DESIGNWISE TECHNOLOGY CO.

Test Plan

Eden Island Villa Resort - Website

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Document History

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1.0	5/18/2022	David Henry	Initial Draft Version
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1.5	5/24/2022	David Henry	Final Draft
1.5	5/24/2022	Oneka Douglas	Final Draft Approved

I have carefully assessed the Test Plan for Eden Island Villa resort's website. This document has been completed in accordance with the requirements of the USSM Guidance.

MANAGEMENT CERTIFICATION

[✓] The document is accepted.

[ ] The document is accepted pending the changes noted.

[ ] The document is not accepted.

We fully accept the content within this project artifact and associated tasks.

Oneka Douglas — *24th May 2022*
Project Lead

Contents

1. Overview

1.1. Project Background

The Eden Island Villa resort requests an updated and modern website that showcases their sceneries, activities, visitor reviews and contact information. In addition, the site needed to be mobile friendly. Given the high-profile nature of the client, it is very important that the site performs well and is of high quality.

The test plan has been created to facilitate communication within the team. This document describes the approach and methodologies applied to the unit, integration and system testing of website hosted at " www.edenisland.resort ".

It includes the objectives, tests, responsibilities, entry and exit criteria, scope, scheduled milestones and approach.

This document clearly identifies what the test deliverables will be and what is deemed in and out of scope.

1.2. Purpose and Scope

This document mainly targets the GUI testing and integration testing on the input data as per requirement specifications provided by the client.

1.2.1. Functions to be tested

- *GUI*
- *Input validation*
- *Backend integration*

1.2.2. Functions not to be tested

- *Contact form email sending*
- *Reservation form Submission*

1.3. Assumptions/Constraints

Key Assumptions

- Backend Database is created and setup properly before the start of functional testing.
- In each testing phase issues will be logged appropriately and all defects will be reported along with a screenshot in JPEG format.
- The test environment and all preparation activities will be done by the Dev Team.

General Assumptions

- Test case activities will be designed and executed by the QA group.
- The test team will be provided access to the Test environment via VPN connectivity.
- The test team assumes all necessary inputs are required during testing and execution will be supported by the analysts appropriately.
- Dev team will provide bug fixes based on the feedback given by the QA team during each cycle of testing.
- Project Team has the knowledge and necessary experience or has received adequate training to complete the testing process.
- There is no test environment downtime during testing due to outages or bug fixes.

1.4. Roles and Responsibilities

Role	Responsibility
Project Manager	• Acts as the primary contact for development and QA team • Responsible for the schedule and overall success of the project
Development Team	• Works with the PM and QA Lead to develop and ensure the requirements and specifications supplied by the Client are met. • Preparation of test environments for QA. • Bug Fixing in accordance to the schedule.

	• Give the OK to start next level of testing.
QA Lead	• Involved in project planning, creation and update process. • Planning and organizing the testing process for release • Communicate with QA analysts/Engineers on issues encountered during testing. • Report Progress on work assignments by the PM.
QA	• Understanding requirements • Writing and Executing Test Cases • Preparing RTM • Defect Reporting and tracking • Bug Review Meeting • Retesting and regression testing • Preparation of test data • Communicate with QA lead on issues or problems encountered during testing/preparation/execution and or defect handling.

Table 1: Test Plan Roles and Responsibilities

1.5. Test Environments

A Windows 7 *or greater* environment (minimum 4GB RAM and 1.8 GHZ processor *or greater*) installed **with all the below-mentioned software** along with Chrome version 101, Internet explorer 11, Firefox version 100 *or later* should be made available to each tester.

- XAMPP version 8.0(MYSQL included)
    - The Eden Island villa resort's website version 1 will be hosted locally on the environment using XAMMP.
- MYSQL version 8.0 (included with XAMMP)
    - To run integration testing, the database should be setup beforehand using MySQL.
- Selenium Automated Testing Tool

1.6. Test Management Tool

HP Application Lifecycle Management is the tool used for Test Management. All testing artifacts such as Test cases, test results are updated in the HP Application Lifecycle Management (ALM) tool.

