Safeboda pricing engine test plan

Test Plan
SB_PRICING_ENGINE

Test Plan

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Revision History

Version No.	Date	Revised By	Description of Change
V1.0	3rd/11/2022	Masete Nicholas	Add more automation environment

Approvals

The undersigned acknowledge that they have reviewed the Master Test Plan and agree with the information presented within this document. Changes to this plan will be coordinated with, and approved by, the undersigned, or their designated representatives. The Project Sponsor will be notified when approvals occur.

Signature:	_____	Date:	_____
Print Name:	_____		
Title:	_____		
Role:	_____		

Signature:	_____	Date:	_____
Print Name:	_____		
Title:	_____		
Role:	Program Director		

Signature:	_____	Date:	_____
Print Name:	_____		
Title:	_____		
Role:	Test Manager		

Signature:	_____	Date:	_____
Print Name:	_____		
Title:	_____		
Role:	QA Engineer		

Test Plan

Definitions

Acronym or Term	Definition
UAT	User Acceptance Test
SB	Safeboda
RTM	Requirement treacebiiity matrix

Reference Documents

Documents and Repository Path	Definition
	Functional requirements document
	Non functional requirements document

Test Plan

1. Document Purpose

The purpose of this document is to outline the test plan process for the safe boda pricing engine. Project Sponsors from all participating departments are intended to review this document. Approval of this document implies that reviewers are confident that following the execution of the test plan, the resulting system will be considered fully-tested and eligible for implementation.

UAT is to be completed by the Business Departments (UAT Team) that will be utilizing the software and/or support departments. The testing is conducted to enable a user to validate that the software meets the agreed upon acceptance criteria.

2. Project Overview

Safeboda pricing engine is a very important module in our ride hailing application that ensures valued is served to the customer, the rider and the organisation. This is a very critical part of our application and its seamless performance is our goal

3. Scope

3.1 In Scope Requirements

<List the BRD and FRS requirement and the corresponding Testcase number in the tabular format>

Ref ID	Functionality
1	We usually have a minimum fare for the trip. So unless the customer has a promotion code with us the trip will never be less than the minimum fare
2	Our basic formula for our base price is a base charge + a duration charge + a distance charge.
3	We will charge a discount or premium depending upon the trip distance. This distance premium tiers will be laid out in a table below.
4	We charge either a discount or a premium depending upon the hour of the day the trip is taken.
5	We may charge a discount or premium on the price depending on the area of town the trip starts in.
6	The charges per trip will vary depending on the vehicle type such as standard car, premium car, bike etc.
7	We will often give customers blanket discounts that apply to all users in a city. So for instance all car users in Kampala might get 50% off of rides.
8	Users may have a promo code such as 80% off your next 3 trips. This can take the price lower than the minimum fare when used.
9	Because drivers often do not have very small amounts of cash we need to round cash trips to the nearest 500 UGX when it comes to the estimate and bill.

3.2 Out of Scope Requirements

Anything that is not mentioned in the requirements from the previous section 3.1 is out of scope for testing.

4. Objectives

Testing is conducted to ensure that the system satisfies the needs of the business as specified in the functional requirements and provides confidence in its use. Modifications to the aforementioned requirements will be captured and tested to the highest level of quality allowed within the project timeline.

To identify and expose defects and associated risks, communicate all known issues to the project team, and ensure that all issues are addressed in an appropriate manner prior to implementation

5. Assumptions/Dependencies/Issues/Risks

This section captures Test Assumptions, Dependencies and Constraints specific to User Acceptance Test (UAT) which are known at this time.

5.1 Assumptions

1) Business Requirements/Software System Requirement Specifications are clear, concise and able to be translated into test cases.
2) Any approved PCR's that QA Team have not had a chance to estimate for will not be included in our testing until such time as they have been estimated, planned and approved.
3) All impacted application(s)/system(s) and their respective interfaces will be tested at least once during the testing phase's lifecycles
4) All necessary development will be complete in time to start testing.
5) JIRA/Adaptavist will be used as test management tool. All test cases, test results and defects will be available in JIRA.
6) All the team member will have access to JIRA

5.2 Dependencies

1) All SDLC artifacts are complete and signed off
2) Test resources availability syncs with project scheduling
3) All test scripts are uploaded to Adaptavist prior to commencement of test execution
4) The Test environments are available and connectivity has been established between all the interfaces identified on this project.
5) All necessary accesses are provided for the test Team
6) Availability of Test Cases and specific test data according to the requirements
7) Changes in scope or redesign will require a project change request be submitted and approved

5.3 Constraints

1) Any unidentified or future changes or inclusions that may adversely affect the test schedule
2) Any technology 'freeze' periods
3) Resource contention and availability of Business, IT & External Stakeholders throughout all work streams due to current allocation on other projects.
4) Timely resolution of issues and key decisions

5.4 Risks

This section lists all potential test related risks known at this time, the proposed mitigation and contingency measures to be adopted by the testing Team.

