# Class RecursiveSquares

java.lang.Object
    RecursiveSquares

---

```
public class RecursiveSquares
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

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## *Constructor Summary*

**Constructors**

| Constructor | Description |
|---|---|
| `RecursiveSquares()` | |

## *Method Summary*

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

| Modifier and Type | Method | Description |
|---|---|---|
| `static void` | `draw(int n, double x, double y, double size)` | this is our main recursive method for creating squares.Plot an order n tree of overlapping gray squares. |
| `static void` | `drawSquare(double x, double y, double size)` | This method is used to draw a square that the (x,y) is it's center. |
| `static void` | `main(String[] args)` | This is the main method. |

### Methods inherited from class java.lang.Object

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

## Constructor Details

### RecursiveSquares

```
public RecursiveSquares()
```

## Method Details

### drawSquare

```
public static void drawSquare(double x,
                              double y,
                              double size)
```

This method is used to draw a square that the (x,y) is it's center.

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

**Parameters:**

`x` - coordinates of the x-axis of the center of the squares.

`y` - coordinates of the y-axis of the center of the squares.

`size` - size of the side length of the squares.

### draw

```
public static void draw(int n,
                        double x,
                        double y,
                        double size)
```

this is our main recursive method for creating squares.Plot an order n tree of overlapping gray squares.

The ratio of the sizes of the squares is 2.2:1.

we use 4 recursion line for creating squares in different locations.

**Parameters:**

`n` - order of the recursion

`x` - coordinates of the x-axis of the center of the first square. we use it later for determine the dimensions of the smaller squares.

`y` - coordinates of the y-axis of the center of the first square. we use it later for determine the dimensions of the smaller squares.

`size` - size of the side length of the squares

## main

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

This is the main method.

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

because our scale of the table is a 0 to 2 at the x,y axis the center will be (1,1).

size length decided by running the program to see which size is better.

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

**Parameters:**

`args` - Unused.