Quick Summary of Graphic Objects and Methods

Constructors for Auxiliary 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 Auxiliary Classes

someColor.getRed()  
Access any of the color values associated with a Color.
someColor.getGreen()  
someColor.getBlue()  
someLocn.getX()  
Access either of the elements of a coordinate pair.
someLocn.getY()  
someLocn.distanceTo( anotherLocation )  
Determine the distance between two points.

Constructors for Graphic Objects

new FramedRect( 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 FilledRect( x, y, width, height, canvas);  
• Specify the coordinates of the rectangle's upper left corner together with the width and height, or
new FramedOval( x, y, width, height, canvas);  
• Specify the coordinates of two opposite corners.
new FilledOval( x, y, width, height, canvas);  
new FramedRect( corner1Locn, corner2Locn, canvas);  
You can fill these shapes or just frame their perimeters.
new FilledRect( corner1Locn, corner2Locn, canvas);  
new FramedOval( corner1Locn, corner2Locn, canvas);  
new FilledOval( corner1Locn, corner2Locn, canvas);  
new FramedRect( cornerLocn, width, height, canvas);  
A line is described by giving its end points.
new FilledRect( cornerLocn, width, height, canvas);  
new FramedOval( cornerLocn, width, height, canvas);  
new FilledOval( cornerLocn, width, height, canvas);  
new Line( startX, startY, endX, endY, canvas);  
The coordinates specify the left-most point of the text’s baseline.
new Line( startLocn, endLocn, canvas);  
new Text( "some message", x, y, canvas);  
new Text( "some message", baseLocn, canvas);
Methods Available for All Graphic Objects

```java
someObject.move( xOffset, yOffset);
```
Move an object relative to its current position.

```java
someObject.moveTo( x, y);
someObject.moveTo( someLocn);
```
Move an object to point specified by coordinates.

```java
someObject.contains( someLocn);
```
Determine if an object's bounding box contains a point.

```java
someObject.hide();
someObject.show();
```
Make an object invisible or visible on the display.

```java
someObject.removeFromCanvas();
```
Delete object from its canvas.

```java
someObject.sendForward();
someObject.sendToFront();
someObject.sendBackward();
someObject.sendToBack();
```
Alter the stacking order that controls how overlapping objects appear.

```java
someObject.getColor();
someObject.setColor( someColor );
```
Access or change an object's color.

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

```java
someObject.getX();
someObject.getY();
someObject.getLocation();
```
Access coordinates of the upper left corner of an object's bounding rectangle.

```java
someObject.getWidth();
someObject.getHeight();
```
Access the dimensions of an object's bounding rectangle.

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

```java
someObject.setWidth( newWidth);
someObject.setHeight( newHt);
```
Change the dimensions of an object's bounding rectangle.

Mutator Methods for Lines

```java
someLine.setStart( someLocn );
someLine.setEnd( someLocn );
someLine.setEndPoints( startLocn, endLocn );
```
Change either or both of a line's end points.
Mutator Methods for Text Objects

someText.setText("new message");  
Change the characters displayed.

someText.setFontSize(pointSize);

Change the font size used.

someText.bold();

someText.italic();

someText.plain();

Change the style in which text is displayed.

someText.setFont(someFont);

Change the font used.