**Aurora Fatwari Suryadi**

**Kelas A (QE)**

**FINAL PROJECT QUALITY ENGINEER**

**“ Website/ Rest API/ Mobile ”**

**Test Plan**

**Version 1.0**

**Revision History**

| **Date** | **Version** | **Description** | **Author** |
| --- | --- | --- | --- |
| 26/04/2022 | 1.0 | Functional Testing, Integration Testing, User Interfaces Testing, Automation Testing, CI/CD | Aurora Fatwari Suryadi |

**Table of Contents**

[1. Introduction 4](#_heading=h.30j0zll)

[1.1. Purpose 4](#_heading=h.1fob9te)

[1.2. Background 4](#_heading=h.3znysh7)

[1.3. Scope 5](#_heading=h.2et92p0)

[1.4. Project Identification 5](#_heading=h.tyjcwt)

[2. Requirement for Test 6](#_heading=h.3dy6vkm)

[3. Test Strategy 6](#_heading=h.1t3h5sf)

[3.1. Testing Types 6](#_heading=h.4d34og8)

[3.1.1. Website 6](#_heading=h.2s8eyo1)

[3.1.2. Rest API 7](#_heading=h.17dp8vu)

[3.1.3. Mobile Application 7](#_heading=h.3rdcrjn)

[3.2. Tools 8](#_heading=h.26in1rg)

[4. Resources 8](#_heading=h.lnxbz9)

[4.1. Workers 8](#_heading=h.35nkun2)

[4.2. System 9](#_heading=h.1ksv4uv)

[5. Project Milestones 9](#_heading=h.44sinio)

[6. Deliverables 10](#_heading=h.2jxsxqh)

[7. Test Model 10](#_heading=h.z337ya)

[8. Appendix A: Project Tasks: 10](#_heading=h.3j2qqm3)

[9. CI/CD 11](#_heading=h.1y810tw)

**Test Plan**

# Introduction

This test plan explains how the software created can run according to a predetermined plan. The systems that will be tested are the Website, Rest API and Mobile Application which have been created by Altera Academy. The main focus of this application is to ensure the alignment of information between all these systems. This document is used to test the application that has been made. The results of the tests that have been carried out will be used to determine the quality of the application.

## Purpose

This test plan document was created to support website system testing, rest API and mobile on applications provided by Alterra Academy, including:

1. Identify the software components to be tested.
2. Make list of recommended requirements for the test
3. Make recommendations for needs to be tested.
4. Make recommendations and describe the strategy testing that will be carried out.

## Background

The testing phase that is built is very much needed so that the performance of the software used can run as expected. In addition, this stage is also carried out to overcome or reduce the occurrence of error.

The scope of testing that will be carried out so that the performance of the software can run smoothly both include:

1. Functional Testing

Functional Testing is a type of testing that verifies that each application function operates according to the requirement specification. Functional testing focuses on manual and automated testing.

1. Integration Testing

Integration testing is one level of software testing where individual units are combined and tested as a group. The purpose of this level of testing is to expose errors in the interactions between integrated units.

1. User Interfaces Testing

Connections that integrate and facilitate communication between these components are referred to as Interfaces. The function of the interface is to verify that communication between systems is carried out properly.

1. Automation Testing

Automation testing is a procedure in which automated tools are used to write test cases and run them, including test characteristics such as loading, stress, and performance. Automated processes are designed to provide higher efficiency, effectiveness and accuracy. It is well suited for handling repetitive tasks as well as functions that can prove difficult for manual testing.

## Scope

The scope to be tested includes functional testing, integration testing, user interfaces testing, automation testingand the accuracy of the software. In addition, testing will also be carried out on each form in the software. Testing is only done with a tester.

## Project Identification

| **Document (version / date)** | **Created or Available** | **Receive or Reviewed** | **Author or Resource** | **Notes** |
| --- | --- | --- | --- | --- |
| Requirements Specification | ο Yes ο No | ο Yes ο No | ο Yes ο No |  |
| Functional Specification | ο Yes ο No | ο Yes ο No | ο Yes ο No |  |
| Project Plan | ο Yes ο No | ο Yes ο No | ο Yes ο No |  |

# Requirement for Test

Tests will be carried out on the function of each form, whether the form can run as expected or not. Elements to be in testing in this testing is the features of the website system, Rest API and mobile applications that have been created.

# Test Strategy

The strategy consists of all plans in the test plan carried out to carry out tests onsoftware or system that has been built.

