Test Plan for Trello Application

Version	Change Date	By	Description
version number	Date of Change	Name of person who made changes	Description of the changes made

1.   INTRODUCTION

1.1 Scope

1.1.1 In Scope

The test plan will focus on testing the CRUD operations for boards in the Trello application through the REST API. Testing will cover both the back-end API and the front-end user interface.

1.1.2 Out of Scope

The non-functional and performance test are not in scope of testing.

2.   TEST APPROACH

2.1 Overview

A primary objective of testing is to: assure that the system meets the full requirements, including quality requirements (functional requirements) and fit metrics for each quality requirement and satisfies the use case scenarios and maintain the quality of the product. To define approach, we are following Automation Functional Testing. In this

approach testing is automated using testing tools and scripts to execute test cases, making it faster and repeatable.

2.2 Test Levels

A CRUD approach is followed to test each test level. C stands for Create, R stands for Read, U stands for Update & D stands for Delete.

API Testing
Create Operation
Positive Test Case:
•   Send a POST request with valid data to create a new board.
•   Validate that the response status code is 200.
•   Validate that the board is created by fetching its details using the API.

Negative Test Case:
•   Send a POST request with missing data or invalid payload.
•   Validate that the response status code is appropriate (e.g., 400 or 422).
•   Ensure that the error message is provided in the response.

Read Operation
Positive Test Case:
•   Send a GET request to fetch board details using a valid board ID.
•   Validate that the response status code is 200.
•   Compare the fetched details with the expected data.

Negative Test Case:
•   Send a GET request with an invalid board ID or non-existent board.
•   Validate that the response status code is appropriate (e.g., 404).
•   Ensure that the error message is provided in the response.

Update Operation
Positive Test Case:
•   Send a PUT request with valid data to update the board name.
•   Validate that the response status code is 200.
•   Fetch the updated board details and compare with the expected data.

Negative Test Case:
•   Send a PUT request with missing or invalid data.
•   Validate that the response status code is appropriate (e.g., 400).
•   Ensure that the error message is provided in the response.

Delete Operation
Positive Test Case:
•   Send a DELETE request to delete a board using a valid board ID.
•   Validate that the response status code is 200.
•   Attempt to fetch the deleted board details using the API and validate that it's not found.

Negative Test Case:
•   Send a DELETE request with an invalid board ID or non-existent board.
•   Validate that the response status code is appropriate (e.g., 404).

- Ensure that the error message is provided in the response.

UI Testing

User Interface Testing

Create Board:
- Open the Trello application.
- Click on "Create Board" option.
- Enter valid board details and create a new board.
- Verify that the board is created with the correct name.

View Board Details:
- Open an existing board.
- Verify that the board details are displayed correctly.

Update Board Name:
- Open an existing board.
- Click on "Edit Board" or similar option.
- Update the board name and save the changes.
- Verify that the board name is updated correctly.

Delete Board:
- Open an existing board.
- Click on "Delete Board" or similar option.
- Confirm the deletion and verify that the board is removed.

2.3 Suspension criteria and resumption requirements

Suspension criteria
- The build contains many serious defects which seriously or limit testing progress.
- Significant change in requirements suggested by client
- Software/Hardware problems

Resumption requirements

Resumption will only occur when the problem(s) that caused the caused the suspension to have been resolved

2.4 Test Completeness
- 100% test coverage
- All CRUD Automated Test cases executed
- All open bugs are fixed or will be fixed in next release

3.0 Test Deliverables
- Test Plan
- BDD Scenarios
- Test Strategies
- Application build

4.0 Resources & Environment Need

    4.1 Testing Tools

- Selenium WebDriver
- Rest Assured
- Docker
- Jenkins

    4.2 Test Environment

- Mac-Os
- Docker Container
- Jenkins Server

5.0 Conclusion

By following this test plan, you'll be able to thoroughly test the CRUD operations for boards in the Trello application, both at the back-end API level and the front-end user interface. Keep in mind that this is a high-level test plan, and you can further expand it by adding more specific test cases and scenarios as needed.