|  |
| --- |
| <<interface>>  Colorable |
| +howToColor():void |

|  |
| --- |
| 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* |

|  |
| --- |
| Circle |
| -radius: double |
| +Circle()  +Circle(radius: double)  +Circle(radius: double, color: String, filled: boolean)  +getRadius(): double  +setRadius(radius: double) : void  +getArea(): double  +getDiameter(): double  +getPerimeter(): double  +printCircle(): void  +toString(): String |

|  |
| --- |
| Rectangle |
| -width: double  -height: double |
| +Rectangle()  +Rectangle(width: double, height: double)  +getWidth(): double  +setWidth(width: double): void  +getHeight(): double  +setHeight(height: double): void  +getArea(): double  +getPerimeter(): double  +toString(): String |

|  |
| --- |
| Square |
| -side: double |
| +Square()  +Square(side: double)  +Square(side: double, color: String, filled: boolean)  +getSide(): double  +setSide(side: double): void  +getArea(): double  +getPerimeter(): double  +toString(): String  +howToColor(): void |

* The **GeometricObject** class is the parent class of the **Circle**, **Rectangle**, and **Square** classes. This is denoted by an open arrow from the child class to the parent class.
* The **Circle**, **Rectangle**, and **Square** classes inherit properties and methods from the **GeometricObject** class. This is denoted by an open arrow from the child class to the parent class.
* The **Square** class implements the **Colorable** interface. This is denoted by a dotted line with an arrowhead pointing to the **Colorable** interface.
* The **TestGeometricObject** class uses instances of the **Circle**, **Rectangle**, and **Square** classes. This is denoted by a line with an arrowhead pointing from the **TestGeometricObject** class to each of the three classes.