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**EE333 Programmette 4 - Fall 2011**

**Task - Introduce an interface to your existing IndexTable model**

Modify the time computation to apply to straight line distance between the beginning and ending coordinates as the “linear distance” referred to in the stated speed algorithm of P3. It is likely that the speed algorithm will change for P5.

Add an interface PositionMonitor which promises a void positionChanged( String[] tag, int[] value, boolean error ) method.

Modify the constructor of IndexTable to be furnished an object that implements the PositionMonitor interface. A properly cast null should be acceptable for this parameter.

Create two classes that implement the interface PositionMonitor:

1. A class that prints to standard out

Device is {in error state | operating normally}. It reports its position {tag[0]} = {value[0]} {tag[1]} = {value[1]} …

1. A class that plays an error tone when the device is in error.

Create a small demo program to illustrate your two PositionMonitor interface implementations.

**JUnit Tests**

Update your JUnit Tests to test your modified IndexTable.

**Hints**

You may find this [site](http://www.soundjay.com/failure-sound-effect.html) (and others on the Internet) useful for sound sources. If you are working in the Engineering Computer Lab, you will need headphones to hear the ringing.

While it uses a sun.\* classes from Java, you may find this [*A simple Java “play sound file” example*](http://www.devdaily.com/java/java-audio-example-java-au-play-sound) useful. I found that it knew how to play at least .wav and .au files.

**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 and display out your name and BlazerID at the start of the test run. Produce a blazerid-p4.zip file containing a directory blazerid-p4 which contains all files (at least .java, .class files) and submit it using the assignment tool of Blackboard Learn by class time of the due date (or if you attend class and sign the class roll for the day, you can automatically have an extension to 11:59pm of the same day.)

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

Last modified: 14 September 2011

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