**CS 1632 - DELIVERABLE 2: Unit Testing Ruby Rush**

**Kyle Thorpe**

**Kjthorpe18**

[**https://github.com/kjthorpe18/D2**](https://github.com/kjthorpe18/D2)

Initially when I began this project, I had many class files the break up the functionality into clear objects. This included graph and prospector classes. But, I started with much of the simulation running from the Prospector class, and it quickly became confusing and difficult to track down bugs as I was creating the simulation. I decided to take a step back and reduce the number of classes and focus on the basic needs of the simulation.

I also started without practicing Test-Driven Development. Since this is the way I usually code, it felt normal. But, when I began to write tests, they were complicated and confusing. So, when I restarted my project with less classes, I focused on using TDD. I quickly found that it made it easier to create simple functionalities.

I still have issues with some parts of test-writing. For my more complicated methods, the tests become difficult to correctly stub and mock. In the future I will attempt to use less instance variables and use more simple methods with one or two parameters. This should make it easier to test.

A slightly frustrating issue I faced was output during testing. I am unsure if this is bad practice, so I stubbed some methods to make it less intrusive.

A screenshot of a cell phone

Description automatically generated