[UAB](http://main.uab.edu/) -> [ENG](http://www.eng.uab.edu/) -> [ [ECE](http://www.uab.edu/engineering/departments-research/ece) / [ECE Intranet](http://www-ece.eng.uab.edu/) ] -> [ [DGreen](http://www-ece.eng.uab.edu/DGreen/redirect/dgreen-internet.html) / [DGreen Intranet](http://www-ece.eng.uab.edu/DGreen/) ] -> [EE333](http://www-ece.eng.uab.edu/DGreen/ee333/) -> P5

**EE333 Programmette 5 - Spring 2011**

**Purpose**

The purpose of this assignment is to gain and demonstrate some proficiency in using advanced software tools — specifically [NetBeans](http://www.netbeans.org/) and [JUnit](http://www.junit.org).

**General Discussion**

The report you should write is the item that will be graded. Refer to your your code as an appendix to the report and include it in the .zip file. It is *extremely important* that your **written report** be crafted around your **narrative log** organized around the process described below. Include the log as another appendix.

NetBeans is a multi-purpose IDE (integrated development environment) that amongst other capabilities provides a superior environment for developing JAVA code. There is extensive [online documentation for NetBeans](http://netbeans.org/kb/trails/java-se.html). In this assignment, you are to demonstrate competency in using NetBeans by

* Creating Java Classes with JavaDoc style documentation
* Creating JUnit Unit tests for classes
* Refactoring code
* Using the debugger
* Creating a jar execution file

**Process**

* Create a running log (in Word) of your efforts. In this log, keep up with what you are doing (which files you create, edit, what bugs/problems you have and what you did to fix them, and any lessons that you learned). Document the use of the debugger and any first use (in this project) of NetBeans features during your efforts.
* Create a Java Project called blazerid-P5 in NetBeans. (Use your reall blazerID instead of “blazerid,”
* Import your P4 models and tests into the the project.
* Verify that code presently passes all unit tests
* Refactor the code to rename your non-compliant methods like is\_complete to Java convention compliant methods like isComplete (your log should contain the steps you took to do this).
* Verify that your code still passes all unit tests.
* Modify the elapsed time to be more realistic. Assuming the table changes along a straight line path between new and old coordinates, assume the speed profile is a ramp up to 50 units/sec over two seconds and there has to be a similar rate-limited ramp down to 0.
* Update your tests and verify that your code still passes all unit tests.
* Modify things so that you add the ability to add more than one PositionMonitor to an IndexTable and each will get called on each change. Be sure to modify your demo program to illustrate this new capability. Supply a log of your demo program’s operation.
* Update your unit tests and verify that your code still passes all unit tests.
* Add documentation as appropriate to make JavaDoc style documentation.
* Create JavaDoc documentation for your project.
* Generate a .jar file and demonstrate how to run the jar file from the command line.
* Demonstrate the use of the debugger by creating log entries to discuss single stepping through code to demonstrate that the that the operation with multiple PositionMonitors works.
* Create a report following the [EE Informal Lab Report Format](http://www-ece.eng.uab.edu/EEInformalReportTemplate.doc).

**Obey Java Documentation Style**

Continue to use the specified [documentation standard for Java source code](http://www-ece.eng.uab.edu/DGreen/java_ex/JavaDocStyle.html).

**Delivery**

You shall produce source code that complies with the documentation standards. Your program MUST show your name and BlazerID near the top of the listing. Produce a folder blazerid-p5 containing all files (at least .java, .class and report files). Zip this folder into the file blazerid-p5.zip and submit it using the assignment tool of BBLearn **by class time of the due date**.

Recall that there are COURSE PERFORMANCE REQUIREMENTS RELATED TO THIS ASSIGNMENT.

The programmette will be graded by this [rubric](http://www-ece.eng.uab.edu/DGreen/ee333/ToolProficiencyGrading.png).

Last modified: 26 September 2011

David Green [.](http://validator.w3.org/check?uri=referer)