Checkstyle

Checkstyle is an Eclipse Plug-in that can help everyone automatically double-check their code for some of the most common Java Style Best Practices. It works much like the Java compiler in that it's an automated application that can perform a 'first-pass' on the code to check for correctness. Basically put, it'll catch the bigger and easier to locate style issues with your code. When grading your submissions, your code will always be run through Checkstyle, so it's in your best interest to use it on your machine and correct any errors it points out to you.
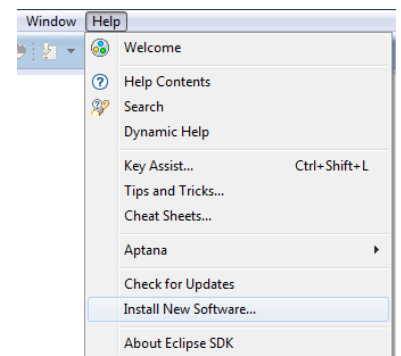
Download / Installation

1. Visit the download link for version 8.0 in SourceForge:

   https://sourceforge.net/projects/eclipse-cs/files/Eclipse%20Checkstyle%20Plug-in/8.0.0/

2. Click the Zip file name to save this Zip file to a location on your machine where you'll be able to find it later (like Desktop, Downloads, or Documents)

3. Start Eclipse

4. Use the menu system and choose **Help > Install New Software...**

5. Click the **Add** button in the upper right corner. This will open a new dialog

6. In the Add Repository dialog, click the **Archive...** button
   Mac users will need to choose **Local…** (because it probably automatically unzipped the file)

7. Navigate to the location where you just saved the Zip file, select that file, and click **Open**
   Mac users probably had their file unzipped automatically, so they should choose the folder holding the unzipped files, most likely named 'net' and click **Open**

8. Back in the Add Repository dialog, the file's path should now show. Click the **OK** button

9. Checkstyle should now show inside the dialog. Click the checkbox next to it and click the **Next >** button

10. Follow the remaining prompts, accepts the license agreement, and Checkstyle will be installed. You'll need to restart Eclipse to have the changes take effect

Configuration

Although Checkstyle comes with a standard configuration, it also gives you the ability to define your own. We've taken the time here to develop a style file that's consistent with what we teach here at UWG. To configure Eclipse to use this file, do the following:

11. Use the menu system in Eclipse and choose **Window > Preferences**
    Mac users will choose **Eclipse > Preferences**

    Look through the list and click to select the **Checkstyle** section. There should already be Check Configurations present, but we want to use a file that matches the department's standards.

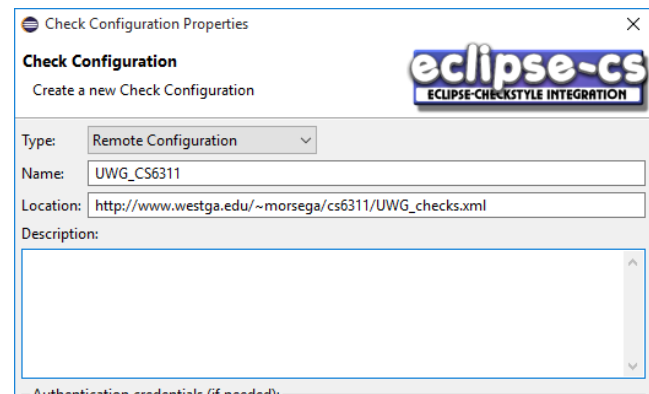12. In the right-hand column, click the **New…** button.

