Team 5

Test Plan

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Team 5
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Revision and Signoff Sheet

Document History

Version	Date	Author	Description of Change
1	02/25/2018	Reed	Draft
2	4/10/2018	Tristan	Draft - Reviewed
3			

1. INTRODUCTION

1.1. Purpose

This test plan describes the testing approach and overall framework. The test plan will ensure software integrity of MyWeatherApp.com. The document introduces:

- Test Strategy: rules the test will be based on, including the givens of the project (e.g.: start / end dates, objectives, assumptions); description of the process to set up a valid test (e.g.: entry / exit criteria, creation of test cases, specific tasks to perform, scheduling, data strategy).
- Execution Strategy: describes how the test will be performed and process to identify and report defects, and to fix and implement fixes.
- Test Management: process to handle the logistics of the test and all the events that come up during execution (e.g.: communications, escalation procedures, risk and mitigation, team roster)

1.2. Project Overview

MyWeatherApp is an online application that will help the user track weather in their local regions. The web application will allow users to view relevant information queried from our databases.

The functionality of this web application allows users to login and view their own saved information, edit it and add to it. All information will be secured and only information that a user is authorized to access will be viewable by said user. Login information will be securely handled to ensure authentication of the user and protect against security threats.

1.3. Audience

- Project team members will perform tasks specified in this document. Project team members will also provide input and recommendations on this document.
- The Testing Team Lead will ensure the performance of the tests are being monitored, they will also track results and monitor success. The Testing Team Lead will also make the final approvals of the testing documents and final results as “met expectations”.
- Functionality team lead will evaluate the functions necessary to implement the project. They will ensure that the project is in scope and has met the requirements of the project.

2. TEST STRATEGY

2.1. Test Objectives

The objective of the test is to verify the overall functionality of MyWeatherApp.com according to the specifications and scope of the project.

There will be two different types of testing used to track overall performance of the website.

- Unit testing: functional testing to check if output is correct depending on the input
- Push to test: manually inserting in fields to check for correct output throughout the user interface

Objectives List:

- User interface is intuitive
- Website page redirection is successful
- Database makes correct queries based upon user inputs

2.2. Test Assumptions

Key Assumptions

- Production like data required and be available in the database before tests are administered.

General

- Exploratory Testing would be carried out once the build is ready for testing
- Performance testing is not considered for this estimation.
- The Test Team assumes all necessary inputs required during Test design and execution.
- Testing Team Lead will verify validity of each unit test prepared by the individual team members.
- Testing Team Lead will review and sign-off all test deliverables.
- Defects will be logged along with relevant information of the defect. Plans to correct the defect will then be outlined and logged as well.
- The system will be treated as a black box; if the information shows correctly online and, in the reports, it will be assumed that the database is working properly.

Unit Testing

- During Unit Testing, testing team will use preloaded data which is available in the database.
- The Test Team will be perform Functional testing only on MyWebApplication.com back end.

2.3. Test Principles

- Testing will be focused on meeting the project scope and specifications.
- There will be common, consistent procedures for all teams supporting testing activities.
- Testing processes will be well defined, yet flexible, with the ability to change as needed.

- Testing activities will build upon previous stages to avoid redundancy or duplication of effort.
- Testing environment and data will emulate a production environment as much as possible.
- Testing will be a repeatable, quantifiable, and measurable activity.
- There will be entrance and exit criteria.

2.4. Data Approach

- In functional testing, MyWeatherApp.com will contain pre-loaded test data and which is used for testing activities.

2.5. Scope and Levels of Testing

2.5.1. Exploratory

PURPOSE: The purpose of this test is to make sure critical defects are removed before the next levels of testing can start.

SCOPE: Basic web interface navigation.

TESTERS: Team 5.

METHOD: this exploratory testing is carried out in the application without any test scripts and documentation

TIMING: at the beginning of each iteration of tests.

2.5.2. Unit Test

PURPOSE: Unit testing will be performed to check the functions of application. This testing will provide functions with valid and non-valid inputs and test for corresponding outputs.

Scope: Backend functions.

TESTERS: Team 5.

METHOD: The tests will be on the backend queries to the database, functions and objects.

TIMING: After Exploratory test is completed.

