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CS355 Section 002

## Assignment 2

Test-driven development is the practice of writing the tests before you start to write the code. This allows you to identify the requirements and constraints of your project. It makes you think about what you want the program to do before you worry about how it is going to do that.

This assignment was helpful to show the benefits of test-driven development. It was easier to write code that met requirements by writing the tests first. It is easier to focus on a single problem by trying to get one test to pass. It was easier to tell what is not working in the code by what test fails. It is nice that you can get feedback rather quickly. There are fewer bugs in the code that is written, and the quality is generally higher. The tests can be helpful for other people that may view your code to understand it better.

There are also disadvantages to test-driven development. It creates more to be maintained. The test might be hard to write. It can be hard to think of good test cases. It is not enough to ensure that you've written good code. Passing all the tests just shows that you've written code that works in all the ways you could think of. It would be very hard to think of all the possible ways a user could use a program.

For the most part, the benefits outweigh the disadvantages. It is not always beneficial to do test-driven development, but it generally produces higher quality code when utilized. It can

be hard to write good tests, but it is much easier to be confident in your code if you have strong tests to work off of.