## Testing Types

### Website

1. Function Testing

| **Test Objective :** | Input forms such as the register and login features can input data for processing |
| --- | --- |
| **Technique :** | * Test the function of the button on the form * Test the input form with various input conditions * Verify the results of the output are in accordance with the input |
| **Completion Criteria :** | Output is in accordance with the input made |
| **Special Considerations :** | **-** |

1. User Interfaces Testing

| **Test Objective :** | Ensure all the components in each form can work well |
| --- | --- |
| **Technique :** | * **Login form**   Input : Entering characters to perform sql injection,  Perform brute force passwords.  Output : The login form can only accept users who have  access rights.   * **Report form**   Input : Various input conditions.  Output : report forms can generate various kinds  reports according to the conditions entered. |
| **Completion Criteria :** | The appearance of the application is easy to use by the user |
| **Special Considerations :** | **-** |

### Rest API

1. Function Testing

| **Test Objective :** | Ensure all code and data responses are as expected |
| --- | --- |
| **Technique :** | * Test input with various input conditions * Make sure the output matches the input |
| **Completion Criteria :** | Provide a response in the form of code and data |
| **Special Considerations :** | **-** |

### Mobile Application

1. Function Testing

| **Test Objective :** | Input forms such as the register and login features can input data for processing |
| --- | --- |
| **Technique :** | * Test the function of the button on the form * Test the input form with various input conditions * Verify the results of the input are in accordance with the input |
| **Completion Criteria :** | Output is in accordance with the input made |
| **Special Considerations :** | **-** |

1. User Interfaces Testing

| **Test Objective :** | Ensure all the components in each form can work well |
| --- | --- |
| **Technique :** | * **Login form**   Input : Entering characters to perform sql injection,  Perform brute force passwords.  Output : The login form can only accept users who have  access rights.   * **Report form**   Input : Various input conditions.  Output : report forms can generate various kinds  reports according to the conditions entered. |
| **Completion Criteria :** | The appearance of the application is easy to use by the user |
| **Special Considerations :** | **-** |

## Tools

| **Tools** | **Vendor/ In-house** | **Version** |
| --- | --- | --- |
| Katalon Studio | Katalon | 8.3.0 |
| Vysor | Vysor | 4.1.77 |
| Microsoft Excel 2013 | Microsoft | 15.0.5 |
| Microsoft Word 2013 | Microsoft | 15.0.5 |

# Resources

Describes the recommended resources for testing the system that has been created. tested, such as making transactions on the system.

## Workers

| **Worker** | **Minimum Resources Recomended** | **Specific Responsibilities/ Comments** |
| --- | --- | --- |
| Tester | 1 | * Make a test plan * Make a report on the error that occurred |
| Implementer | 1 | Implement and test the project in develop  Task Details :   1. Try the app according to the flow which has been made. 2. Keeping records of everything events that occur during implementation. |

## System

The following is a table list of equipment requirements from the implementation of the system testing process.

| **System Resources** | |
| --- | --- |
| **Resources** | **Name / Type** |
| URL / Application    Website  Rest API  Mobile Application | <https://qa.alta.id/>  <https://be-qa.alta.id/>  alta-online-shop.apk |
| Client Test PC’s  Operation System  Motherboard  Processor  Hard Disk  RAM | Microsoft Windows 10  Asus  Intel Core i7 4.0 GHz  1 TB  8 GB |

# Project Milestones

Project milestones or timelines are often used in project management and will make it easier to estimate the project/work completion time.

| **No** | **Milestone Task** | **Effort** | **Start Date** | **End Date** |
| --- | --- | --- | --- | --- |
| 1. | Plan Test | 100% | 26/04/2022 | 09/05/2022 |
| 2. | Design Test | 100% | 27/04/2022 | 13/05/2022 |
| 3. | Implement Test | 100% | 28/04/2022 | 13/05/2022 |
| 4. | Execute Test | 100% | 28/04/2022 | 13/05/2022 |
| 5. | Evaluate Test | 100% | 13/05/2022 | 15/05/2022 |

# Deliverables

Test Deliverables is a list of any documents that will be generated after the test is completed. The following are the documents produced after the testing process:

1. Master test plan (this document)

This document contains a plan for the application (system) testing process carried out by a designated person (tester) to check the modules and functions in the application and look for errors / bugs in the application.

1. Test Scenario and expected result in an excel sheet

This document will be in the form of a technical description of the plans that have been made in the test plan. so that the plans that have been made have a clear flow to be implemented

1. Test Report

This document contains the results of the tests that have been carried out on the application.

# Test Model

The test is carried out using manual and automation testing method.

# Appendix A: Project Tasks:

Below are the test related task:

|  | Plan Test |
| --- | --- |
|  | Identify Requirement for Test |
|  | Design Test |
|  | Identify and Describe Test Case |
|  | Implement Test |
|  | Record or Program Test Script |
|  | Execute Test |
|  | Evaluate Execution Test |
|  | Evaluate Test |
|  | Report Test |

# CI/CD

Continuous integration (CI) is integrating code into a code repository and then running tests automatically, quickly, and frequently. You can do this CI by using the commit command.

While continuous delivery or continuous deployment (CD) is a practice that is carried out after the CI process is complete and all code has been successfully integrated, so that applications can be built and released automatically.

This CI/CD pipeline is very commonly used in software development. This CI/CD pipeline is a liaison between the development team and the operational team, in which there are three phases, namely continuous integration, continuous delivery, and continuous deployment. These three phases will be carried out continuously and automatically to get reliable and bug-free software.