**1. Introduction and Objectives:**

* **Objective:**

The purpose of the Test Plan document is to provide thorough description of the automation test strategy, test approach, execution strategy and test management of ‘Shady Meadows B&B’ web application.

* **Scope:**

As part of the test script, the system integration test(SIT) will be automated. The following functionalities will be automated:

i)Reservation of rooms

ii)’Send us a message’ section

Regression testing and smoke testing will be out of scope for this test script.

**2. Test Strategy:**

* **Test Levels:**

System Integration Testing will be automated.

* **Test Types:**

Functional tests will be automated as part of this automation script.

* **Automation Approach:**

We will be focusing on data-driven test approach in the framework.

* **Framework and Tools:**

We will be using Selenium 4 with JDK 21. We will be using TestNG framework for annotations, grouping, prioritizing and reporting. Maven dependencies will be utilized as part of the framework.

**3. Resources and Roles:**

* **Team Composition:**

Sonali Acharyya – Test Automation Lead – Responsible for creating and maintaining the framework.

Sonali Acharyya – Tester – Responsible for creating the test scripts

**4. Test Data and Environment:**

* **Test Data Strategy:** Test data will be managed in JSON file. We are dealing with fresh clients/customers in our test cases, hence no need to generate test data from database.

**5. Test Design and Development:**

* **Test Script Design:**

Below are the guidelines for writing and organizing automated test scripts:

The framework has used Page-Object Model where for each webpage separate java class has been created. Inside src/main/java, a package named ‘PageObject’ has been created. Inside this package, class files are written for each webpage. Each file contains locators and corresponding methods to perform test.

Two more packages, named ‘AbstractComponent’ and ‘Resources’ packages are also created inside ‘src/main/java’. ‘AbstractComponent’ package contains class named ‘AbstractComponent.java’ which contains commonly used selenium methods, for example, WebDriverWait, Actions etc. ‘Resources’ package contains a class named ‘ExtentReporterNG’ which is responsible for configuring ExtentReport for test reporting purpose. The package contains a properties file named ‘GlobalData.properties’ which contains the global parameters such as browser name. We can use this file for storing the environment-specific URLs as well.

‘src/test/java’ contains three packages named – ‘TestCases’, ‘TestComponents’, ‘TestData’. The ‘TestCases’ package contains the testcase class files where each test-step has been written. ‘TestComponents’ package consists of two classes – ‘BaseTest.java’ and ‘Listeners.java’. ‘BaseTest.java’ is responsible for all the commonly used methods in each testcase like initializing the WebDriver, triggering the base URL, closing the browser after each test, code to capture and store the screenshot, code to read the data stored in JSON file. The Listeners.java’ is responsible for implementing the ITestListener abstract class where we create the unique instance for each testcase and log the status of each testcase.

‘TestData’ package contains the .json files where the test data are kept.

We have ‘reports’ folder under the project folder where the latest ‘index.html’ report is generated and stored.

Under the project folder, there is a folder named ‘testsuites’ where the TestNG.xml files are stored.

All maven dependencies are mentioned inside ‘pom.xml’ file.

* **Testcase design:**

Below is the name of the testcase design document :

“ShadyMeadowsB&B\_TestcaseDesignDocument.xlsx”

**6. Test Execution and Reporting:**

* **Execution Strategy:**

As of now we will be triggering the testcases using TestNG.xml file. But, we have a plan to run the cases via Maven build tool by integrating with Jenkins CI/CD tool.

* **Reporting and Metrics:**

We will generate the test report after execution of each test suite. We will be using ExtentReport for reporting purpose. Each report will contain number of test passed, number of test failed with metrics and system/environment information.

**7. Risk Management:**

* **Risk Identification:** The website sometimes shows application error which may cause the testcase to fail. We may track it under environment issue.