

Software Methods and Tools

Fall 2014

Assignment 4

Due on 11:59PM, Tuesday, October 14, 2014

This assignment is about Eclipse plug-ins and the extension and extension point mechanism. We will give you the source code of a Java application. Your task in this assignment is to change it to an Eclipse plug-in based application. Specifically, your final outcome must meet the following requirements.

1. Your final product must be Eclipse plug-ins, and can be deployed as Eclipse plug-ins.
2. There must be at least three Eclipse plug-ins created in your system, and they are integrated through Eclipse extension points and extensions.
3. At least one plug-in extension point should be created in your system.
4. At least two extensions should be made to the extension point you created.
5. The user interface of the original application was built using Java AWT and SWING. Since we are going to make it an Eclipse-based application, it is highly recommended that you use Eclipse's own Standard Widget Toolkit (SWT) to implement the user interface. As we discussed in class, Eclipse's workbench is just based on SWT. Note that this is optional, and you will get 5 extra points if you use SWT.

The application we will give you is a standalone calculator application. Its source code can be downloaded from the following link below.

<http://www.objectsbydesign.com/projects/calc/overview.html>.

There you can also find the related class diagrams and sequence diagrams. Hopefully they can help you understand the design of this calculator application.

After you finish, add all your JAR files into a zip file and submit it to the Blackboard system before the deadline. Please make sure that your submission is runnable and bug free, and meets all the requirements. Your submitted code counts for 50% of your grade.

You also need to give a demo of your application to the TA at a session that will be announced later. Your demo counts for 30%.

Hint:

1. Try to decompose the calculator application into modules or components first. As we discussed in class, Eclipse plug-ins or bundles are essentially just modules.
2. SampleHandler.java in Lab 4 is a good reference for you, especially about how to use plug-in related APIs.