COMP210 - Lab2

Spring 2014

For this lab you'll implement an OO design found in *How to Design Classess*. You goal is to figure out how to let Eclipse work for you by generating essential methods, test stubs, and documentation templates. You should also reflect on the choices made in the design and how they capture basic design recipe ideas.

The Problem

The follow problem comes from *How to Design Classes*[1]:

> "...Develop a program that can assist railway travelers with the arrangement of train trips. The available information about a specific train includes its schedule, its route, and whether it is local. (The opposite is an express train.) The route information consists of the origin and the destination station. A schedule specifies the departure and the arrival times..."

[1] `http://www.ccs.neu.edu/home/matthias/htdc.html` pg 23

A class hierarchy diagram for modeling a train can be found on pg 24 of the text. You'll need to add the following methods to the hierarchy[2]

[2] Methods are described in terms of the Train type, but many are likely to require auxiliary methods in other classes.

- By field constructors, toString, equals, hashCode
- *isNightTrain*: true if the train travels at night (7pm until 5am). false otherwise.
- *connects*: true if the argument train connects with this train
- *layover:* determines the time spend on layover between two trains.[3]

[3] you might consider an ElapsedTime class to avoid confusion of purpose with ClockTime

Your Tasks

You should work in the following tasks in the following order.

1. Redraw the diagram to include class methods.[4]
2. Begin classes with auto-generated code and stubs
3. Stub out tests for methods you're writing.[5]
4. Implement and test methods.

[4] Leave space for revisions/additions that might occur when you start coding

[5] Try doing a Test-Suite to combine tests for multiple classes. `http://www.vogella.com/tutorials/JUnit/article.html#usingjunit_testsuites`

Submit all source documents with *handin* as assignment *lab2* and turn in your revised diagram at the end of lab.