Exercises: Beans

For these exercises, avoid *any* Java code in the JSP pages.

1. Define a class called ColorBean that stores strings representing a foreground color and a background color. Compile and test it in a standalone manner (i.e., without using a servlet or JSP page). Remember that in Eclipse, if your class has a "main" method, you can right-click anywhere in the file, choose Run As --> Java Application, and Eclipse will run main and put the output in the console at the bottom.

Also, note that Eclipse has a very nice shortcut for creating getter and setter methods in beans. Start by writing a class like this:

```
package myPackage;

public class ColorBean {
  private  String foregroundColor = "BLACK";
  private  String backgroundColor = "WHITE";
}
```

Then, R-click in the class, go to the Source sub-menu, and choose "Generate Getters and Setters". You can then have Eclipse automatically create getForegroundColor, setForegroundColor, getBackgroundColor, and setBackgroundColor.

2. Make a "color preference" form that collects the user's preferred foreground and background colors. Send the data to a JSP page that displays some message using those colors. This JSP page should use a default value for any form value that the user fails to supply (but don't worry about empty strings). So, for example, if the user goes directly to the JSP page (bypassing the form), the JSP page should still work fine. For now, don't worry about the user sending you whitespace; just handle totally missing values.

3. Redo the color preference example, but if the user fails to supply either of the colors, use whatever value they gave last time. If you have no previous value, use a default. (Hint: this problem is almost exactly the same difficulty as the previous one.)

4. Redo the color preference example, but if the user fails to supply any of the parameters, use whatever color the most recent user gave last time. Why could this give bad results?

5. Fix problem #2 so that it also handles whitespace. Do so without adding any explicit Java code to the JSP page.