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**System Test Plan**

**Prepared By**

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# Document History

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| --- | --- | --- | --- |
| **Version** | **Revision Date** | **Name** | **Modification Summary** |
| 1.0 | 25/03/2016 | Suresh Babu | Initial Draft |
| 1.1 | 29/04/2016 | Santhosh | Updated the QA and Build schedules. |
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# Approvals

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **User Id** | **Role** | **Date** |
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# Introduction

## Project Overview

**Stock Accounting System** allows various Options i.e (Stocks,suppliers,purchasers customers,sales,payments) to login and access the application for further usage and also it provides information about various features offered by Stock Accounting.

The objective of the **Stock Accounting** Admin module in project is to create new suppliers, new purchasers,new Customers and sales creation along with the privileges. Admin is the super user, which has all the privileges for creating,updating and as well as deleting also.

**Document Purpose**

The purpose of this document is to provide an overview for System Testing (ST) of Stock Accounting. This document covers the testing scope, Entry and Exit criteria, QA Deliverables, QA Schedule, High Level Test Scenarios, Assumptions & Dependencies, Test Management and Risks & Mitigations.

## 

## Referred Documents

The Stock Accounting Functional Requirements Specifications (FRS)

# Scope

## In Scope

* Testing the Admin module in stock accounting project.
* Functional / System testing of all test scenarios mentioned under sec 10.0.
* Creation of Test Requirements, Test Cases and Test Sets in ALM.
* Preparation of Test Data for executing the Test Cases.
* Test Case execution for 2 builds and defect Tracking.
* Test Case execution on Operating System “Windows 2003”.
* Test Case execution using browser “Internet Explorer 6.0”.

## Out of Scope

* Load & Performance testing.
* Unit and Integration testing is not part of this scope.

# Assumptions and Dependencies

## Assumptions

* The main drivers for System Testing are the functionalities contained within the functional specification documents. These will define the scope of the testing and it is assumed that once functionality from these has been tested then full coverage has been achieved.
* Staging Server will be accessible.
* Contact details of person(s) concerned with resolving environmental issues will be provided.
* Formal and Intensive Unit and Integration testing will be done by the Dev Team.
* Defects will be dealt with in timely fashion by all teams involved.
* New builds will be deployed in QA environment as per build schedule.
* All identified High-level test scenarios can be simulated in test environment.

## Dependencies

* Knowledge transfer on functionality as well as technology to offshore testing team
* Availability of testing environment to validate test scripts.
* Availability of connection to applications from offshore.
* Availability of connection to Databases from offshore.
* Availability of Database schema description to understand the Database Structure.
* Availability of All necessary software’s and Operating System’s
* Test data as specified by the QA team, injected into the stage environment.
* All necessary User ID’s & Passwords provided to the QA team

# Risks and Mitigations

|  |  |  |  |
| --- | --- | --- | --- |
| **Risk** | **Likelihood** | **Impact** | **Mitigation** |
| Application not accessible or not responding properly during test execution due to environmental issue. | Low | High | Perform an environment sanity check before starting the formal testing Obtain Mobile numbers of IT team members to escalate P1 environment issues. |
| Test team does not have adequate knowledge of the application | Low | High | Organize extensive knowledge transfer sessions with offshore team |
| Development team having less knowledge of Quality Center. | Low | High | QA team will provide clarifications to the Development team. |
| Presence of large number of blocking Defect‘s during test execution, this would prevent or delay testing. | Low | High | Daily defect meeting will be utilized to prioritize defects  QA co-ordinator will work closely with the IT team lead to provide |
| Changes to requirements | Medium | Medium | All new Requirements that arise are initiated through Change Control process |

# System Testing Entry and Exit Criteria

## Entry Criteria

The following must be in place prior to the onset of QA System Testing.

**Business**

* The Business Requirements Document is frozen.
* All new Requirements that arise are initiated through Change Control process.

