System.out.println("Color: " + bike.color);
        System.out.println("Speed: " + bike.speed);
        System.out.println("Miles traveled: " + bike.travel((double)3/60)); // 3 minutes
        System.out.println("Location: " + bike.location);

        bike.increaseSpeed(5);
        System.out.println("Speed: " + bike.speed);
        System.out.println("Miles traveled: " + bike.travel((double)3/60)); // 3 minutes
        System.out.println("Location: " + bike.location);
    }
}
```

When you run the `main()` method of the `BicycleTester` class, your output should be as follows (if you've done everything correctly):

```
Color: blue
Speed: 10.0
Miles traveled: 0.5
Location: 0.5
Speed: 15.0
Miles traveled: 0.75
Location: 1.25
```