Molly Smith Dr. Arias Software Development 1 4/19/17

#### Lab 10

#### 13.1

### GeometricObject

- color: String
- filled: boolean
- dateCreated: java.util.Date

## #GeometricObject()

#GeometricObject(color: string, filled:

boolean)

- + getColor(): String
- + setColor(color: String): void
- + isFilled(): boolean
- + setFilled(filled: boolean): void
- + getDateCreated(): java.util.Date
- + toString(): String
- + getArea(): double
- + *getPerimeter(): double*

## Triangle

- side1: double
- side2: double
- side3: double
- s: double
- + Triangle()
- + Triangle(side1: double, side2: double,
- side3: double)
- + Triangle(side1: double, side2: double,

side3: double, color: String, filled:

boolean)

- + getSide1(): double
- + getSide2(): double
- + getSide3(): double
- + setSide1(side1: double): void
- + setSide2(side2: double): void
- + setSide3(side3: double): void
- + getArea(): double
- + getPerimeter(): double
- + printTriangle(): void

- color: String filled: boolean
- dateCreated: java.util.Date

#### #GeometricObject()

#GeometricObject(color: string, filled:

boolean)

- + getColor(): String
- + setColor(color: String): void
- + isFilled(): boolean
- + setFilled(filled: boolean): void + getDateCreated(): java.util.Date
- + toString(): String + getArea(): double
- + getPerimeter(): double

#### Circle2D

- x: double
- y: double
- r: double
- + Circle2D(double x, double y, double r)
- + getX(): double
- + getY(): double
- + getRadius(): double
- + getArea(): double
- + getPerimeter(): double
- + contains(double x, double y): boolean
- + contains(Circle2D c): boolean
- + overlaps(Circle2D c): boolean

#### MyRectangle2D

- centerX: double
- centerY: double
- width: double
- height: double
- + MyRectnangle2D(centerX: double, centerY: double, width: double, height: double)
- +MyRectangle2D(rectangle: Rectangle)
- +MyRectangle2D()
- + getCenterX(): double
- + setCenterX(centerX: double): void
- + getCenterY(): double
- + setCenterY(centerY: double): void
- + getWidth(): double
- + setWidth(width: double): void
- + getHeight(): double
- + setHeight(height: double): void
- + getPerimeter(): double
- + getArea(): double
- + contains(double x, double y): boolean
- + contains(MyRectangle2D r2): boolean
- +overalaps(MyRectangle2D r2): boolean

- color: Stringfilled: boolean
- dateCreated: java.util.Date

#### #GeometricObject()

#GeometricObject(color: string, filled:

boolean)

- + getColor(): String
- + setColor(color: String): void
- + isFilled(): boolean
- + setFilled(filled: boolean): void + getDateCreated(): java.util.Date
- + toString(): String + getArea(): double
- + *getPerimeter(): double*

#### Square

- x: double
- y: double
- side: double
- + Square()
- + Square(x: double, y: double, side: double)
- + getArea(): double
- + getPerimeter(): double
- + howToColor(): String
- + getX(): double
- + setX(x: double): void
- + getY(): double
- + setY(y: double): void
- + getSide(): double
- + setSide(side: double): void

## <<interface>> java.lang.Colorable

+ howToColor(): String

- color: Stringfilled: boolean
- dateCreated: java.util.Date

#### #GeometricObject()

#GeometricObject(color: string, filled:

boolean)

- + getColor(): String
- + setColor(color: String): void
- + isFilled(): boolean
- + setFilled(filled: boolean): void + getDateCreated(): java.util.Date
- + toString(): String + getArea(): double
- + getPerimeter(): double

#### CircleC

- radius: double
- + CircleC()
- + CircleC(radius: double)
- + CircleC(radius: double, color:
  - String, filled: boolean) getRadius(): double
- + setRadius(radius: double): void
- + getArea(): double
- + getDiameter(): double
- + getPerimeter(): double
- + equals(obj: Object): boolean
- + printCircle(): void

## 

color: Stringfilled: boolean

- dateCreated: java.util.Date

## #GeometricObject()

#GeometricObject(color: string, filled: boolean)

+ getColor(): String

+ setColor(color: String): void

+ isFilled(): boolean

+ setFilled(filled: boolean): void + getDateCreated(): java.util.Date

+ toString(): String + getArea(): double + getPerimeter(): double

# Octagon

side: double

+ Octagon()

+ Octagon(side: double)

+ getArea(): double

+ getPerimeter(): double

+ clone(): Object

+ equals(o: Object): boolean

<<interface>>

java.lang.Cloneable<GeometricObject>

+ clone(o: Object): int