

## Class Rectangle

1/2

```
import java.util.*;
/**
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 * @teacher     Coglianese
 * @version     2-27-18
 * @period      2
 *
 * Class Rectangle creates a rectangle object
 * that inherits methods from <abstract> Shape
 */
public class Rectangle extends Shape
{
    //Instance variables
    private double myBase;
    private double myHeight;

    /**
     * Create a rectangle with base and height
     *
     * @param x    Double for base
     * @param y    Double for height
     */
    public Rectangle(double x, double y) {
        myBase=x;
        myHeight=y;
    }

    /**
     * Returns area of rectangle as Double
     */
    public double findArea() {
        return myBase*myHeight;
    }

    /**
     * Returns diagonal of rectangle as Double
     */
    public double findDiagonal() {
        return Math.sqrt(myBase*myBase+myHeight*myHeight);
    }

    /**
     * Returns perimeter of rectangle as Double
     */
    public double findPerimeter() {
        return 2.0*(myBase+myHeight);
    }
}
```

```
/**
 * Returns base of rectangle as Double
 */
public double getBase() {
    return myBase;
}

/**
 * Returns height of rectangle as Double
 */
public double getHeight() {
    return myHeight;
}

/**
 * Sets base of rectangle
 *
 * @param x Double for base
 */
public void setBase(double x) {
    myBase = x;
}

/**
 * Sets height of rectangle
 *
 * @param x Double for height
 */
public void setHeight(double x) {
    myHeight = x;
}
}
```