

Class Rectangle

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```
import java.util.*;  
/**  
 * @author      Nathan Chen  
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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);  
    }  
}
```

Class Rectangle (continued)

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```
/**  
 * 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;  
}  
}
```