- Each resource in the Testing team will be provided with Read/Write access to add/modify Test cases in HP ALM.
- Each Tester will directly access their respective assigned test cases and update the status of each executed step in HP ALM directly.
- During bug fix testing, defects are re-assigned back to the tester to verify the bug fix. The tester verifies the defect fix and updates the status directly in HP ALM
- Various reports can be generated from HP ALM to provide status of Test execution. For example, Status report of Test cases executed, Passed, Failed, No. of open defects, Severity wise defects etc.

Selenium Automated Testing Tool is a free and open-source automated testing framework used to validate web applications across different browsers and platforms.

- Each resource in the Testing team will be provided with access to the scripts that will be used for testing

- Each Tester will directly access their respective assigned test cases and update the status of each executed script in HP ALM directly.

2. Overall Test Approach and Process

2.1. Testing Phases

In accordance with a requirements-based test strategy, the approach will be analytical. I.e., requirement form specifications will form the basis for planning, estimation and test design.

Test cases will be developed during exploratory testing and all test types will be determined during Test planning and strategy.

Testing teams must use experienced-based testing and error guessing and utilizing the tester's skill and intuition along with experience.

The development team has chosen an agile approach with weakly iterations and at the end of each week the identified requirements for that iteration will be delivered to the testing team.

2.1.1. Test Planning

Project leads will communicate to complete the following:

- Identify Requirements for test
- Access risk
- Develop test strategy
- Identify resources
- Create a schedule
- Generate a test plan

***Deliverable**: **Test Plan** (this document).*

2.1.2. Test Definition

The Testing team will be required to complete the following:

- Workload Analysis
- Identify and Describe Test Cases
- Identify and Structure Test Scripts
- Review and Access Test Coverage
- Prepare test case documents and data sets

Deliverables**: **Consolidated Test Case Document, Test Datasets.

2.1.3. Test Execution

The QA team will be required to complete the following:

- Execute tests
- Recover from halted tests
- Verify test results
- Investigate unexpected results
- Determine if Test Completion Criteria and Success Criteria have been achieved
- Log bugs
- Prepare test report

***Deliverable*: Test Report**

2.2. Overall Test Strategy

The overall objective of testing is to ensure the functionality of the website in accordance with the client's specifications.

The tests will identify, verify, fix and retest all high and medium severity bugs as per entrance criteria and prioritize low level bugs for future bug fixing.

The final product of the test should be twofold:

- A production ready website
- A set of test cases and procedures than can be reused for future testing.

2.2.1. QA team's role in the testing process

Understanding the requirements

- Requirement specifications will be acquired by the Project Lead from the client
- An understanding of the requirements will be undertaken by the QA team.

Preparing Test Cases

- QA will develop test cases based on exploratory testing that will cover the scenarios as per requirements.

Test Matrix and Test Cases

- QA will prepare test matrix which maps test cases to the respective requirement.
- Peer review will be conducted on test cases and matrix by the QA lead
- Suggesting and rewords will be sent for approval.
- Reworked improvements will be reviewed and approved by the reviewed

Executing Test Cases

- Test cases will be executive by the respective QA team member on the test environment based on the design scenarios and test data.
- Test results will be updated in the test case documents “Bug Logging and Reporting”

QA will be logging all the defects/bugs in a word document that are found during testing.

After testing has ended, QA will inform the respective developer about the bugs.

Retesting and Regression Testing

Retesting for fixed bugs will be done by the Respective QA team member once it is marked as resolved by the developer and the bug status will be updated accordingly.

Regression testing will be done in parallel to ensure all components work correctly.

2.2.2. Criteria for entering, exiting, and suspending testing

2.2.3. Entry Criteria

- All the necessary documentation, design, and requirements information should be available that will allow testers to operate the system and judge the correct behavior.
- All the standard software tools including the testing tools must have been successfully installed and functioning properly.
- The test environment such as, lab, hardware, software, and system administration support should be ready.
- QA resources have completely understood the requirements
- QA resources have sound knowledge of functionality
- Reviewed test scenarios and test cases

2.2.4. Exit Criteria

- A certain level of requirements coverage has been achieved.
- No high priority or severe bugs are left outstanding.
- All high-risk areas have been fully tested, with only minor residual risks left outstanding.
- Cost – when the budget has been depleted.
- The schedule has been achieved.