**QA**

* Daily communication plan in place.
* Test Cases Reviewed & signed-off.
* Dependent teams & resources identified.
* QA Data Requirements identified & all necessary passwords/accesses obtained.
* Daily Defect Meeting Day/Time/Attendance established in the execution phase.
* All appropriate team members have access to Quality Center.
* Test cases have been linked to test sets in Quality Center.

## Exit Criteria

The following must be in place prior to the sign-off of QA System Testing:

* No open P1 or P2 defects.
* All P3-P5 (enhancements) defects have a documented resolution plan.
* A minimum of 2 builds (100% execution) is completed.
* 95% Pass Rate of all test cases.
* Regression testing of defects fixed during system testing.
* All defects logged in Quality Center.
* QA sign-off on system test.
* System test Close-out report is provided.
* Documented list of any outstanding (open) defects.

# QA Deliverables

The following items will be delivered:

* System Test Plan
* Test Cases
* Daily Test Execution Report
* Defect Log (Maintained in Quality Center)
* Traceability Matrix
* Exit Report.
* Project Metrics.

# QA Schedule

| **QA Activities** | **QA Deliverable** | **Start Date** | **End Date** |
| --- | --- | --- | --- |
| Analysis of the Documents | Understanding BRS, FRS Documents |  |  |
| Test Plan | Test Plan Document |  |  |
| Test Scenarios Identification & Documentation | Test Scenarios Document |  |  |
| Designing and Validating the Test Case’s | Test Cases, Peer Review, Test Data |  |  |
| Test Environment Setup and Traceability Matrix Preparation | N/A |  |  |
| Test case execution and Defect Tracking | Complete the execution and defect log maintained in ALM 12.0 |  |  |
| End-to-End Test Scenarios Identification & End-to-End test cases preparation | End-to-End Test Scenarios & End-to-End test cases |  |  |
| System Testing Sign -off | Exit report |  |  |

# Build Schedule

New builds will only be deployed in stage environment as per build schedule. Only emergency builds can be deployed on other dates. Each build should have version number. Email to QA coordinator has to be sent after successful installation of build. Sanity test by IT team should be conducted after build installation.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S.No** | **Activity** | **No of Resources** | **Start Date** | **End Date** | **No of Days** |
| 1 | Build # 001 | 1 |  |  |  |
| 2 | Build # 002 | 1 |  |  |  |

# Test Environment

The following list of software will be required in the System Test Environment

|  |  |
| --- | --- |
| **QA URLs** | Stock Accounting –“ http://<app-server>” |
| **Web Browser** | Internet Explorer 6.0 |
| **Test management Tool** | ALM – 12.0, http://qcserver:8080/qcbin  Domain: ERP, Project :Stock Accounting |
| **Operating System** | Microsoft Windows 2003 |
| **Hardware** | Intel (R) Pentium, 2.8 GHZ, 501MB |

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# High Level Test Scenarios

|  |  |
| --- | --- |
| **S No** | **Test Scenario’s** |
| **Admin** | |
| **1.0** | **Stock accounting login page** |
| 1.1 | Admin login |
| 1.2 | Admin Forget Password |
| 1.3 | **Register** |
| **2.0** | **Stock accounting Home Page** |
| 2.1 | Dashboard |
| **3.0** | **Stock Items** |
| 3.1 | Stock Item Creation |
| 3.2 | Stock item Updation |
| 3.3 | Stock item deletion |
| **4.0** | **Suppliers** |
| 4.1 | Suppliers creation |
| 4.2 | Suppliers updation |
| 4.3 | Suppliers deletion |
| **5.0** | **Purchases** |
| 5.1 | Purchaser Creation |
| 5.2 | Purchaser Updation |
| 5.3 | Purchaser Deletion |
| **6.0** | **Customers** |
| 6.1 | Customer Creation |
| 6.2 | Customer Updation |
| 6.3 | Customer Deletion |
| **7.0** | **Sales** |
| 7.1 | Sales Creation |
| 7.2 | Sales Updation |
| 7.3 | Sales Deletion |
| **8.0** | **Outstanding** |
| 8.1 | Purchaser outstanding |
| 8.2 | Sales Outstanding |
| 8.3 | Payments Transactions |
| **9.0** | **Administartor Links** |
| **10.0** | **Settings** |
| 10.1 | Font Name |
| 10.2 | Font size |
| 10.3 | Themes |
| **11.0** | **Log out** |

