

TEST PLAN FOR BASKETBALL PROJECT

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VERSION HISTORY

Version #	Implemented By	Revision Date	Approved By	Approval Date	Reason
1.0	<i>Garrett Geesink</i>	<11/20/19>	<i>Garrett Geesink</i>	<11/20/19>	Test Plan draft
2.0	<i>Garrett Geesink</i>	<12/08/19>	<i>Garrett Geesink</i>	<12/08/19>	Final test plan

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1 Introduction

The Test Plan documents and tracks the necessary information required to effectively define the approach to be used in the testing of the product. The Test Plan is created during the Planning Phase of the project. Its intended audience is the project manager, project team, and testing team. Some portions of this document may on occasion be shared with the client/user and other stakeholder whose input/approval into the testing process is needed.

1.1 Items to be tested

1. Test if the home button takes you to the main page from any other page
2. Test that the buttons that change the program between pages of the UI work and load the correct pages.
3. Test all SQL data display options in the view window
 - a. Display all information for a particular team
 - b. Display all NBA teams sorted by team name
 - c. Display arenas and their teams sorted by arena name
 - d. Display Eastern Conference Teams sorted by team name
 - e. Display Southeast Eastern division teams sorted by team name
 - f. Display NBA coaches and their teams sorted by team name
 - g. Display NBA arenas and their teams sorted by seating capacity (smallest to largest), along with seating capacity.
 - h. Display NBA teams, arenas, and join years sorted by join year (ascending order)
 - i. Display all souvenirs for one particular team
4. Test that the trip starting at the Denver Nuggets is correct
5. Test that the Dream Vacation (Order specified) trip is correct
6. Test that the Detroit Pistons trip is correct
7. Test that the Dream Vacation (Shortest Distance) trip is correct

8. Test that the MST connecting all arenas is correct
9. Test that the DFS starting from Orlando Magic is correct
10. Test that the BFS starting at Los Angeles Lakers is correct
11. Test that souvenirs can be purchased for the given teams in a trip, along with a receipt
12. Test that the login window is secure, any only valid username and password combinations will allow access to admin features
13. Test that edits made through the edit window are saved, and changes affect all aspects of the program

1.2 Quality Objective

- Ensure the Application Under Test conforms to functional and nonfunctional requirements
- Ensure the product meets the quality specifications defined by the client
- Bugs/issues are identified and fixed before go live

1.3 Roles and Responsibilities

- Product Owner - Envisions the complete product and presents the project during sprint reviews and assesses its process. Also determines what constitutes as a finished or unfinished project.
- Scrum Master - Works with the product owner to create tasks that the team members can implement in code. Also eliminates any distractions for any member in the project, and keeps track of the scrum log.
- Team Member - Coders that implement project requirements into a working product that meets the standards of the product owner and scrum master.

2 Test Methodology

2.1 Overview

We are using Agile to meet requirements set by Professor Lebowitz for this project. The use of Agile helps us accomplish a significant project in smaller sprints, which allow for a more effective way to produce a functioning project in smaller, usable increments, rather than one large implementation that happens a long way down the road.

2.2 Test Levels

Test functionality of all major aspects of the product as well as all listed requirements. Make sure the user can plan a trip successfully by choosing food items and cities to visit, along with accounting for incorrect inputs and making sure the whole project works smoothly and as intended.

2.3 Test Completeness

- Product working as intended
- User can successfully plan a trip
- All teams and souvenirs are available
- Database features are all enabled
- Admin can log in successfully
- Invalid input does not cause fatal errors

3 Test Deliverables

Artifacts available during testing

- Code
 - Test Plan
 - Agile Stories
 - Scrum Log
 - Coding Standards
 - Team Rules
 - UML Diagrams
 - Data Structures Used
 - Big Oh Analysis
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4 Resource & Environment Needs

4.1 Testing Tools

Qt Creator was the main tool used in testing purposes as it ran the project, displaying any errors to the console and display and visual issues or functionality issues in the run time viewing of the project.

4.2 Test Environment

The following **softwares** are required:

- Qt Creator 5.13.0 with a 32-bit C++ compiler kit
- Windows and Linux Operating System
- Github
- SQLite