2.2.5. Suspension criteria

- The currant build contains many serious bugs which seriously limit testing progress.
- Significant change in requirements suggested by client.
- Software/Hardware problems
- Assigned resources are not available when needed by test team.

2.2.6. Resumption criteria

Resumption will only occur when the problems outlined in the suspension criteria are resolved.

2.2.7. Testing Principles

- Testing will be focused on meeting the business objectives, cost efficiency, and quality.
- There will be common, consistent procedures for all teams supporting testing activities.
- Testing processes will be well defined, yet flexible, with the ability to change as needed.
- Testing activities will build upon previous stages to avoid redundancy or duplication of effort.
- The Testing environment and data will emulate a production environment as much as possible.
- Testing will be a repeatable.
- Testing will be divided into distinct phases, each with clearly defined objectives and goals.
- There will be entrance and exit criteria.

3. Integration Test

3.1. Integration Test Objectives

The objective of the integration test is to, as per requirements, ensure that the review feature of the website allows users to leave ratings and reviews properly commits this information to the database for retrieval.

3.1.1. Test Items in Scope

As per requirement specifications the following will be tested to ensure functionality:

- The review page
- The review form

3.1.2. High-Level Test Scenarios

Scenario ID #	Integration Test Scenario Description
S_ID_001	Check if the review page loads
S_ID_002	Test if the “Leave review” button show the review form when clicked
S_ID_003	Verify that the review form does not allow a blank form or missing fields to be submitted
S_ID_004	Verify that the review form allows submission when all the required fields are filled out
S_ID_005	Verify that submitted reviews are retrieved from the database and displayed in the page

Table 8: Integration Test Scenarios

3.2. Integration Test Approach

A Big-bang integration testing approach will be taken as this feature only relates to a small fraction the website.

3.2.1. Test Preparation Activities

- In order for the test to be commence and be completed successfully the aforementioned testing environments must be configured correctly with required software (XAMMP and MYSQL).

- When the environments are configured, QA team will approve test cases and data to begin the test.

3.2.2. Test Execution Activities

- Once all Test cases are approved and the test environment is ready for testing, tester will start an exploratory test of website to ensure it is stable.
- Each Tester is assigned Test cases directly in HP ALM
- Testers to ensure necessary access to the testing environment, HP ALM for updating test status and raise defects. If any issues, will be escalated to the Test Lead and in turn to the Project Manager as escalation.
- Each tester performs step by step execution and updates the executions status. The tester enters Pass or Fail Status for each of the step directly in HP ALM
- If any failures, defect will be raised as per severity guidelines in HP ALM tool detailing steps to simulate along with screenshots if appropriate
- If there are any defects that are not part of steps but could be outside the test steps, such defects need to be captured in HP ALM and reported to the QA Lead.
- This process is repeated until all test cases are executed fully with Pass/Fail status.

3.2.3. Test Deliverables

Deliverable: Test Report

3.2.4. Roles and Responsibilities

Name	Responsibility
QA Team Leader	• Communicate with Dev team and Testers to ensure the environment is functioning correctly
QA Team Member	• Acquire test cases and data from QA Team leader to conduct the required tests

Table 10: Integration Test Roles and Responsibilities

4. User Acceptance Test

4.1. User Acceptance Test Objectives

As per the requirements and specifications of The Eden Island Villa Resort, the objective of this test is to ensure that the delivered product is of high quality and functionality.

