**Software Quality Assurance (SQA) Plan Of**

**Rural Tour Package Booking System**

1. **Test Plan Identifier**
2. **Introduction**

Rural Journeys offer a variety of travel packages focused on Nepal, including trips, tours, and trekking experiences. Users can search for these packages and view the details on the website. Users can also register to the website which enables the users to book any package.The test plan for Rural Journeys website is a crucial document that outlines the objectives, scope, and approach of the testing process. It defines the specific use cases and scenarios to be tested, identifies the responsible personnel, and addresses potential risks. This comprehensive plan ensures thorough testing of the website's functionalities and features, ensuring a high-quality and reliable platform for users.

**2.1 Objectives**

The main objectives of Test Plan for Rural Journeys are listed below:

* Identify functionalities and features of the Rural Journeys website that will undergo testing.
* Define and outline all necessary activities to prepare for and conduct the testing process effectively.
* Establish clear pass/fail criteria for each tested item to determine the success of the testing phase.
* Identify and specify the expected deliverables of the testing phase, including test cases, reports, and logs.
* Define suspension criteria and resumption techniques, providing guidelines for pausing and restarting the testing process if needed.
* Discuss the testing techniques employed to evaluate the Rural Journeys website, such as functional, usability, performance, and security testing.
* Define the tools, methodologies, and metrics employed for test execution, monitoring, and reporting purposes in the context of Rural Journeys.
* Assign roles and responsibilities to team members involved in testing, ensuring clear accountability and coordination.
* Provide an overview of test deliverables, including test plans, scripts, reports, and relevant documentation specific to Rural Journeys.

**2.2 References**

* Test Plan Airline Reservation System

1. **Scope of work**

The document mainly targets the validating data in report output as per Requirements Specifications provided by the clients.

Functions to be tested.

GUI

Reports Output/Data

USer Registration

Booking Testing

Functions not to be tested.

1. Not other than mentioned above

1. **Test Strategy**

**4.1 Overall Testing Strategy**

Step 1: Requirements Reviews

Step 2: Test Case Preparation

Step 3: Black box Testing

Step 4: UI/UX Testing

Step 5: Integration Testing

Step 6: Functional testing

Step 7: System Testing

Step 8: Smoke Testing

Step 9: Performance Testing

Step 10: User acceptance testing

**4.2. Testing type**

**Black box testing:**

It is sometimes called behavioural testing or Partition testing. This kind of testing focuses on the functional requirements of the software. It enables one to derive sets of input conditions that that will fully exercise all functional requirements for a program.

**UI/UX Testing:**

UItesting will includes testing the UI part of report. It covers users Report format, look and feel, error messages, spelling mistakes, GUI guideline violations.

**Integration Testing:**

Integration testing is systematic technique for constructing the program structure while conducting test to uncover errors associated with interacting. In Report, integration testing includes the testing Report from respective location(s).

**Functional Testing:**

Functional testing is carried out in order to find out unexpected behavior of the report. The characteristic of functional testing are to provide correctness, reliability, testability and accuracy of the report output/data.

**System Testing:**

System testing of software is testing conducted on a complete, integrated system to evaluate the system's compliance with its specified requirements.

**Smoke Testing:**

SMOKE TESTING, also known as “Build Verification Testing”, is a type of software testing comprising a non-exhaustive set of tests that ensure that the most important functions work.

**Performance Testing:**

Performance testing will be done by Client.

**User acceptance testing:**

The purpose behind user acceptance testing is to confirm that the system is developed according to the specified user requirements and is ready for operational use. Acceptance testing is carried out at two levels - Alpha and Beta Testing. User acceptance testing (UAT) will be done at the Client.

**4.3. Tools**

**The following tools will be employed for the Testing activities involved in the project:**

| **#** | **Item** | **Tool** | **Vendor/In-**  **house** |
| --- | --- | --- | --- |
| **1.** | **Project Management** | **Zira** | **Open Source** |
| **2** | **API Testing** | **Postman** | **Open Source** |
| **3** | **Performance Testing** | **JMeter** |  |

**Table 7: List of Tools for Testing Activities**

1. Resource

3.TEST ITEMS

This section of the test plan lists all the items of the Rural Journey project that will be tested:

1. Login.
2. User Registration
3. Search and book packages.
4. Search and book places.
5. Cancel Booking

**6.**  **Test Environment**

| **#** | Test Type | Environment |
| --- | --- | --- |
| 1 | Blackbox Testing | Development/QA |
| 2 | UI/UX Testing | Development/QA |
| 3 | Integration Testing | Development/QA |
| 4 | Functional | Development/QA |
| 5 | System | Development |
| 6 | Smoke | Development/QA |
| 7 | Performance | Development/QA |
| 8 | UAT Testing | Development/QA/Production/UAT |

**7. TET SCHEDULE**

**Planning Phase:**

High-level test planning activities, which include preliminary development of Master QA Plan (this document, QA schedule. At this Milestone, the high level planning should be completed. Some of the deliverables are: Project Plan, Program function specifications.