13. In the Check Configuration Properties dialog, use the following settings:

Type: **Remote Configuration**
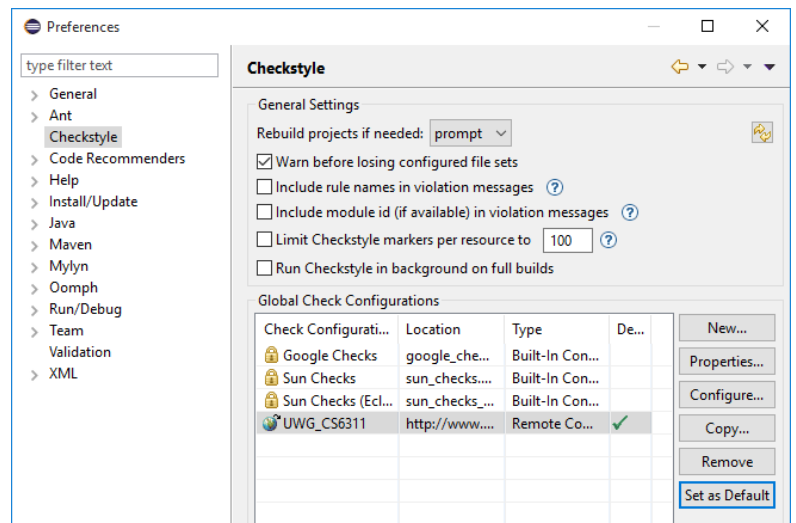Name: **UWG_CS6311**
Location:
http://www.westga.edu/~morsega/cs6311/UWG_checks.xml

Click **OK** to close this dialog and you should now see UWG_CS6311 as one of the items in the Preferences dialog

14. To use this check file as the default, click to select it and then click the **Set as Default** button. You should now see a green checkmark next to it.
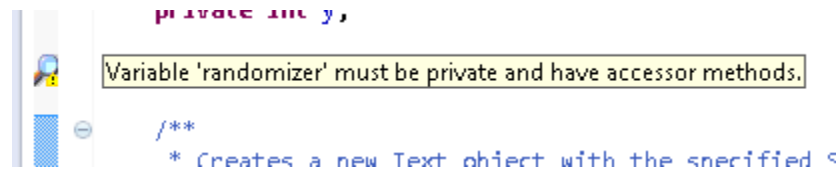
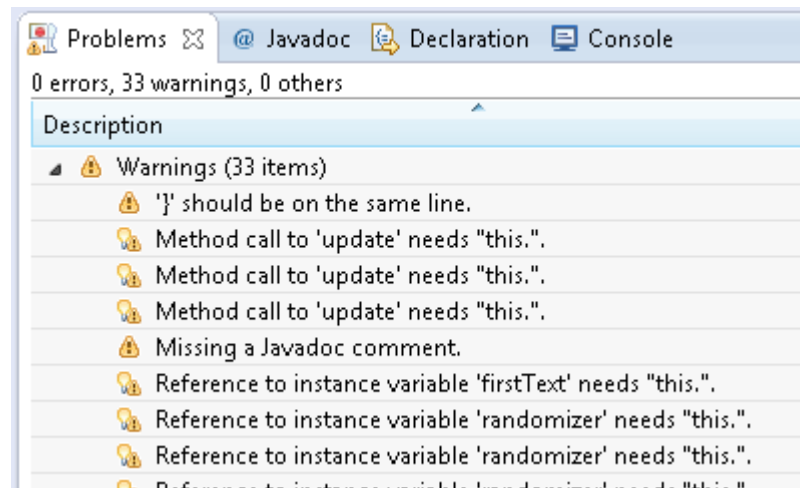   Click **OK** to close the Preferences dialog.

To Use Checkstyle

15. Now that Eclipse is all set up with Checkstyle, it's time to actually use it on the code. Simply right-click the Project name in the Package Explorer window and from the resulting shortcut menu, choose **Checkstyle > Activate Checkstyle**

When Checkstyle finds issues, it will highlight the code and include an icon in the margin. Just like with the compiler, if you hold your mouse over the icon, Checkstyle will attempt to describe the problem.

Also like the compiler, if you want to see a complete listing of all issues, you can click the **Problems** tab at the bottom of the application. Double-clicking any of the items will take you to that location in the code.

There are many other features of Checkstyle, but we'll let you explore those on your own.