**Bookkeeping Application to support Small Enterprise and Informal Traders business transactions**

***Test Plan***

**Table of Contents**

1 Introduction [3](#__RefHeading___Toc173041511)

1.1 Scope [3](#__RefHeading___Toc173041512)

1.1.1 In Scope [3](#__RefHeading___Toc173041513)

1.1.2 Out of Scope [3](#__RefHeading___Toc173041514)

1.2 Quality Objective [3](#__RefHeading___Toc173041515)

1.2.1 Primary Objective [3](#__RefHeading___Toc173041516)

1.2.2 Secondary Objective [4](#__RefHeading___Toc173041517)

1.3 Roles and Responsibilities [4](#__RefHeading___Toc173041518)

1.3.1 Developer [4](#__RefHeading___Toc173041519)

1.3.2 Adopter [4](#__RefHeading___Toc173041520)

1.3.3 Testing Process Management Team [4](#__RefHeading___Toc173041521)

1.4 Assumptions / RISKS for Test Execution [5](#__RefHeading___Toc173041522)

1.5 Constraints for Test Execution [5](#__RefHeading___Toc173041523)

1.6 Definitions [6](#__RefHeading___Toc173041524)

2 Test Methodology [6](#__RefHeading___Toc173041525)

2.1 Purpose [6](#__RefHeading___Toc173041526)

2.1.1 Overview [6](#__RefHeading___Toc173041527)

2.1.2 Usability Testing [6](#__RefHeading___Toc173041528)

2.1.3 Unit Testing (Multiple) [7](#__RefHeading___Toc173041529)

2.1.4 Iteration/Regression Testing [7](#__RefHeading___Toc173041530)

2.1.5 Final release Testing [7](#__RefHeading___Toc173041531)

2.1.6 Testing completeness Criteria [8](#__RefHeading___Toc173041532)

# Introduction

This test approach document describes the appropriate strategies, process, workflows and methodologies used to plan, organize, execute and manage testing the new application.

## Scope

Describe the current test approach scope based on your role and project objectives.

### In Scope

The *Test Plan* defines the unit, integration, system, regression, and Client Acceptance testing approach. The test scope includes the following:

* Testing of all functional, application performance, security and use cases requirements listed in the *Use Case* document.
* Quality requirements and fit metrics.
* End-to-end testing testing.

### Out of Scope

The following are considered out of scope for this systemTest Plan and testing scope:

* Testing of Business SOPs, disaster recovery and Business Continuity Plan.

## Quality Objective

### Primary Objective

A primary objective of testing application systems is to: ***assure that the system meets the full requirements, including quality requirements (AKA: Non-functional requirements) and fit metrics for each quality requirement and satisfies the use case scenarios and maintain the quality of the product.*** At the end of the project development cycle, the user should find that the project has met or exceeded all of their expectations as detailed in the requirements.

Any changes, additions, or deletions to the requirements document, Functional Specification, or Design Specification will be documented and tested at the highest level of quality allowed within the remaining time of the project and within the ability of the test team.

### Secondary Objective

The secondary objective of testing application systems will be to: ***identify and expose all issues and associated risks, communicate all known issues to the project team, and ensure that all issues are addressed in an appropriate matter before release.*** As an objective, this requires careful and methodical testing of the application to first ensure all areas of the system are scrutinized and, consequently, all issues (bugs) found are dealt with appropriately.

## Roles and Responsibilities

Roles and responsibilities may differ based on the actual SOW. Below listed functions are for testing phase.

### Developer

Responsible to:

(a) Develop the system/application

(b) Develop Use cases and requirements in collaboration with the Adopters

(c) Conduct Unit, system, regression and integration testing

(d) Support user acceptance testing

### Outsourced Testers

The Testers will undertake formal adoption, testing, validation, and application of this system Responsible to:

(a) Contribute to Use case, requirement development through review

(b) Conduct Full User Acceptance, regression, and end-to-end testing; this includes identifying testing scenarios, building the test scripts, executing scripts and reporting test results

## Assumptions/ Risks for Test Execution

Below are some minimum assumptions (in black) that has be completed .

