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**Test Plan**

**Project “The Online Book Store”**

Document Revision History

| **Date** | **Version** | **Description** | **Author** | **Reviewer** | **Approver** |
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|  |  |  |  |  |  |

1. **INTRODUCTION**

Customers want a perfect website, which passes the full cycle of manual testing. Given the specificity of the site it is very important to have the same quality and the site.

The Test Plan has been created to facilitate communication within the team members. This document describes approaches and methodologies that will apply to the unit, integration and system testing of the Online Book Store, it is an online application and this application can be used to buy a Books online. This document includes the objectives, test responsibilities, scope, schedule major milestones, entry and exit criteria and approach. This document has clearly identified what the test deliverables will be, and what is deemed in and out of scope. The plan identifies the features to be tested, the futures not to be tested, the types of testing to be performed, the personnel responsible for testing, the resources and schedule required to complete testing, and the risks associated with the plan.

1. **SCOPE**

The primary purpose of the document is test the GUI and validating in report output as SRS provided by customer

* 1. **Functions to be tested**
* GUI
* Login
* Add new Books
* Add/Edit/Delete topic
* Add/Edit/Delete admin
  1. **Functions not to be tested**
* Not other than mentioned above in section 2.1

1. **QUALITY OBJECTIVES**
   1. **Primary Objectives**

A primary objective of testing is to: assure that the system meets the full requirements, including quality requirements (functional and non-functional requirements) and fit metrics for each quality requirement and satisfy 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 and it guarantees all these operations can work normally in a real business environment.

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.

* 1. **Secondary Objectives**

The secondary objectives of testing 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.

1. **TEST APPROACH**

The approach that is used is Analytical therefore, in accordance with requirements-based strategy, where an analysis of the requirements specification forms the basis for planning, estimating and designing tests. Test cases will be created during exploratory testing. All test types are determined in Test Strategy.

Test cases will be created. The project is using an agile approach, with weekly iterations. At the end of each week the requirements identified for that iteration will be delivered to the team and will be tested.

* 1. **Automation Test**

Automated unit tests are part of the development process, we used the selenium technique to execute test cases automatically.

1. **ROLES AND RESPONSIBILITIES**

| Role | Staff Member | Responsibilities |
| --- | --- | --- |
| Project Manager |  | 1. Manage the whole project  2. Acts as a primary contact for development and QA team.  3. Responsible for Project schedule and the overall success of the project.  4. Acquire appropriate resources |
| QA Lead/Test Lead |  | 1. Participation in the project plan creation/update process.  2. Planning and organization of the test process for the release.  3. Coordinate with tester/BA on any issues/problems encountered during testing.  4. Report progress on work assignments to the PM  5. Acquire appropriate resources |
| Tester/QA |  | 1. Understand requirements  2. Design test cases and Executing Test  3. Preparing RTM  4. Reviewing Test cases, RTM  5. Assign bug for developer team  6. Defect reporting and tracking  7. Retesting and regression testing  8. Bug Review meeting  9. Preparation of Test Data  10. Coordinate with Test Lead for any issues or problems encountered during test preparation/execution/defect handling. |

1. **ENTRY AND EXIT CRITERIA**
   1. **Entry Criteria**

* All the necessary documentation like: requirement specification document, test plans document.
* All the standard software tools including the testing tools must have been successfully installed and functioning properly
* The test environment such as, lab, hardware, software, and system administration support should be ready.
* QA resources have completely understood the requirements
* QA resources have sound knowledge of functionality
* Reviewed test scenarios, test cases document
  1. **Exit criteria**
* Test Results/reports (cost and schedule have been achieved)
* What function is tested, what function is not tested
* No high priority or severe bugs are left outstanding
* All high-risk areas have been fully tested, with only minor residual risks left outstanding
* Defect Report
* Installation/ Test procedures guidelines
* The schedule has been achieved

1. **SUSPENSION CRITERIA AND RESUMPTION REQUIREMENTS**
   1. **Suspension criteria**

* The build contains many serious defects which seriously or limit testing progress
* Any changed sharply in requirements suggested by client
* Tools or test environment problems
* Assigned resources are not available when needed by test team
  1. **Resumption criteria**
* The development team fixes all the failed cases.
* All other problems have been resolved

