

TEST PLAN FOR TRAVEL BUDDY

INTRODUCTION:

This document describes the methods and procedures that will be used by the QA team in the functional testing process of the web application. It is meant to be used as a manual during testing works. It describes the procedure of the testing process. The test plan is intended for project managers, product developers, and QA engineers.

PURPOSE:

The Test Plan document for the “Travel Buddy” project supports the following objectives:

- Identify existing project information and software components to be tested.
- Recommendation and description of the testing strategies to be employed.
- Identify required resources and provide a test effort estimate
- List the test project deliverable elements. The results of test execution will be sent to the customer as reports. All found bugs will be tracked using the **JIRA** bug tracker.

SCOPE:

IN SCOPE:

Testing of “TRAVEL BUDDY” is in the scope of this test plan.

The following components and functions would be tested:

1. Login Functionality
2. Destination(includes Guest count and No. of days)
3. Weather forecast
4. Booking Accommodation
5. Activities
6. Itineraries
7. Discount/ Offers
8. Currency Convertor
- 7.Payment
- 8.Save and edit user profile

Out of Scope:

Non-integrated third-party systems.

OBJECTIVES:

- Verify functional requirements (workflows, profile management, payment processing, etc.)
- Validate user interface and experience across different devices
- Ensure compatibility across various browsers (Chrome, Firefox, Safari, Edge)
- Validate API integration (flight, hotel, car rental providers)
- Test application performance under Multi user load (load testing)
- Verify security protocols, including user authentication and payment handling

- Validate localization and multilingual functionality.

TEST METHODOLOGY: The Test methodology selected for this Project is “AGILE methodology” because if there is any change in requirements, we can easily adopt the changes in Agile Environment.

Incremental testing is used in agile development methods so, every release of the project is tested thoroughly. This ensures that any bugs in the system are fixed before the next release.

TESTING STRATEGY:

TEST TYPES:

1. Functional Testing: Ensures that all functionalities perform as expected (e.g., booking system, payment processing).
2. Integration Testing: Verifies that modules and third-party APIs work together.
3. User Interface (UI) Testing: Tests the user interface to ensure it is user-friendly.
4. Performance Testing: Includes load and stress testing to ensure the application can handle large no. of data and users.
5. Security Testing: Ensures the application is secure and user data is protected.
6. Cross-Browser Testing: Tests compatibility across different web browsers.
7. Mobile Testing: Ensures the application works on both Android and iOS devices.
8. Usability Testing: Ensures that the application is easy to use from a user's perspective.
9. Localization Testing: Verifies the correct implementation of different languages, formats, and currencies

TESTING ENVIRONMENT:

Environment Setup:

- o Development Environment
- o Test Environment (Staging)
- o Production Environment (for live testing)

Tools:

- o Test Management Tool: Jira
- o Performance Testing: JMeter/Manual Testing
- o Bug Tracking Tool: Jira
- o API Testing Tool: Postman
- o Cross-Browser Testing: BrowserStack
- o Security Testing: OWASP ZAP / Burp Suite

TEST DELIVERABLES:

- Test Strategy Document
- Test Plan Document
- Test Cases
- Test Data
- Test Summary Report
- Defect Reports

- Test Closure Report

Roles and Responsibilities:

Manager: Oversees the entire testing process, resource allocation, and communication with stakeholders.

Test Lead: Manages test execution, defect tracking, and reporting.

Testers: Write test cases, execute tests, and log defects.

Developers: Fix bugs reported during testing.

Product Owner: Provides clarifications on requirements and performs UAT.

ENTRY CRITERIA:

Is unit Testing is completed in the Development environment

Is Testing Environment available.

Is test Data is available for Testing in QA Environment

Is Test Scripts are completed, reviewed and approved by project Team

TEST EXECUTION:

Test Phases:

1. **Unit Testing:** Performed by developers during development.
2. **System Testing:** Performed after the integration of different components.
3. **Regression Testing:** Repeated after each code change.
4. **Acceptance Testing:** End-user testing in a pre-production environment.

Test Cycles: Multiple cycles to cover different phases and regression testing.

Defect Tracking: All defects will be logged and tracked using the defect tracking tool (e.g., Jira).

Exit Criteria

- All planned test cases have been executed
- All critical and high-severity defects have been fixed
- User acceptance is obtained from stakeholders
- Above 90% pass percentage of Test cases is achieved.

Upon completion of all testing activities and the resolution of defects, a Test Summary Report will be prepared, outlining the test results and providing a recommendation for production release.