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# Test Approach

## Test Preparation

* The QA Team will prepare Test Scenarios and Test Requirements based on all the project related documents provided by the project team.
* The QA Team will prepare the system test cases to validate each Test Scenario and Test requirement.
* The system test cases will check the application functionality by supplying a set of valid and invalid inputs.
* The system test cases will be reviewed by the development PL. The Test Lead/Analyst will approve the document. The test cases will be stored in Quality Center from the draft stage itself. The test coordinator will export the test cases in excel format for ease of review.
* SQL queries will be attached to the relevant steps of the test scripts to validate the information on the screen will be validated against the information contained in the database.

## Test Execution

* The test scripts will be executed manually. The results will be validated against the expected results listed in the test scripts. Any defect found in this process will be logged in Quality Center.
* The application development team will review defects raised by the QA team. The tester will provide all necessary information about the defect in Quality Center. Attachment tab of Quality Center will be used for providing any screen shots, files required for investigating the defects.
* After the completion of the testing run, the peer team member of the Testing Team reviews the results. The test results are reported to the project PL who will approve the test results. This process may repeat till the number of bugs found is within the acceptable limits and the test exit criteria previously determined is achieved.
* There will be at least six complete cycles of tests executed. The last cycle should go through without any P1 or P2 defects. If there are P1 and P2 defects are found in the last cycle, more testing cycles will be executed until all P1 and P2s are removed.

# 

# Appendix A

1. **Test Planning**
   1. **ALM:**

Test cases, test sets and defects will be stored and maintained in the Stock accounting (Domain – ERP) in Quality Center, http://localhost:8080/qcbin/.

**Quality Center :Requirements -** Requirements will be documented in the Requirements module and associated with applicable test cases.

**Quality Center :Test Plan -** Test cases will be written in the Test Plan tab. Test cases will be organized by subject (or function/ use case). At this time, all test cases are written for manual execution.

**Quality Center :Test Lab -** Test Sets containing test cases to be executed during System Test will be created in and executed from the Test Lab tab. Test cases will be executed manually.

**Quality Center :Defects -** The Quality Center Defects tab will be used to log and communicate status of defects. If a test case does not meet the expected result, the test case will be “failed” and a defect will be logged identifying the problem.

1. **Defect Management**
   1. **Prioritization of Defects**

During system, business and user-acceptance testing, defects will be logged in Quality Center and assigned a status and priority. Any “Show Stopper” issues will be assigned a priority of P1. Issue priorities are defined as follows:

**P1– High -** affects core functionality; prevents availability or interrupts testing; no workaround available. Must be resolved ASAP.

**P2 – Medium High -** affects core functionality; interrupts testing; workaround available. Must be resolved within 2 business days.

**P3** – **Medium -** interrupts isolated test cases; UI problems; workaround available. Resolution pending schedule.

**P4 – Medium Low -** affects isolated test cases; nice-to-haves; UI enhancements; workaround available. Resolution pending schedule.

**P5 – Low –** Cosmetic defects; workaround available. Resolution pending schedule.

**P6 – Very Low –** Deferred for future releases

* 1. **Entering Defects**

Before entering a new defect, be sure to check for similar defects to avoid logging duplicates. If you find a potential defect that is within the functionality of another track/module, be sure to work with the appropriate member of your QA team. A daily defect meeting will be scheduled and is mandatory if you have any defects opened by you or assigned to you that are not of the status Closed. Appropriate developer(s) and Business team members will also attend this meeting.