4.1.1. Test Items in Scope

- The pre-deployment Eden Island Vila resort's website on the test environment

4.1.2. High-Level Test Scenarios

Scenario ID #	UAT Scenario Description
S_ID_0010	User visits the website
S_ID_0012	User tries navigation to other pages from the homepage
S_ID_0013	User tries to leave a review through the review page
S_ID_0014	Test if the review page correctly loads user reviews retrieved from the backend
S_ID_0015	Test if the Blog Page loads and all links to posts work correctly
S_ID_0016	Test if the Gallery page loads all images correctly
S_ID_0017	Ensure all pages are responsive and properly show all content on mobile screens
S_ID_0018	Test all links on the website

Table 14: UAT Scenarios

4.1.3. Test Items not in Scope

- The reservation form submission
- The contact form submission

4.2. User Acceptance Test Approach

4.2.1. Test Preparation Activities

- In preparation, an analysis of the business requirements must be available.
- Website should be fully developed and in its final stages
- All other testing must be done
- Regression testing must be completed with no major bugs remaining
- All reported bugs must be fixed before testing can commence

4.2.2. Test Execution Activities

- Analysis of Business Requirements
- Creation of UAT test plan by the QA team
- Test scenarios are to be identified by the QA team
- QA creates test cases
- Test data is prepared by the QA Team
- Test cases are run
- Results are recorded
- Objectives of the tests are confirmed

4.2.3. Test Deliverables

***Deliverable*: Test Report**

5. Smoke Test

5.1. Smoke Test Objectives

The primary objective of this test is to determine whether the current build version of the website is stable enough to run further tests.

5.1.1. Test Items in Scope

The following are the requirements that are being tested.

- Review Page functionality
- Gallery Page functionality
- Blog Page & Posts Functionality
- Reservation page
- Contact Page
- Mobile Responsiveness

5.1.2. High-Level Test Scenarios

Scenario ID #	Smoke Test Scenario Description
S_ID_0020	Navigate though the website using the navigation bar
S_ID_0021	Test if all pages load correctly
S_ID_0022	Test if all forms allow user input
S_ID_0023	Test that all links work

Table 23: Smoke Test Scenarios

5.1.3. Test Items not in Scope

- Reservation form submission
- Contact form submission

5.2. Smoke Test Approach

5.2.1. Test Preparation Activities

- In order for the test to be commence and be completed successfully the aforementioned testing environments must be configured correctly with required software (XAMMP and MYSQL).

- When the environments are configured, QA team will approve test cases and data to begin the test.

5.2.2. Test Execution Activities

- Once all Test cases are approved and the test environment is ready for testing, tester will start an exploratory test of website to ensure it is stable.

- Each Tester is assigned Test cases directly in HP ALM and test scrips prepared by the Dev Team

- Testers to ensure necessary access to the testing environment, HP ALM for updating test status and raise defects. If any issues, will be escalated to the Test Lead and in turn to the Project Manager as escalation.

- Each tester performs step by step execution and updates the executions status. The tester enters the issues raised directly in HP ALM

- If any failures, defect will be raised as per severity guidelines in HP ALM tool detailing steps to simulate along with screenshots if appropriate

- If there are any defects that are not part of steps but could be outside the test steps, such defects need to be captured in HP ALM and reported to the QA Lead.

- This process is repeated until all test cases and scripts are executed fully.

5.2.3. Test Deliverables

Deliverable: Test Report

6. Test Schedule

Milestone	Planned Start Date	Planned End Date
Test Planning	24/5/2022	24/5/2022
Review requirements documents	24/5/2022	24/5/2022
Create test basis	24/5/2022	24/5/2022
Staff and train new team members	25/5/2022	25/5/2022
First deploy to QA test environment	25/5/2022	25/5/2022
Testing Iteration 1	25/5/2022	25/5/2022
Iteration 2 deployed to QA test environment	25/5/2022	25/5/2022
Testing iteration 2	26/5/2022	26/5/2022
Integration test	26/5/2022	26/5/2022
Smoke test	26/5/2022	26/5/2022
User Acceptance test	26/5/2022	26/5/2022
Bug fixing final build	27/5/2022	27/5/2022
Deploy	27/5/2022	27/5/2022
Release to production	27/5/2022	27/5/2022

Table 32: Test Schedule