Class SierpinskiGasket

java.lang.Object
    SierpinskiGasket

```
public class SierpinskiGasket
extends Object
```

Since:

1.0

this class create a recursive graphic image that displays on the screen.

we use the StdDraw class in edu.princeton library. this library provides a standard drawing class that uses java swing.

edu.princeton library developed by university of Princeton and provided by com.googlecode.

Version:

2.0

Author:

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Constructor Summary

Constructors

Constructor	Description
`SierpinskiGasket()`	

Method Summary

All Methods | **Static Methods** | **Concrete Methods**

Modifier and Type	Method	Description
`static void`	`main(String[] args)`	This is the main method.
`static void`	`recursion(int order, double[] x0, double[] y0)`	This method is used to draw a filled triangle that the ((x1,y1),(x2,y2),(x3,y3)) is it's points.

Methods inherited from class java.lang.Object

`clone`, `equals`, `finalize`, `getClass`, `hashCode`, `notify`, `notifyAll`, `toString`, `wait`, `wait`, `wait`

Constructor Details

SierpinskiGasket

```
public SierpinskiGasket()
```

Method Details

recursion

```
public static void recursion(int order,
                             double[] x0,
                             double[] y0)
```

This method is used to draw a filled triangle that the ((x1,y1),(x2,y2),(x3,y3)) is it's points.

this method create a filled square with a light gray background and black border.

we initialize the new triangle with a specific color we can also change it use one of these methods setPenColor(int red, int green, int blue) or setPenColor(Color color). the first method allows to create a color using RGB system. the second method allows to use one of the pre-defined color in the library

in this method we also determine the next coordinates of the next triangle

we use 3 recursion lines for making our image.

Parameters:

`x0` - the array of the x-axis coordinates of the triangle

`y0` - the array of the y-axis coordinates of the triangle

`order` - number of the recursion

main

```
public static void main(String[] args)
```

This is the main method.

change the int n number to plot an order n recursive pattern.

to change the screen resolution change the CanvasSize by using StdDraw.setCanvasSize(width,height);.

we set our scale by our algorithm so you cant change it.

we need to determine the first triangle 3 points in x,y axis.

we clears the screen to the specified color(gray).if you want the background to be comment the StdDraw.clear(StdDraw.GRAY); line or another color change the StdDraw.GRAY to StdDraw.(available color at the library)

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you can change the order of the incursion but right now its 6 only because it looks better

Parameters:

`args` - Unused.