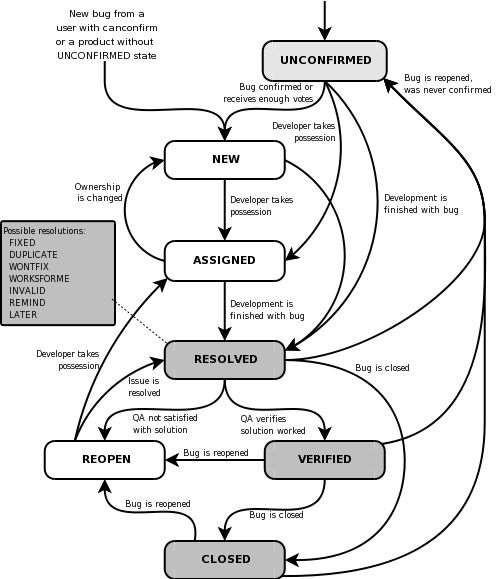
1. **TEST STRATEGY**
   1. **QA role in test process**

* Understanding Requirements:
* Requirement specifications will be sent by client.
* Understanding of requirements will be done by QA
* Preparing Test Cases:
* QA will be preparing test cases based on the exploratory testing. This will cover all scenarios for requirements.
* Preparing Test Matrix:
* QA will be preparing a test matrix which maps test cases to respective requirements. This will ensure the coverage for requirements.
* Reviewing test cases and matrix:
* Peer review will be conducted for test cases and test matrix by QA Lead
* Any comments or suggestions on test cases and test coverage will be provided by reviewer respective Author of Test Case and Test Matrix
* Suggestions or improvements will be re-worked by author and will be send for approval
* Re-worked improvements will be reviewed and approved by reviewer
* Creating Test Data:
* Test data will be created by respective QA on client's developments/test site based on scenarios and Test cases.
* Executing Test Cases:
* Test cases will be executed by respective QA on the client's development/test site based on designed scenarios, test cases and Test data.
* Test result (Actual Result, Pass/Fail) will updated in test case document Defect
* Logging and Reporting:
* QA will be logging the defect/bugs in Word documents, found during execution of test cases. After this, QA will inform the respective developer about the defect/bugs.
* Retesting and Regression Testing:
* Retesting for fixed bugs will be done by respective QA once it is resolved by the respective developer and bug/defect status will be updated accordingly. In certain cases, regression testing will be done if required.
* Deployment/Delivery:
* Once all bugs/defects reported after complete testing are fixed and no other bugs are found, the report will be deployed to the client's test site by PM.
* Once a round of testing will be done by QA on the client's test site, a required report will be delivered along with sample output by email to respective lead and Report groups.
* QA will be submitting the filled hard copy of the delivery slip to the respective developer.
* Once the lead gets the hard copy of the delivery slip filled by QA and developer, he will send the report delivery email to the client.

**8.2 Bug life cycle**

All the issues found while testing will be logged into Word documents.

Bug life cycle for this project is as follows:



**8.3 Testing Types**

Black box testing:

It is sometimes called behavioral testing or Partition testing. This kind of testing focuses on the functional requirements of the software. It enables one to derive sets of input conditions that will fully exercise all functional requirements for a program.

GUI Testing:

GUI testing will include testing the UI part of the report. It covers users Report format, look and feel, error messages, spelling mistakes, GUI guideline violations.

Integration Testing:

Integration testing is a systematic technique for constructing the program structure while conducting tests to uncover errors associated with interacting. In Report, integration testing includes the testing Report from respective location(s).

Functional Testing:

Functional testing is carried out in order to find out unexpected behavior of the report. The characteristic of functional testing is to provide correctness, reliability, testability and accuracy of the report output/data.

System Testing:

System testing of software is testing conducted on a complete, integrated system to evaluate the system's compliance with its specified requirements.

User Acceptance testing:

The purpose behind user acceptance testing is to confirm that the system is developed according to the specified user requirements and is ready for operational use. Acceptance testing is carried out at two levels - Alpha and Beta Testing. User acceptance testing (UAT) will be done at the Client.

Performance Testing

-Check the optimal time the page is loaded

-Check the operation of the system under load

Alpha testing:

The alpha test is conducted at the developer's site by client.