When logging a new defect for this track/module, field values should be set as follows:

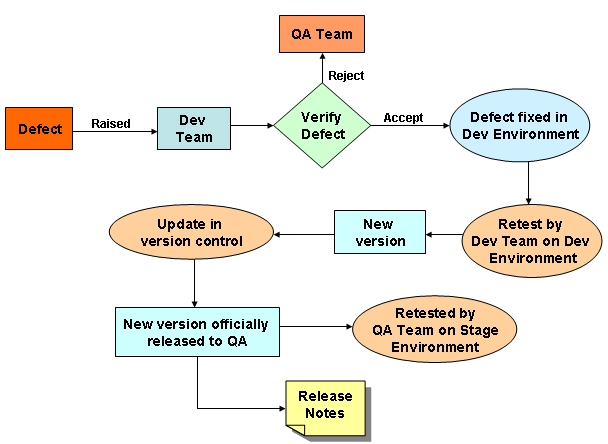
| Field | Required | Values |
| --- | --- | --- |
| Assigned To | Yes |  |
| Browser | Yes | Fire fox  Internet Explorer  Conqueror  Mozilla  Multiple Browsers  Netscape  Safari |
| Created Date | N/A |  |
| Defect ID | N/A |  |
| Defect Status | Yes | New  Open  Fixed  Rejected  Reopen  Deferred  Duplicate  Closed  Pending |
| Description | Yes |  |
| Detected By | N/A |  |
| Detected in Version | Yes |  |
| Modified | N/A |  |
| Priority | Yes | P1 - High  P2 - Med High  P3 - Medium  P4 - Med-low  P5 - Low  P6 - Very Low |
| Project | Yes |  |
| Subject | Yes | drop down values automatically will be populated through the requirements tab  For UAT – The Use cases have been listed in Subject for each build |
| CR - Cross Reference | No |  |
| Actual Fix Time | No |  |
| Closed in version | N/A | Linked to Version defined |
| Closing Date | N/A |  |
| Comments | No |  |
| Estimated Fix Time | No |  |
| Fix Date | No |  |
| OS | Yes | Operating System – Windows 2000, Windows XP, Macintosh and Linux |
| Planned closing Version | No | Linked to Version defined in the requirement |
| Reproducible | N/A | y-n field = when NO, Status will be closed |
| Re-work Counter | No | Should be behind the scenes |
| Root Cause | No | Boundary System  Duplicate  Caused by Environment  Design Issue  Development Issue  New Requirement  Changed Requirement  Deleted Requirement  Not in Use Case  Prod/ Env. Issue  Not Reproducible  Pre Existing  User Training  Not a bug  Cosmetic/Grammatical  Database Issue  Data Issue |
| CR Type | No | In/Out Cycle |

* 1. **Defect Status Workflow**

An email will automatically be created and sent to the person in the Detected By field as well as the person in the Assigned To and Biz Owner field each time an issue is created or updated within Quality Center. As many “**Closed**” issues as possible will be included in the regression testing to occur in the production environment (pre-go-live). Daily, cross-functional defect meetings will be held to ensure proper prioritization of all defects.

The following table lists the status values available for a defect, who a defect with each status should be assigned to, which Quality Center Fields require updating when the status is updated, and any notes regarding the status.

| Status | Assign To | TD Fields to Update | Notes |
| --- | --- | --- | --- |
| New | Dev Lead | All required | IT Track leads listed above. |
| Open | Developer, IT QA Analyst, Business QA, Business Owner | Status, Assign to, R&D Comments, Estimated Fix Time | Developers should resolve P1 issues prior to P2, P3, or P4 issues. Open status is used for assigned, researching, in-progress, etc. tasks. |
| Fixed | QA team lead | Status, R&D Comments, Actual Fix Time | Coding completed and unit testing passed. |
| Closed | User who closed defect | Status, R&D Comments, Closing Date, Closed in Build, Closing Reason |  |
| Reopen | Dev Lead | Status, Assign to, R&D Comments | Include test scenario details during re-test. |
| Deferred | Business PM/ Business Owner | Status, Assign to, R&D Comments, Deferral Reason, Planned Closing Version | Business review and approval required for this status. Biz owners listed above. |



**(Picture: Defect Status Workflow)**