For: Melissa Bakke

Assignment: Exercise 13.5 GeometricObject Comparable

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| **Screenshot(s)** |
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| **Code** |
| ***/\*\****  ***\* Class: GeometricObject***  ***\* Developer: Melissa Bakke***  ***\* Date: 01/26/2017***  ***\*/***  *public abstract class GeometricObject implements Comparable<GeometricObject>{*  *private String color = "white";*  *private boolean filled;*  *private java.util.Date dateCreated;*  */\*\* Construct a default geometric object \*/*  *protected GeometricObject() {*  *dateCreated = new java.util.Date();*  *}*  */\*\* Construct a geometric object with color and filled value*  *\* @param color*  *\* @param filled \*/*  *protected GeometricObject(String color, boolean filled) {*  *dateCreated = new java.util.Date();*  *this.color = color;*  *this.filled = filled;*  *}*  */\*\* Return color*  *\* @return \*/*  *public String getColor() {*  *return color;*  *}*  */\*\* Set a new color*  *\* @param color \*/*  *public void setColor(String color) {*  *this.color = color;*  *}*  */\*\* Return filled. Since filled is boolean,*  *\* the get method is named isFilled*  *\* @return \*/*  *public boolean isFilled() {*  *return filled;*  *}*  */\*\* Set a new filled*  *\* @param filled \*/*  *public void setFilled(boolean filled) {*  *this.filled = filled;*  *}*  */\*\* Get dateCreated*  *\* @return \*/*  *public java.util.Date getDateCreated() {*  *return dateCreated;*  *}*  *@Override*  *public String toString() {*  *return "created on " + dateCreated + "\ncolor: " + color +*  *" and filled: " + filled;*  *}*  */\*\* Abstract method getArea*  *\* @return \*/*  *public abstract double getArea();*  */\*\* Abstract method getPerimeter*  *\* @return \*/*  *public abstract double getPerimeter();*  *@Override*  *public int compareTo(GeometricObject o) {*  *return max(this, o);*  *}*    *public static int max (GeometricObject geo1, GeometricObject geo2){*  *if (geo1.getArea() > geo2.getArea()){*  *System.out.print("The first object is bigger. ");*  *return 1;*  *}*  *else if (geo1.getArea() < geo2.getArea()){*  *System.out.print("The first object is smaller. ");*  *return -1;*  *}*  *else {*  *System.out.print("The objects are the same size. ");*  *return 0;*  *}*  *}*  *}*  ***/\*\****  ***\* Class: Circle***  ***\* Developer: Melissa Bakke***  ***\* Date: 01/28/2017***  ***\*/***  *public class Circle extends GeometricObject{*  *private double radius;*    *public Circle (double radius){*  *this.radius = radius;*  *}*  */\*\**  *\* @return the radius*  *\*/*  *public double getRadius() {*  *return radius;*  *}*  */\*\**  *\* @param radius the radius to set*  *\*/*  *public void setRadius(double radius) {*  *this.radius = radius;*  *}*    *@Override*  *public double getArea() {*  *return 3.14 \* (getRadius() \* getRadius());*  *}*  *@Override*  *public double getPerimeter() {*  *return 2 \* 3.14 \* getRadius();*  *}*  *}*  ***/\*\****  ***\* Class: Rectangle***  ***\* Developer: Melissa Bakke***  ***\* Date: 01/28/2017***  ***\*/***  *public class Rectangle extends GeometricObject{*  *private double length;*  *private double width;*    *public Rectangle (double length, double width) {*  *this.length = length;*  *this.width = width;*  *}*  */\*\**  *\* @return the length*  *\*/*  *public double getLength() {*  *return length;*  *}*  */\*\**  *\* @param length the length to set*  *\*/*  *public void setLength(double length) {*  *this.length = length;*  *}*  */\*\**  *\* @return the width*  *\*/*  *public double getWidth() {*  *return width;*  *}*  */\*\**  *\* @param width the width to set*  *\*/*  *public void setWidth(double width) {*  *this.width = width;*  *}*    *@Override*  *public double getArea() {*  *return length \* width;*  *}*  *@Override*  *public double getPerimeter() {*  *return 2 \* (length + width);*  *}*    *}*  ***/\*\****  ***\* Class: TestProgram***  ***\* Developer: Melissa Bakke***  ***\* Date: 01/26/2017***  ***\*/***  *public class TestProgram {*  *public static void main(String[] args) {*  *Circle circle1 = new Circle(2.5);*  *Circle circle2 = new Circle(4.25);*  *Rectangle rec1 = new Rectangle(2, 4);*  *Rectangle rec2 = new Rectangle(1, 3);*  *System.out.println(circle1.compareTo(circle2));*  *System.out.println(rec1.compareTo(rec2));*  *}*  *}* |
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