Prepared by:

Kareem Bute, Bipul Chaudhary, and Shaquera Moore

8/01/2022

Objectives

Facilitate a testing suite for ClimaWatch a weather app. The suite provides unit testing and end to end testing. The development team is developing tests and code in parallel, with the goal of using tests as gauge of progress. This will allow for a clearer target for the application development.

Tasks

The group will write backend tests using PyTest and PyTest-mocker. Front end testing will be automated using Selenium and TestNG to optimal effect. The other test will be performed manually. The test suite will have test cases according to the test case design. There will be the following sections in the test design: Requirements, User Stories, Acceptance Criteria, Test Scenario, Test Case ID, Test, Test Data, Expected Results, Actual Results, Status, Defect ID, Defect Report, Traceability Matrix, and notes.

SCOPE

General

The test suite will consist of unit testing of the backend, end to end testing and automation testing with Selenium of the front-end.

Tactics

The team will collectively perform unit testing on a particular feature. The team will be responsible for end-to-end testing. The team will be responsible for automation testing scripts. Members that have completed tasks should assists other project members with their tasks.

TESTING STRATEGY

The project team will use agile development and emphasize collaboration. The team will have daily stand-ups to communicate progress and identify any problems as soon as they are encountered. Progress is tracked on Project 2 Trello board created by Bipul Chaudhary. Test cases are derived from user stories, acceptance criteria, and test scenarios.

Test will follow requirements via a requirements traceability matrix. The requirements traceability matrix will include a Business Requirement ID Number, a Requirement Description, a Test Case ID and a Status.

Unit Testing

Definition:

Unit tests for the backend will focus on atomic sections of code. These sections should reflect a single test case defined in the test strategy. Developers will write test cases for each user story. There must be a unit test per user story. The team will record all tests for their corresponding test case entry. Fail test will be written in the defect report with a defect ID.

Participants

Methodology:

Kareem Bute will write backend unit tests with PyTest and PyTest-mocker.

End to End and Automation Testing

Definition:

End to End testing will be any black box testing of the website.

Participants:

End to end testing will be done both manually and automated through Selenium.

TEST SCHEDULE

August 13, 2022

CONTROL PROCEDURES

Problem Reporting

Problem Reporting will be an extensive procedure that the testing team will implement. Any time a bug or defect is caught during testing it will be disused by the entire team, even if caught by a single individual. This will be done to ensure that no one is left out with a different perspective to approach or fix the defect. Once the team has decided they are incapable of fixing the bug or defect it is sent back to the developers.

FEATURES TO BE TESTED

MVP Features

- Login

- Register

- Webpage

Feature: Login

1. Scenario: Logging in successfully
2. Scenario: Invalid username
3. Scenario: Invalid password
4. Scenario: Blank username
5. Scenario: Blank password
6. Scenario: Not logged in, weather home page displays

Feature: Register

1. Scenario: Signing up successfully
2. Scenario: Blank username
3. Scenario: Blank password
4. Scenario: Blank email
5. Scenario: Blank name
6. Scenario: Username already taken
7. Scenario: email already taken
8. Scenario: Email is invalid format

Feature: Webpage

1. Scenario: Page loads
2. Scenario: Blank location

Stretch goals

-News

Feature: News

1. Scenario: News loads
2. Scenario: Current local news loads when Use Current Location button is clicked
3. Scenario: News refreshes when the Refresh link is clicked

RESOURCES/ROLES & RESPONSIBILITIES

Paired programming was utilized for the tests by setting up the test cases together as a team and walking through them.

SCHEDULES

Deliverables

What we are delivering is the test plan, test case document, traceability matrix and defect report.

DEPENDENCIES

What are some of the constraints or limitations on testing?

Time is a constraint for this project and being able to pair program in a timely manner.

RISKS/ASSUMPTIONS

A possible risk is having overlap of test between features.

Mitigated by proper communication between group members.

Tools

IntelliJ, Pycharm, PyTest, Flask, Psycopg, Cucumber, TestNG, VS Code, Selenium, and AWS