* For User Acceptance testing, the Developer has completed unit, system and integration testing and met all the Requirement’s (including quality requirements) based on Requirement Traceability Matrix.
* User Acceptance testing will be conducted by End-users
* Use cases have been developed by the Developer for User Acceptance testing. Use cases are approved by test lead.
* Tester will support and provide appropriate guidance to the Developer to conduct testing
* Major dependencies should be reported immediately after the testing kickoff meeting.

Risks

The following risks have been identified and the appropriate action identified to mitigate their impact on the project. The impact (or severity) of the risk is based on how the project would be affected if the risk was triggered. The trigger is what milestone or event would cause the risk to become an issue to be dealt with.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| # | Risk | Impact | Trigger | Mitigation Plan |
| 1 | Scope Creep – as testers become more familiar with the tool, they will want more functionality | High | Delays in implementation date | Each iteration, functionality will be closely monitored. Priorities will be set and discussed by stakeholders. Since the driver is functionality and not time, it may be necessary to push the date out. |
| 2 | Changes to the functionality may negate the tests already written and we may loose test cases already written | High – to schedule and quality | Loss of all test cases | Export data prior to any upgrade, massage as necessary and re-import after upgrade. |
| 3 | Weekly delivery is not possible because the developer works off site | Medium | Product did not get delivered on schedule |  |
| 4 |  |  |  |  |

## Constraints for Test Execution

Below are some minimum assumptions (in black)

* Developer will support ongoing testing activities based on priorities
* The Developer cannot execute the User Acceptance and End to End test scripts. After debugging, the developer can conduct their internal test, but no results from that test can be recorded / reported.

# Test Methodology

## Purpose

### Overview

The purpose of the Test Plan is to achieve the following:

* Define testing strategies for each area and sub-area to include all the functional and quality (non-functional) requirements.
* Divide Design Spec into testable areas and sub-areas (do not confuse with more detailed test spec). Be sure to also identify and include areas that are to be omitted (not tested) also.
* Identify testing risks.
* Identify required resources and related information.
* Provide testing Schedule.

### Usability Testing

The purpose of usability testing is to ensure that the new components and features will function in a manner that is acceptable to the customer.

Development will typically create a non-functioning prototype of the UI components to evaluate the proposed design. Usability testing can be coordinated by testing, but actual testing must be performed by non-testers (**as close to end-users as possible).** Testing will review the findings and provide the project team with its evaluation of the impact these changes will have on the testing process and to the project as a whole.

### Unit Testing (Multiple)

Unit Testing is conducted by the Developer during code development process to ensure that proper functionality and code coverage have been achieved by each developer both during coding and in preparation for acceptance into iterations testing.

The following are the example areas of the project must be unit-tested and signed-off before being passed on to regression Testing:

* Databases, Stored Procedures, Triggers, Tables, and Indexes

### Iteration/Regression Testing

During the repeated cycles of identifying bugs and taking receipt of new builds (containing bug fix code changes), there are several processes which are common to this phase across all projects. These include the various types of tests: functionality, performance, stress, configuration, etc. There is also the process of communicating results from testing and ensuring that new drops/iterations contain stable fixes (regression).

### Final release Testing

Testing team with end-users participates in this milestone process as well by providing confirmation feedback on new issues uncovered, and input based on identical or similar issues detected earlier. The intention is to verify that the product is ready for distribution, acceptable to the customer and iron out potential operational issues.

Assuming critical bugs are resolved during previous iterations testing- Throughout the Final Release test cycle, bug fixes will be focused on minor and trivial bugs (severity 3 and 4). Testing will continue its process of verifying the stability of the application through regression testing (existing known bugs, as well as existing test cases).

The milestone target of this phase is to establish that the application under test has reached a level of stability, appropriate for its usage (number users, etc.), that it can be released to the end users .

### Testing completeness Criteria

Release for production can occur only after the successful completion of the application under test throughout all of the phases and milestones previously discussed above.

The milestone target is to place the release/app (build) into production after it has been shown that the app has reached a level of stability that meets or exceeds the client expectations as defined in the Requirements and Functional Spec.

## Test Completeness

Testing will be considered complete when the following conditions have been met:

### Standard Conditions:

* When the testers and Developer, agree that testing is complete, the app is stable, and agree that the application meets functional requirements.
* Script execution of all test cases in all areas have passed.
* Each test area has been signed off as completed by the tester .
* 50% of all resolved severity 1 and 2 bugs have been successfully re-regressed as final validation.
* Ad hoc testing in all areas has been completed.