Lab: Interfaces and Abstract Classes

SPRING CS 5004 / 5005

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Contents

I.   Lab 03 Reflections

This lab as taught me a good deal about interfaces and abstract classes, as well as how to properly implement them. I like the distinction between the two and will look forward to using them properly in the future.

II.   Testing Comparison:

A.   What was the difference in the Junit testing and the driver tests?

The JUnit testing used a separate class to conduct the testing. It seems like it might be more robust but not as customizable. The JUnit testing suite is built into Eclipse, which allows for a very readable testing GUI which has a lot of information.

B.   Which was easier?

I found the Driver tests easier, but messier. I am sure this will change as I become more familiar with JUnit. I do like how cleaner and easier to read the JUnit test was than the driver test.

C.   Which was more complete?

I was able to cover the whole project with both the driver and the JUnit test. The JUnit test will provide coverage for future expansions and changes to the program. The driver on the other hand gives good information for debugging everything. It may not however tell me if something else breaks.

D.   Which helped you understand your objects more?

They both taught me valuable lessons on the structure of JAVA objects.

III.   Extensions

A.   Added Complexity

Even though there is some added complexity, it also makes the program simpler and easier to read. This comes in the form of writing our methods so that they can be called from either child and still work as expected. This allows us to reuse as much code as possible while staying true to the intent of the lab.

The only methods in the various child temperature classes are their constructors and their respective toString methods. If there were more things that I wanted the abstract temperature implementation class to include I would eventually add a constructor.

B.   Test Coverage

All java files except the driver have 100% coverage by the test file. However to get the exception test to work I would need to remove the try and catch blacks in the constructors. Doing this will though, make our driver crash if we try to call for a value below absolute zero.

Therefore, the try-catch blocks are implemented to allow the program to catch the exception and the program moves on. If you were to call either of the children with a value less than absolute zero, the program will notify the user but continue on and populate all fields appropriately.

IV. Grading statement:

A. What grade do you feel you deserve on this assignment and why?

With the amount of work and time that was put into this lab and the fact that everything works and compiles correctly (including the extensions), I believe that I should receive an A on this project.