

Quick Summary of Graphic Objects and Methods

Constructors for Auxilliary Classes

```
new Color(redness, greenness, blueness);
```

Mix a new color. Parameter values are numbers between 0 and 255.

```
new Location(x,y);
```

Build a coordinate pair object for the point (x,y).

Accessor Methods for Auxilliary Classes

```
someColor.getRed()
someColor.getGreen()
someColor.getBlue()
```

Access any of the color values associated with a Color.

```
someLocation.getX()
someLocation.getY()
```

Access either of the elements of a coordinate pair.

```
someLocation.distanceTo( anotherLocation )
```

Determine the distance between two points.

Constructors for Graphic Objects

```
new FramedRect( x, y, width, height, canvas);
new FilledRect( x, y, width, height, canvas);
new FramedOval( x, y, width, height, canvas);
new FilledOval( x, y, width, height, canvas);
```

The parameters to a rectangle or oval constructor describe the rectangle bounding the object to be drawn. You can either:

```
new FramedRect( corner1Location, corner2Location, canvas);
new FilledRect( corner1Location, corner2Location, canvas);
new FramedOval( corner1Location, corner2Location, canvas);
new FilledOval( corner1Location, corner2Location, canvas);
```

- Specify the coordinates of the rectangle's upper left corner together with the width and height, or

```
new FramedRect( cornerLocation, width, height, canvas);
new FilledRect( cornerLocation, width, height, canvas);
new FramedOval( cornerLocation, width, height, canvas);
new FilledOval( cornerLocation, width, height, canvas);
```

- Specify the coordinates of two opposite corners.

You can fill these shapes or just frame their perimeters.

```
new Line( startX, startY, endX, endY, canvas);
new Line( startLocation, endLocation, canvas);
```

A line is described by giving its end points.

```
new Text( "some message", x, y, canvas);
new Text( "some message", baseLocation, canvas);
```

The coordinates specify the left-most point of the text's baseline.

Methods Available for All Graphic Objects

<code>someObject.move(xOffset, yOffset);</code>	Move an object relative to its current position.
<code>someObject.moveTo(x, y);</code> <code>someObject.moveTo(someLocation);</code>	Move an object to point specified by coordinates.
<code>someObject.contains(someLocation);</code>	Determine if an object's bounding box contains a point.
<code>someObject.hide();</code> <code>someObject.show();</code>	Make an object invisible or visible on the display.
<code>someObject.removeFromCanvas();</code>	Delete object from its canvas.
<code>someObject.sendForward();</code> <code>someObject.sendToFront();</code> <code>someObject.sendBackward();</code> <code>someObject.sendToBack();</code>	Alter the stacking order that controls how overlapping objects appear.
<code>someObject.getColor();</code> <code>someObject.setColor(someColor);</code>	Access or change an object's color.

Methods Available for All 2-D Graphic Objects (including Text, but not Line)

<code>someObject.getX();</code> <code>someObject.getY();</code> <code>someObject.getLocation();</code>	Access coordinates of the upper left corner of an object's bounding rectangle.
<code>someObject.getWidth();</code> <code>someObject.getHeight();</code>	Access the dimensions of an object's bounding rectangle.

Methods Available for Resizable 2-D Graphic Objects (not Text)

<code>someObject.setWidth(newWidth);</code> <code>someObject.setHeight(newHt);</code>	Change the dimensions of an object's bounding rectangle.
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Mutator Methods for Lines

<code>someLine.setStart(someLocation);</code> <code>someLine.setEnd(someLocation);</code> <code>someLine.setEndpoints(startLocation, endLocation);</code>	Change either or both of a line's end points.
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Mutator Methods for Text Objects

```
someText.setText( "new message" );
```

Change the characters displayed.

```
someText.setFontSize( pointSize );
```

Change the font size used.

```
someText.setBold();  
someText.setItalic();  
someText.setPlain();
```

Change the style in which text is displayed.

```
someText.setFont( someFont )
```

Change the font used.

DrawingCanvas methods

```
canvas.getWidth();  
canvas.getHeight();
```

Return the canvas width or height as an int.

```
canvas.clear();
```

Remove all objects from the canvas.