TEST ACCEPTANCE CRITERIA

1. Test cases approved and signed-off prior to start testing execution.
2. Development completed, unit tested with pass status and results shared to Testing Team Lead to avoid duplicate defects.
3. Test environment with application installed, configured and ready to use state.

TEST DELIVERABLES

Step	Deliverable Name	Author	Reviewer
1.	Test Plan	Test Lead	Tristan
2.	Unit Test Cases	Test Team	
3.	Logging Defects	Test Team	
4.	Weekly Status Report	Test Team/ Test Lead	
5.	Test Closure Report	Test Lead	

3. EXECUTION STRATEGY

3.1. Entry and Exit Criteria

- Entry criteria: desirable conditions to start testing. Database populated with realistic inputs, test cases have been assessed and test environment is setup/established across all team members computers.
- Exit criteria: tests have been approved by the Testing Team Lead, the results are successful and the tests meet the scope and specifications of the project.

Exit Criteria	Test Team	Technical Team	Notes
100% Unit Testing			
90% Tests are successful			
No open Critical and High severity defects			
All remaining defects are either cancelled or documented as Change Requests for a future release			
All expected and actual results are captured and documented with the unit tests			
All defects logged/documented			
Test Closure Memo completed and signed off			

3.2. Test Cycles

- There will be two cycles for Unit Testing. Each cycle will execute all unit tests.
- The objective of the first cycle is to identify any blocking, critical defects, and most of the high defects. It is expected to use some work-around.
- The objective of the second cycle is to identify remaining high and medium defects, remove the work-around from the first cycle, correct gaps in the units and obtain performance results.

3.3. Validation and Defect Management

- Each tester will execute all unit tests. Testers are to log both intended output and actual output after their testing is concluded.
- The defects will be tracked. The defects will be logged and collected at the end of each week by the Testing Team Lead.
- Defects found during the testing will be categorized according to the categories defined:

Severity	Impact
1 (Critical)	▪ This bug is critical enough to crash the system, cause file corruption, or cause potential data loss ▪ It causes an abnormal return to the operating system (crash or a system failure message appears). ▪ It causes the application to hang and requires re-booting the system.
2 (High)	▪ It causes a lack of vital program functionality with workaround.
3 (Medium)	▪ This Bug will degrade the quality of the System. However there is an intelligent workaround for achieving the desired functionality - for example through another screen. ▪ This bug prevents other areas of the product from being tested. However other areas can be independently tested.
4 (Low)	▪ There is an insufficient or unclear error message, which has minimum impact on product use.
5(Cosmetic)	▪ There is an insufficient or unclear error message that has no impact on product use.

3.4. Defect tracking & Reporting

1. Document expected/valid output
2. Document actual output
3. At conclusion of work day document failed tests
4. Final actual output
5. Final expected/valid output

4. TEST MANAGEMENT PROCESS

4.1. Role Expectations

The following list defines in general terms the expectations related to the roles directly involved in the management, planning or execution of the test for the project.

	Roles	Name
1.	Test Team Lead	
2.	Testing Team Member	
3.	Development Team	

4.1.1. Testing Team Lead

- Sign off on created unit tests
- Sign off on completed tests
- Ensure testing environment of Test Team Members is correct
    - Check database information
    - Check testing metrics
- Develop test plan and guidelines to create test conditions, cases and expected results
- Gather test results weekly

4.1.2. Testing Team Member

- Perform execution and validation
- Document outputs of tests
- Create tests for gaps found while implementing tests
- Re-test after modifications/additional functionality are added
- Prepare testing metrics and provide regular status
- Assess failures and properly document them according to their severity

4.1.3. Development Team

- Review testing deliverables (test plan, cases, expected results, etc.) and provide timely feedback.
- Assist in the validation of results (if requested).
- Support the development and testing processes being used to support the project.

- Certify correct components have been delivered to the test environment at the points specified in the testing schedule.
- Keep project team and leadership informed of potential software delivery date slips based on the current schedule.
- Define processes/tools to facilitate the initial and ongoing migration of components.
- Conduct first line investigation into execution discrepancies and assist test executors in creation of accurate defects.
- Implement fixes to defects according to schedule.

5. TEST ENVIRONMENT

MyWeatherApp.com will be hosted locally with shared database entries. The Push to Test testing will be done through Google Chrome (Current), Internet Explorer 10 and Firefox (Current).