When conducting risk analysis two components should be considered:

- The probability that the negative event will occur.
- The potential impact or loss associated with the event.

Ref ID	Risk	Risk Probability H / M / L	Risk Impact H / M / L	Mitigation	Contingency

6. User Acceptance Test (UAT) Phase

6.1 Test Planning/Preparation

Test planning and preparation involves ensuring the required framework is in place to support test execution activities. The aim of testing is to ensure that the system matches the requirements specified and that the probability of the occurrence of mistakes endangering real-time operation does not exceed the acceptable level.

The following Test Planning/Preparation activities must be completed prior to initiation of Test execution activities:

6.2 Test Cases and Traceability

Test cases contain a detailed step by step breakdown of each test case to be performed by the tester. Each script contains: test case number, product, test description, requirement number, requestor, tester, action to be performed, test data to be utilized, expected results, error descriptions (if applicable), pass/fail results, date tested, and any additional comments from the tester.

Location of Test Cases:

Location of Traceability: (Embed RTM)

6.3 Test Execution/Management/Reporting

A. Test Execution

Test execution initiates when the test Plan has been completed and signed off, a complete set of test cases have been written that cover all of the functional specifications and certain non-functional specifications, if applicable, and the test environment becomes available. Test execution is basically executing the test cases according to your test plan. For each test case, follow the test steps described in the test case and validate the 'expected' results against the 'actual' results. If the expected results for all steps of the test case were achieved the test passes, otherwise the test case fails. Any failures are documented as a defect with accompanying screen shots or other attachments that will help reproduce the defect.

B. Entry/Exit Criteria

Entry Criteria	• The application works functionally as defined in the specifications • No outstanding "Critical or High" defects • All the identified QA Test Cases are executed with the pass rate of 98% • Any open defects from QA should have resolution plan • All areas have had testing started on them unless pre agreed by UAT stakeholder/Test and Project managers • Entire system functioning and all new components available unless previously agreed between test stakeholder/Test manager and project managers • All test cases are documented and reviewed prior to the commencement of testing

Exit Criteria	• The Acceptance Tests must be completed, with a pass rate of not less than 98%. • No outstanding "Critical or High" defects • Less than 5 significant defects outstanding • All Test cases have been complete • No new defects have been discovered for a week prior to Production Implementation. • All test results recorded and approved • Test summary report documented and approved • Test close off meeting held.

C. Test Management (Tracking)

Depending on the test management tools utilized by the team, test execution and results are logged either manually or in a Test Management tool. If a Test Management tools is being utilized, results will be available and summarised via a dashboard or test metric reporting. Tracking is a necessity in the testing process, as quality metrics are required in order to effectively track how the test effort is progressing and to measure the quality of the system/application.

Test Management activities to be performed are:

a) Test Case Creation and Execution will be performed in Adaptavist Test Management tool
a) JIRA will be used for Defect Management

D. Test Reporting

Test reporting, provides the ability to evaluate testing efforts and communicate test results to Project stakeholders. The objective of reporting is to assess the current status for project testing against testing timeliness and to provide details about the overall quality of the application or system under test.

Test Reporting activities to be performed are:

a) Weekly Test Status Report will be generated and shared to project stakeholders

6.4 Test Closure Tasks

Test closure activities collect data from completed test activities to consolidate experience, test ware, and metrics. Test closure activities occur at project milestones such as when a system/application is released, a project is completed (or cancelled) or a test milestone achieved (i.e. completion of testing phase).

Test Closure activities to be performed are:

a) Test Closure Report will be prepared at the end of testing Phase along with the Recommendations

7. Environments Requirements

The following hardware and software requirements apply to Safeboda princing engine testing only:

• iOS

-Operating system – Version 9.0 or later; compatible with iPhone, iPad, and iPod touch

-Storage size – Minimum 65.9 MB

• Android

-Operating system – Version 4.1 or later

-Storage size – Minimum 17 MB

8. Test Data

To perform system integration testing, test data will be supplied from two sources:

7) Data created specifically for the system integration test and

8) Data obtained from past application versions.

