Test Plan Documentation

<REDACTED> – <REDACTED> – James Ryan – <REDACTED>

University of Victoria

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# Test Plan

Over the course of the project, testing took the form of the provided workload files which tested the functionality of our project. However, in a real-world situation this would not be the only testing performed. This document outlines what we would have done if this was a real-world product which we were developing for a product.

## Unit Testing

Each component of the application would need set of unit tests to ensure proper functionality of it. Ideally, these unit tests would be part of a larger automated test suite which would be run throughout future development to ensure that changes to the component doesn’t produce any unexpected changes to the functionality and outcome of the component. Each individual unit test must have the ability to be run independent to the other tests in the test suite for the component.

Python has a unit testing framework, unittest, which provides support for test automation, sharing of setup and shutdown code for tests along with other functionality we would need for an automated unit testing framework for our system. Documentation for this feature is available here: <https://docs.python.org/3/library/unittest.html>

## Integration Testing

A testing suite would be created which ensures that each component properly integrates with the other components which it interacts with, and to ensure proper functionality of the entire system. In our current development state, our testing done be the use of the workload files acts as a way of testing the system as whole unit. Ideally, we would want to develop a testing suite that does this for us automatically whenever we create a new build of the system.

None of our group members have experience in proper software testing, and no member have even taken the software testing course offered by the Department of Software Engineering at UVic. Known as Seng 275. This fact is the ultimate outlier on why we did not have the ability to provide a testing suite for our system which would be on par with what would be used by professionals in the industry.