

Jerry’s all-stars test plan

CS1D Project Two



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**Purpose of Test Plan:**

The purpose of the test plan is to ensure that our program will be able to run without error. The test plan will force us to test our program during development to determine flaws and critical errors that may occur during the final presentation.

**Scope of the Test Plan:**

The scope of the test plan will be in relationship to all the Agile Stories. We will test each of the Agile Stories and make sure that each story runs efficiently and correctly.

**Supported Documents:**

We will be using the UML Diagrams that we have created to help us thoroughly test out program and each Agile Story. The UML Diagrams consist of three use cases, three state diagrams, and a class diagram.

**Testing User’s Perspective:**

From the user’s perspective, Kamron and Chaz will be testing the program as if they were the client. They will be testing the user input to make sure the user cannot break the program at any point during the presentation. They will test to make sure the administrative page and login is encrypted and cannot be accessed. They will constantly be checking to make sure the GUI is being developed correctly and tested thoroughly. They will also be checking the stadium trips and the capability to purchase souvenirs. When planning a trip, they will test to make sure that there will be no invalid input that could possibly break the program and will thoroughly check invalid input when purchasing souvenirs on that trip. They will also test for the administrative page and each function such as modifying stadium information, souvenirs, and adding new teams to the leagues.

**Testing Program Perspective:**

From behind the scenes, Katie and Anna, will be testing the database and algorithms to ensure that there are no critical failures in the process. They will be testing the database to ensure all data has been entered correctly and is being saved to the database. There are a couple of algorithms that will need to be completely tested. The first one being Dijkstra's algorithm, which will be the main method of determining the most economical route to each stadium in a trip. They will need to test the algorithm to ensure that the trip is going the correct route for any possible combination. They will also need to test Prim’s or Kruskal’s algorithms in order to determine the Minimum Spanning Tree of the graph of stadiums.

**Testing Strategy:**

To test the functionality of our project, we will have to run the program, testing each part of it to make sure that they run in accordance to our stories. We will test the input by inputting invalid data to test the response from the program. We will desk check each possible route to ensure that the algorithms are correctly working. Also, we will desk check the minimum spanning tree of the graph.

**Criteria:**

This section describes what criteria need to be met before starting, exiting, or suspending testing.

1. **Starting Criteria**

To begin testing, we will need to have the database, algorithms, and GUI all working to commence the majority of testing. Desk checking of algorithms can start as soon as we develop code for those algorithms and we could use console output to test them too.

1. **Suspension Criteria**

If the program was ever to crash on start up or have some other critical failure, all testing will stop and the team will meet up to resolve the issue. The program will need to be able to build and run perfectly when preforming tests.

1. **Exit Criteria**

Realistically, the testing of the program should never stop. The only test that should be done are the desk checks and they should be completed before implementation into the GUI. We believe that the program will only be perfect if every possible line of code is tested correctly.

**Reference Material:**

Link to general information about the C++ programming language, including non-technical documents and descriptions: [*http://www.cplusplus.com/*](http://www.cplusplus.com/)

Link to Qt Documentation for any Qt-related queries: [*http://doc.qt.io/*](http://doc.qt.io/)