

Test Plan

RajaMark

Version: 1.0.0

Date: 19/04/2024

1.0 Introduction

1.1 Purpose

The test plan supports the following objectives:

- I. To detail the activities required to prepare for and conduct the system test.
- II. To communicate with all responsible parties the tasks that they are to perform and the schedule to be followed in performing the tasks.
- III. To define the sources of the information used to prepare the plan.

1.2 Scope

The scope of testing only covers black box functional testing for features developed in Rajaark for F001 until F014. The test plan only covers system level test, excluding unit test, static test, integration test, acceptance test, regression test, confirmation test as well as other types of tests not mentioned in this Test Plan. It would focus on meeting the requirements of the system and making sure that the system is fit for purpose.

1.3 References

The following IEEE standards have been referenced in the preparation of this document.

- I. IEEE 829-2008 Standard for Software and System Test Documentation.

The following documents provide the test basis for this test design:

- I. System Design Document

2.0 Details of Test Plan

2.1 Test Items

The following document(s) will provide the basis for defining the correct operation:

- I. System Design Document
- II. Test Design Specification

2.2 Test Traceability Matrix

The following table contains all the functions in RajaMark and its traceability.

Table 2.2: Test Traceability Matrix

Function ID	Risk Level	Function Description	Source of Function
F001	Low	Register	SDS
F002	Low	Login	SDS
F003	Low	Logout	SDS
F004	Low	Forget Password	SDS
F005	Moderate	Manage Exam	SDS
F006	Moderate	View Exam	SDS
F007	High	Upload Sample Answer	SDS
F008	High	Upload Student Data	SDS
F009	Moderate	View Student Score	SDS
F010	Moderate	Generate Student Report	SDS

F011	High	Preprocess Image	SDS
F012	High	Extract Answer	SDS
F013	High	Compare Answer to Question	SDS
F014	Moderate	Calculate Exam Score	SDS

2.3 Features To Be Tested

The following table contains the features to be tested based on the System Design Document. Listed together are the function ID and its corresponding functions and estimated risk level.

Table 2.3: Features To Be Tested

Function ID	Function	Risk Level	Person In Charge
F001	Register	Low	Danial
F002	Login	Low	Danial
F003	Logout	Low	Surenthar
F004	Forget Password	Low	Surenthar
F005	Manage Exam	Moderate	Hendrick
F006	View Exam	Moderate	Hendrick
F007	Upload Sample Answer	High	Khiruba
F008	Upload Student Data	High	Khiruba
F009	View Student Score	Moderate	Nisya
F010	Generate Student Report	Moderate	Nisya
F011	Preprocess Image	High	Afiq
F012	Extract Answer	High	Afiq
F013	Compare Answer to Question	High	Iffah
F014	Calculate Exam Score	Moderate	Iffah

Other aspects of the system that are not covered in this test plan includes, but is not limited to:

I. Operation Procedure

This test plan is for static, integration and system level test, operation procedure is not covered here.

II. Network Security

This test plan is designed for functional tests, security is not covered here.

III. Performance

This test plan is for functional testing. Hence, performance testing is not covered.

2.5 Approach

The test on RajaMark is a system level functional test that focuses only on the functional part of the system. Hence, the testing will be using a risk-based strategy. This test will also be a black-box test where test cases are derived using black box testing techniques such as:

I. Equivalence partitioning

II. Boundary value analysis

III. Decision table testing

IV. State transition

V. Use case testing

VI. GUI testing

VII. Error Guessing

2.6 Item Pass/Fail Criteria

The system must satisfy the following criteria in order to pass:

- I. All test cases must be passed
- II. No deadlock during operation

Other than that, all test items must fulfill its requirements as stated in the System Design Document.

2.7 Suspension Criteria and Resumption Requirements

Suspension Criteria:

- none

Resumption Requirement:

- none

2.8 Test Deliverables

The following documents will be generated by the system test group and will be delivered during the system testing.

Test documentation:

- I. Test Plan
- II. Test Design Specifications
- III. Test Case Specifications
- IV. Test Logs
- V. Test Incident Reports

2.9 Entry Criteria

The following items are needed before the testing can begin:

- I. System Design Document
- II. Test Design Specification
- III. Test Case Specification

2.10 Exit Criteria

The following items are needed before the testing can end:

- I. All Test Deliverables in Section 2.8 Test Deliverables have been delivered to the client.
- II. Test execution has been completed.
- III. Open defect at the end of final iteration shall be:
 - Zero fatal defect,
 - Zero major defect
 - \leq three minor defects.

Approvals

Approved Date	Approved Version	Approver Role	Approver