**8.4 Bug Severity and Priority Definition**

Bug Severity and Priority fields are both very important for categorizing bugs and prioritizing if and when the bugs will be fixed. The bug Severity and Priority levels will be defined as outlined in the following tables below. Testing will assign a severity level to all bugs. The Test Lead will be responsible to see that a correct severity level is assigned to each bug.

The QA Lead, Development Lead and Project Manager will participate in bug review meetings to assign the priority of all currently active bugs. This meeting will be known as “Bug Triage Meetings”. The QA Lead is responsible for setting up these meetings on a routine basis to address the current set of new and existing but unresolved bugs.

## Severity List

The tester entering a bug into GForge is also responsible for entering the bug Severity.

| **Severity ID** | **Severity** | **Severity Description** |
| --- | --- | --- |
| 1 | Critical | The module/product crashes or the bug causes non-recoverable conditions. System crashes, GP Faults, or database or file corruption, or potential data loss, program hangs requiring reboot are all examples of a Sev. 1 bug. |
| 2 | High | Major system components unusable due to failure or incorrect functionality. Sev. 2 bugs cause serious problems such as a lack of functionality, or insufficient or unclear error messages that can have a major impact on the user, prevent other areas of the app from being tested, etc. Sev. 2 bugs can have a work around, but the work around is inconvenient or difficult. |
| 3 | Medium | Incorrect functionality of component or process. There is a simple work around for the bug if it is Sev. 3. |
| 4 | Minor | Documentation errors or signed off severity 3 bugs. |

## 

**Priority**

| **Priority** | **Priority Level** | **Priority Description** |
| --- | --- | --- |
| 1 | Must Fix | This bug must be fixed immediately; the product cannot ship with this bug. |
| 2 | Should Fix | These are important problems that should be fixed as soon as possible. It would be an embarrassment to the company if this bug shipped. |
| 3 | Fix When Have  Time | The problem should be fixed within the time available. If the bug does not delay the shipping date, then fix it. |
| 4 | Low Priority | It is not important (at this time) that these bugs be addressed. Fix these bugs after all other bugs have been fixed. Enhancements/ Good to have features incorporated just are out of the current scope. |

**9 RESOURCES AND ENVIRONMENT NEEDS**

**9.1 Testing Tools**

| Process |  | Tool |
| --- | --- | --- |
| Test case creation | Microsoft Excel |  |
| Test case tracking | Microsoft Excel |  |
| Test case execution | Manual |  |
| Test case management | Microsoft Excel |  |
| Defect management | Microsoft Word |  |
| Test reporting | PDF |  |
| Check list creating | Microsoft Excel |  |
| Project structure | Mind Map |  |

**9.2 Configuration Management**

Code CM: Git

**9.3 Test Environment**

x Support level 1 (browsers):

x Windows 8: Edge, Chrome (latest), Firefox (latest), Safari (latest)

**10. TEST SCHEDULE**

| **Task Name** | **Start** | **Finish** | **Effort** | **Comments** |
| --- | --- | --- | --- | --- |
| Test Planning | 03-10 | 04.10 | 1 | Support! |
| Review Requirements  documents | 04.09 | 05.10 | 1 |  |
| Create test basis | 06-10 | 07.10 | 1 |  |
| Staff and train new test resources | - | - |  |  |
| First deploy to QA test environment | 07.10 |  |  |  |
| Functional testing –  Iteration 1 | 07.10 | 08.10 | 1 |  |
| Iteration 2 deploy to QA test environment | 08.10 | 09.10 | 1 |  |
| Functional testing –  Iteration 2 | 09.10 | 10.10 | 1 |  |
| System testing |  |  |  |  |
| Regression testing |  |  |  |  |
| UAT |  |  |  |  |
| Resolution of final defects and final build testing |  |  |  |  |
| Deploy to Staging  environment |  |  |  |  |
| Performance testing |  |  |  |  |
| Release to Production |  |  |  |  |

**Approvals**

|  | **Project Manager** | **QA Lead** |
| --- | --- | --- |
| **Name** |  |  |
| **Signature** |  |  |

**Term Acronyms**

The below terms are used as examples, please add/remove any terms relevant to the document.

| **TERM/ACRONYM** | **DEFINITION** |
| --- | --- |
| API | Application Program Interface |
| GUI | Graphical user interface |
| PM | Project manager |
| UAT | User acceptance testing |
| CM | Configuration Management |
| QA | Quality Assurance |
| RTM | Requirements Traceability Matrix |