**Test Plan**

**Mini Project Quality Engineer A**

**Alterra Academy**

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# Test Plan

## Introduction

A document containing the definition of test objectives and objectives within the iteration (or project) scope, the items to be tested, the approach to be taken, the resources required and the points to be produced. In other words, a test plan can be referred to as a plan or scenario to carry out testing that will be carried out either by experts or general users. The system that will be tested is the web UI, API, and mobile application of Alterra Academy.

### 1.1 Purpose

The purpose of this test plan document is to :

1. The document should detail what requires to be tested, how it will be tested, and who is in charge of testing.
2. It acts as a layout to implement software testing activities as a defined process.
3. Determine the tools to be used for testing.

d. To make it easier for developers to do testing so that the testing carried out

becomes clear so that the results are more useful and efficient.

### 1.2 Background

The section describes what is to be tested and why. The examples of objectives (or whys) are checking the quality of existing functionality, testing new features, or ensuring stable work throughout the product life cycle.

Testing needs to be done to ensure that a software or system being tested is in accordance with the requirements made. In addition, testing is also carried out to identify possible bugs that appear in the system created. To perform the test, a test plan document is needed. This test plan is made as a reference in conducting tests so that the expected goals and results can be achieved.

### 1.3 Scope

This document contains testing of the AltaShop web system. The scope to be tested includes testing the functionality, manually, user interface, and automation of each feature on the web such as authorized user (register, login, and logout), homepage (add product,reduce product, and rating product), cart, and transaction. For mobile app, the scope to be tested is using testing that is the same as web UI, just the feature on mobile that will be tested is auth and homepage.

The scope to be tested includes testing manually and automation for API on API url <https://documenter.getpostman.com/view/5781191/2s7YYpekQS>.

### Requirement for Test

Requirements for this test include :

For Web UI the system being tested, which is AltaShop. For API the API URL being tested, which is <https://documenter.getpostman.com/view/5781191/2s7YYpekQS>. Mobile app is app-release.apk.

Tools that are used for testing such as :

1. Katalon Studio for automation testing for all software.
2. Google Docs for document test and report.
3. Microsoft Excel for test documentation.
4. Vysor used for emulator mobile testing.

Both tools are used for all systems that will be tested.

## Test Strategy

### 3.1 Test Types

#### 3.1.1 Web UI

1. Manual Testing

|  |  |
| --- | --- |
| Test Objective | Perform manual checks without using the help of tools or scripts to ensure if the application being tested is free of defects and the application software can work as expected. |
| Technique | Analyze system.  Create a document test plan.  Create scenarios  Create test case  Finding bugs and errors and fixed it |
| Completion Criteria | Verify requirement.  Verify the result are same as expected |

1. Automation Testing

|  |  |
| --- | --- |
| Test Objective | To compare expected results with actual results. |
| Technique | Get the object  Create test cases  Run test suite  Check the result and make a report. |
| Completion Criteria | Verify every object that is to be used.  Verify the results are the same as expected. |

#### 3.1.2 API

1. Function Testing

|  |  |
| --- | --- |
| Test Objective | Ensure your APIs and applications function as they ought to. |
| Technique | Test endpoint and request url with various conditions. |
| Completion Criteria | Verify response data.  Verify the result are same as expected |

1. Automation Testing

|  |  |
| --- | --- |
| Test Objective | API testing should culminate in the creation of a set of scripts or a tool that can be used to execute the API regularly |
| Technique | Get endpoint  Set method  Create request body and test cases  Run test suite  Check the result and make a report. |
| Completion Criteria | Verify every endpoint and method request body that is to be used.  Verify the results are the same as expected. |

#### 3.1.3 Mobile

1. Manual Testing

|  |  |
| --- | --- |
| Test Objective | If the functionalities or UI of the app are still in a changing phase then it doesn’t make sense to invest in automation. Similarly, if the functionalities of the app are vital, then it is better to test manually. |
| Technique | Analyze system.  Create a document test plan.  Create scenarios  Create test case  Finding bugs and errors and fixed it |
| Completion Criteria | Verify requirement.  Verify the result are same as expected |

1. Automation Testing

|  |  |
| --- | --- |
| Test Objective | Lengthy tests that are often avoided or missed thus leaving undetected bugs. Also 100% coverage, in-depth execution is not possible with manual testing. |
| Technique | Get the object  Create test cases  Run test suite  Check the result and make a report. |
| Completion Criteria | Verify every object that is to be used.  Verify the results are the same as expected. |

### 3.2 Tools

|  |  |  |  |
| --- | --- | --- | --- |
|  | Tool | Vendor | Version |
| Web UI, Mobile and API Testing Tools | Katalon Studio | Katalon | 8.3.0 |
| Test Case Document | Microsoft Excel | Microsoft | 2019 |
| Mobile Test Emulator | Vysor | Vysor | 4.1.77 |
| Test Plan and Report | Google Docs | Google Docs | 2019 |

## Resources

### 4.1 System

The following is a list of equipment requirements from the implementation of the test.

|  |  |
| --- | --- |
| System Resources | |
| Resource | Name/Type |
| Web UI  API  Mobile App | <https://alta-shop.vercel.app/>  <https://documenter.getpostman.com/view/5781191/2s7YYpekQS>  app-release.apk |
| PC  Processor  RAM  Operation System | Intel(R) Core(TM) i3-1005G1  4 GB  Windows 11 Home Single Language |
| Software Test | Katalon Studio  Microsoft Excel  Vysor |

## Project Milestones

|  |  |  |  |
| --- | --- | --- | --- |
| No | Milestone Task | Start date | End date |
| 1. | Plan Test | 25/10/2022 | 27/10/2022 |
| 2. | Design Test | 25/10/2022 | 27/10/2022 |
| 3. | Implement Test | 28/10/2022 | 04/11/2022 |
| 4. | Execute Test | 28/10/2022 | 04/11/2022 |
| 5. | Report Test | 29/10/2022 | 05/11/2022 |

## Deliverables

The deliverable of the tests that have been carried out is in the form of a list of test results documentation. As :

1. Document test plan.

That is a document created using Microsoft Word that contains a plan on how the testing will be carried out and the requirements and types of tests that will be implemented.

1. Document matrix

Contains information about the modules that will be tested on each system complete with what features are in each module. This document will make it easier to create test scenarios that will be made.

1. Document Test Scenario.

Is a document that contains information about what test scenarios will be run complete with test cases, test data, and expected results.

1. Report

Contains an overall report related to the results of tests that have been carried out on each system.

## Appendix A: Project Tasks

|  |  |
| --- | --- |
| 1. | Plan Test |
| 2. | Identify Requirements for Test |
| 3. | Design Test |
| 5. | Identify and Describe Test Cases |
| 6. | Implement Test |
| 7. | Record or Program Test Scripts |
| 8. | Execute Test |
| 9. | Evaluate Execution of Test |
| 10. | Report Test |