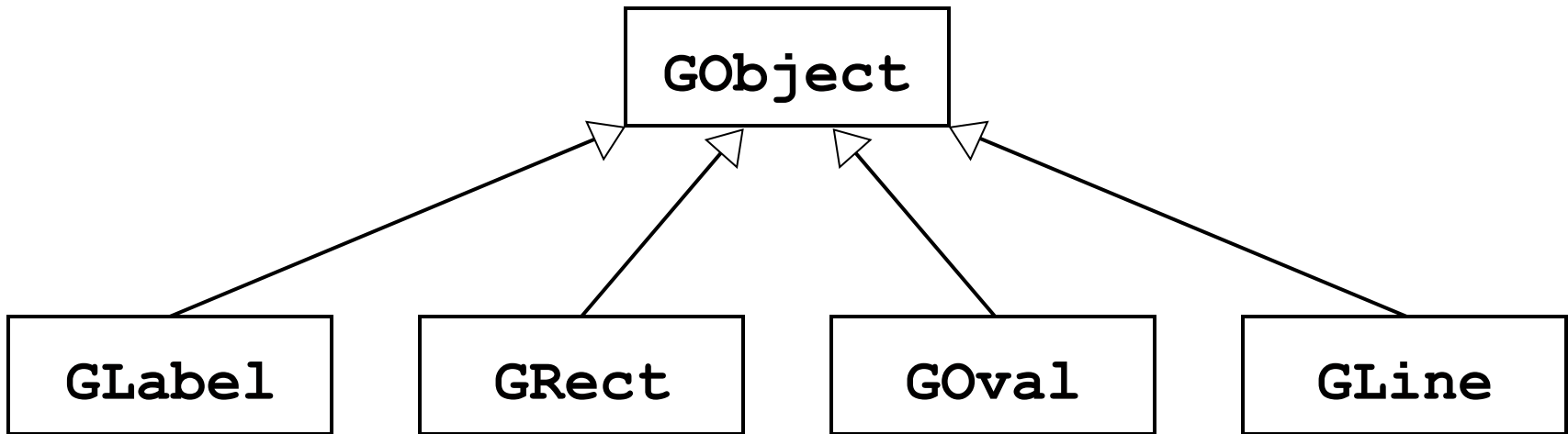




# The GObject Hierarchy

The classes that represent graphical objects form a hierarchy, part of which looks like this:



# Operations on the GObject Class

The following operations apply to all **GObjects**:

*object*.**setColor** (*color*)

Sets the color of the object to the specified color constant.

*object*.**setLocation** (*x*, *y*)

Changes the location of the object to the point (*x*, *y*).

*object*.**move** (*dx*, *dy*)

Moves the object on the screen by adding *dx* and *dy* to its current coordinates.

The standard color names are defined in the **java.awt** package:

**Color.BLACK**

**Color.RED**

**Color.BLUE**

**Color.DARK\_GRAY**

**Color.YELLOW**

**Color.MAGENTA**

**Color.GRAY**

**Color.GREEN**

**Color.ORANGE**

**Color.LIGHT\_GRAY**

**Color.CYAN**

**Color.PINK**

**Color.WHITE**

# Operations on the GLabel Class

## Constructor

```
new GLabel (text, x, y)
```

Creates a label containing the specified text that begins at the point (*x*, *y*).

## Methods specific to the GLabel class

```
label.setFont (font)
```

Sets the font used to display the label as specified by the font string.

The font is typically specified as a string in the form

```
"family-style-size"
```

*family* is the name of a font family

*style* is either **PLAIN**, **BOLD**, **ITALIC**, or **BOLDITALIC**

*size* is an integer indicating the point size

# Drawing Geometrical Objects

## Constructors

**new GRect** (*x*, *y*, *width*, *height*)

Creates a rectangle whose upper left corner is at (*x*, *y*) of the specified size.

**new GOval** (*x*, *y*, *width*, *height*)

Creates an oval that fits inside the rectangle with the same dimensions.

**new GLine** (*x*<sub>0</sub>, *y*<sub>0</sub>, *x*<sub>1</sub>, *y*<sub>1</sub>)

Creates a line extending from (*x*<sub>0</sub>, *y*<sub>0</sub>) to (*x*<sub>1</sub>, *y*<sub>1</sub>).

## Methods shared by the **GRect** and **GOval** classes

*object*.**setFilled** (*fill*)

If *fill* is **true**, fills in the interior of the object; if **false**, shows only the outline.

*object*.**setFillColor** (*color*)

Sets the color used to fill the interior, which can be different from the border.

# Size of Graphics Window

Methods provided by **GraphicsProgram** class

**getWidth()**

Returns the width of the graphics window.

**getHeight()**

Returns the height of the graphics window.

Note: receiver of these calls is the **GraphicsProgram** itself, so we don't specify a separate object as receiver.