The order of test execution allows for test data to be created before it is needed.

Test Suite #	Test Data #	Test Data Description

9. Deliverables

The following sections detail milestones crucial to the completion of the Testing phase of the project. Once all dependent milestones have been completed, Testing will formally sign-off on the system's functionality and distribute an e-mail to all project stakeholders.

- Testing Plan – A strategy-based document defining test methodology and criteria is distributed to the team.
- Test Cases – A document that details each specific test case that will be performed during the Testing process.
- Testing Closure Report – Formal sign-off indicating the system satisfies the needs of the business as specified in the functional requirements and provides confidence in its use.

10. Schedule

Application/ System	# Cycle	Environment	Planned Start Date	Planned End Date

11. Roles and Responsibilities

Phase	Activity	Test Lead	Dev Lead	Unix, DBA Lead	PM	BA	Comments
Requirement Analysis	Providing detailed list of requirements in scope for the release	I	I	I	A&R	R	Functional lead is also responsible for any functional requirements if developed for the release
Test Case Development	Requirement analysis and test case development	A&R	C	C	C	C	During requirement understanding and test case development test lead would require help from other

							stakeholders to finalize the test plan
Test Case Development	Test requirements review and sign off	A	R	I	R	R	While test lead has the final accountability on finalizing test plan, it is other stake holders responsibility to review and provide sign off
User Acceptance test execution	UAT execution	C	R	C	A	R	

R – Responsibility A – Accountability C – Consulted I – Informed

Responsible: Those who do the work to achieve the task. There is typically one role with a participation type of responsible, although others can be delegated to assist in the work required
Accountable: (also Approver or final Approving authority) those who are ultimately accountable for the correct and thorough completion of the deliverable or task, and the one to whom responsible is accountable. In other words, an Accountable must sign off (Approve) on work that responsible provides. There must be only one Accountable specified for each task or deliverable.
Consulted: Those whose opinions are sought; and with whom there is two-way communication.
Informed: Those who are kept up-to-date on progress, often only on completion of the task or deliverable; and with whom there is just one-way communication

12. Testing Team

The test team is comprised of members who possess a thorough knowledge of the current systems and processing methods. These team members will be better able to initiate test input, review the results, and be more intuitively familiar with the impact on other related business issues and staff activities. Members should be detail-oriented and be diligent in collecting proper documentation to support the test results. Team members are selected based, in part, on the ability of management to reassign the daily duties they will have to forgo while performing the testing.

All team members will be presented with an overview of the test process and what their specific role in Testing will be. The Business Analyst's role in the Testing process is to oversee testing by assigning scripts to SMEs, providing general support, and serving as the primary Testing contact point throughout the test cycle. The BA will be expected to filter out any duplicate defects found and escalate high priority issues to the team in a time sensitive manner.

Name	Project Role	Email	Phone	Location
Nicholas Masete	Automation Engineer	nicholasmasete72 @gmail.com	0775406406	Jinja
Masete Nick	Manual Tester	nick@gmail.com	0755688019	Kampala

13. Defects

Defects will be entered and tracked via Test Management Tool Jira during the UAT process. Each entry will include detailed information about each defect.

13.1 Defect Tracking

Team members will be provided with instruction on how to effectively execute test scripts, as well identify, capture, and report defects. Utilization of Microsoft Office applications and screen capture programs will be required to document defects for escalation. Team members will be expected to present findings on regularly scheduled touch point meetings in the event that end user support and/or Development require additional detail.

Test Plan

13.2 Defect Severity and Priority Standards

Severity	Definition	Expected time for Closure
Critical	A complete software system, or a subsystem, or software unit (program or Module) within the system lost its ability to perform its required function (=Failure) and no workaround available OR Testing of a significant number of tests cannot continue without closure OR Potential show stopper for Go/ No-Go decision to enter next stage or Cutover without closure	1 Business Day
High	The software system, or subsystem, or software unit (program or module) within the system produces Incorrect, Incomplete, or Inconsistent results OR Defect impairs the usability (capability of software to be understood, learned, used and attractive to the user when used under specified conditions [ISO 9126]	2 Business days
Medium/Low	Everything that not Major or Critical	3 Business days

IMPORTANT NOTE: It is recommended that this document be printed and used for reference during test execution activities to ensure uniform categorization of defects across all base test phases.

