Gem Matching FAQ

Do I need to follow the prescribed APIs?

Yes. You may not add public methods to the API; however, you may add private methods if you wish (which are only accessible in the class in which they are declared).

How do I set the font type and size that `StdDraw.text()` uses?

Our Gem point total used: `StdDraw.setFont(new Font("SansSerif", Font.BOLD, 14))`

How do I set the color `StdDraw.text()` uses?

Use `StdDraw.setPenColor()`. This method accepts a Color object. There are a handful of public static final colors built in to the Color class, e.g. `Color.WHITE` or `Color.RED`, or you can construct a new Color object (supplying three integers from 0 to 255 [inclusive] that represent the RGB intensities).

How do I draw a picture at a particular location?

Review the `StdDraw.java` class' documentation for help with the specific drawing methods. The default coordinate system has the lower-left corner being (0.0, 0.0) and the upper-right corner being (1.0, 1.0) (slightly different than "ordinary" computer graphics, for those that are familiar with them).

When drawing a picture at <X, Y>, the X and Y represent the midpoint of the picture on the canvas. Drawing a picture at <0.5, 0.5> will put the midpoint of the picture at the center of the canvas.

Omg! What is this `GemList$Node.class`?!

When you declare a *nested* class like Node, the Java compiler uses the `$` symbol to mark its name. If you print a Node object without overriding its `toString` method, you might see something like `GemList$Node@3d4eac69`.

Can I use Java's built in `LinkedList` class?

Absolutely not! One of the main goals of this assignment is to gain experience writing and using linked structures. The Java libraries can only take you so far, and you will eventually discover applications which cannot be solved without devising your own linked structures.

When implementing my `insertBefore` method, what special cases should I worry about?

You should worry about inserting into a completely empty list and inserting at the very start of the list. You could also worry (briefly) about inserting at any value >= `size`.

When implementing `draw` in GemList how do I determine where to draw each gem?

There is a static helper method `indexToX` in GemGame. You can call this method to calculate the X-coordinate based on the index position of a gem in the linked list (and vice versa). **Note:** static methods are called on the class, not an object of the class, e.g. `GemGame.indexToX(5)`.