**Design Phase:**

Development and Test engineers participate actively in feature design by

inspecting and reviewing the requirements and design documents. As the design documents are completed, the test engineers are encouraged to start working on the Test Plan document and test design planning.

**Code Complete-Infrastructure:**

The Test Engineers should have completed or in the final stages of their

preliminary Infrastructure Test Plan, test cases and other QA documents

related to test execution for each feature or component such as test

sets, test procedures, scripts and applicable testing tools.

**Code Complete-Function:**

The Test Engineers should have provided Code Complete Assessment Test to Development Engineer one week prior to Code Complete Review date. The Test Engineers should also have completed or in the final stages of their preliminary White Box Test Plan, test cases and other QA documents related to test execution for each feature or component such as test scenarios, expected results, data sets, test procedures, scripts and applicable testing

tools.

**Feature Complete:**

All bugs verified and QA documentation is finalized. The test Engineers

should assess that Binary Tree features are ready for Beta regression and have started their preliminary Test Summary Reports.

**Regression Test:**

Complete regression test execution of complete system and update Test

Summary Reports for regression.

**Beta Ready:**

2 Weeks regression of Binary Tree features to Beta and preparation for Beta Shutdown.

**Ship/Live:**

Any unfinished Testing documents should be completed.

**8. CONTROL PROCEDURE**

**8.1 Reviews:**

Reviews will be done on the following documents and a review report will be prepare for each work products

• Test cases

• RTM(Requirement Traceability Matrix)

**8.2 Bug Review Meetings:**

Bug review meeting will be held for every test cycle conducted during the

following phases:-

• GUI Testing

• Report Output/Data Testing

In case of critical / show stoppers bugs.

**8.3 Change Request:**

Change request for report will be handled using following process:

• Understanding the change request and its impact on exiting report

functionality

• If the change is major, test cases will be updated

• If the change is minor, test cases will may not be updated

• Retesting and regression testing will be done as per changed request

**8.4 Defect Reporting:**

Bugs found during static and dynamic testing will be logged in Bugzilla bug tracking tool.

**9. ROLES AND RESPONSIBILITIES**

The following table describes the Roles / Responsibilities, as regards to the testing activities, for the proposed Advertisement Board System (ABS):

| # | Item | Description |
| --- | --- | --- |
| 1 | Test Lead | • Identifies, prioritizes, and implements testing activity  • Responsibilities:  - Overall review of system design, process  - Create Test strategy and Test specification  - Generate test plan  - Generate test model  - Test Execution  - Report to upper management  - Asses Project health  - Mitigate Risks |
| 2 | Test System Administrator | • Ensures test environment and assets are managed and maintained.  • Responsibilities:  - Administer Test Management System  - Install and Manage access to Test Systems |
| 3 | Database Administrator, Database Manager | • Ensures Test Data (database) environment and assets are managed and maintained  • Responsibilities:  -Administer test data (database) |
| 4 | Tool Admin | • Handles any issues related to Tools |

Table 2:Roles/Responsibilities

**10.**

**11. ENTRY CRITERIA**

• The whole source code must be unit tested H/W and S/W should be in

place

• QA resources have completely understood the requirements

• QA resources have sound knowledge of functionality in Reports

• Reviewed test scenarios, test cases and RTM

**12. SUSPENSION CRITERIA**

• The build contains many serious defects which seriously or limit testing

progress.

• Significant change in requirements suggested by client

• Software/Hardware problems

• Assigned resources are not available when needed by test team.

**13. RESUMPTION CRITERIA**

• Resumption will only occur when the problem(s) that caused the

caused the suspension have been resolved

**14. EXIT CRITERIA**

• No defects over a period of time or less testing efforts

• All the high priority/severity test cases has been executed

• Deliverables are ready

• High severity/ priority bugs are fixed

**15. RISK**

• Delay in delivery of test items might require increased night shift

scheduling to meet the delivery date

• Understanding requirements

• Domain and project knowledge

**16. ACRONYMS**

• GUI: Graphical User Interface

• RTM: Requirement Traceability Matrix