❖ Examples of Defects and Related Severity Classifications

The following is a list provides examples of defects and their related severity classification. The table below provides uniform guidance to line(s) of business to assist in assigning severity levels to defects. Severity levels (Critical, High, Medium or Low) are measured in terms of the impact to the business as well as any other systems, devices or users impacted with which the new system/application interfaces.

Critical	
1.	Crashes the system
1.	Crashes the user session
2.	Corrupts data
3.	No work-around exists
4.	Prevents completion of a given task within specified business time requirements
5.	Missing security
6.	Violates security policy of business
7.	Negatively impacts customers or business' ability to service customers
8.	Causes violation of regulatory rule or guideline
9.	Prevents or impedes implementation per required scheduled
10.	Unable to interface to specified devices and applications (includes failed or degraded performance due to device or application failure.) ex: printers, interfaces, & TCA
11.	Failure to meet scalability, resiliency and performance requirements within specified thresholds.

High	
1.	Work-around exists
1.	Work-around negatively impacts customer interaction or business process with regard to performance, scalability, stability and resiliency.
2.	Probability of occurrence is high and/or easily reproduced – High means it occurs in daily/regular operations of the application, device or interface

Medium	
1.	Work around exists
1.	Work-around negatively impacts operation of the application, device or interface – does not occur in regular operational use of application, device or interface. Not easily reproduced.
2.	Probability of occurrence is low and/or is not easily reproduced during regular operations of the application, device or interface. This does NOT mean that all issues that are difficult to reproduce fall in this category. Issue severity is based on the effect on the system or users, NOT the difficulty in reproducing issues. This implies auxiliary functionality.

Low	
1.	Work around exists
1.	Spelling
2.	Grammar
3.	Cosmetic – User interface issues that have minimal impact to the operation of the application
4.	Any help documentation or context sensitive information

14. Defect escalation procedure

Below table provides information on when to escalate a defect

Defect Severity	# Blocking test cases	Slipped	Candidate for escalation
Any Level	>10% of total test cases	Yes	
Critical	>5% of total test cases	Yes	
Any Level	Any number	Yes / Go–No Go meeting is scheduled within 5 days from current day	

Defect communication and escalation procedure:

First level of notification: As soon as the defect is logged in to quality center, auto generated email would be sent to the assigned person. Since the defect will be assigned to development team alias, all the team who are subscribed to the alias would get the email.

Daily status review meeting: Along with the test execution status discussions, all the outstanding defects would be discussed in the meeting. Development team, business team, basis team, QA management and other stakeholders as appropriate would join the meeting. Defect details and estimated time of fix would be documented in the quality center accordingly.

Defect disposition meeting: this is a twice a week meeting where in only high impact defects as identified are the candidates for escalation would be discussed in detail. Development team management, QA team management along with respective leads would discuss the finer details and put an action plan to resolve them.

Escalation email to development team/SME team manager: QA Manager would send an email with details of defects which need immediate attention to development team/SME team manager and on need bases a triage call involving senior management would be organized to discuss associated risks, have a resolution plan, and to review the status.

Note: Above mentioned escalation criteria can be adjusted during execution based on number of days left for the release go-no go decision.

15. Integration and Intersystem Interfaces

The following tabular contents will list down the various Interfaces/Applications involved in the Integration Testing of safeboda pricing engine Project and also contains the individual point of contact that will be used for coordinating any Integration Testing.

System ID	Application/Functional Area	Testing Responsibility

16. Suspension and Resumption Criteria

The purpose of this section is to identify the conditions that warrant a temporary suspension of testing and the criteria for resumption.

16.1 Suspension Criteria

Suspension of test activities will be at the discretion of Test Manager/Test Lead and based on the following conditions:

- Environment not available / unstable
- Major functionality not working
- Incorrect data/files loaded in test environment
- Blocking defect that would prevent further testing of the application/system
- Poor code quality which is evidenced by larger than normal number of defects identified in the first few days

16.2 Resumption Criteria

Resumption of testing will be at the discretion of Test Manager/Test Lead and based on the following requirements:

- Environment setup issues corrected
- Application instability issue resolved
- Correct data/files loaded in the test environment
- Blocking defect fixed and retested to provide evidence testing may continue

17. Communication and Escalation

Category	Type	Participants	Mode	Type of reporting
Bi-Weekly project	Project		Telephonic	• High level project status,

meeting			conference	• Key issues and risks, • Action tracker
Weekly status meeting	PMO		Telephonic conference	• Progress as against plan • Key issues and risks • Action tracker
Daily status reporting	Project		Email	Daily reporting of tasks and progress of the same against plan