TEST PLAN FOR

LIBRARY MANAGEMENT SYSTEM

Group 8

1 Introduction

A test plan is a detailed document that outlines the test strategy, testing objectives, resources (manpower, software, hardware) required for testing, test schedule, test estimation and test deliverables. The test plan serves as a blueprint to conduct software testing activities as a defined process which is minutely monitored and controlled by the test manager. A test plan defines the project scope and focus of testing. The document is more granular than a strategy document and deals with issues like test coverage, features that need to be tested or ignored, estimation of effort and time. A test strategy focuses on the approach for attaining the test objectives, various test types and environments, tools & techniques, automation requirements, risk analysis, and mitigation plans. A major reason for developing a test strategy is to minimize the risks involved. The test strategy is more or less a static document – the document is rarely updated if any – and created at the beginning of a project using the high-level system documents. In phased development, a strategy document may be created for each development phase.

1.1 Scope

1.1.1 In Scope

The following features functional or non-functional requirements of the software that will be tested that will make the software acceptable and bugfree. The testing scope includes the following:
- Testing the login functionality of librarian
- Testing the add and manage book functionality of librarian
- Testing the dashboard functionality of the student
- Testing the password change and logout functionality of the student
- Testing my profile and update profile functionality of the student
- Testing the password change and logout functionality of the librarian
- Testing the add and manage author functionality of the librarian

1.1.2 Out of Scope

Testing the traffic on our application is still scope for the future as the application is yet to be deployed for the university in coming time.

1.2 Testing Objective

Some objectives of our testing project are:

- Ensure the Application Under Test conforms to functional and non-functional requirements
- Bugs/issues are identified and fixed before go live
- Gaining confidence in and providing information about the level of quality.

- To prevent defects.
- To make sure that the end result meets the business and user requirements.
- To ensure that it satisfies the BRS that is Business Requirement Specification and SRS that is System Requirement Specifications.

1.3 Roles and Responsibilities

Sr No.	Tester name	Description of test performed
1.	Jay Patel	Testing the add and manage book functionality of librarian, Testing the add category and manage category functionality of librarian, Testing the manage issued book functionality of librarian
2.	Aayush Shah	Testing the signup functionality of the student Reviewing a few tests performed by Soham
3.	Nihar Shah	Testing the student dashboard functionality of the student Reviewing a few tests performed by Jay
4.	Soham Joshi	Testing the password change and logout functionality of the librarian and student, Testing my profile and update profile functionality of the student
5.	Prashant Bajak	Testing the add and manage author functionality of the librarian,Testing manage issued books functionality of the student

2 Test Methodology

2.1 Data and Database Integrity Testing

Verify access to Add Book Catalog Database.
Verify simultaneous record to read book accesses.
Verify lockout in case of multiple students adding same books.
Verify correct retrieval of update of database data.

2.2 Functional requirements testing

We have used the black box testing method for checking the functional requirements as prescribed by the client. This method attempts to find errors in the following categories:
- Incorrect or missing functions
- Interface errors
- Errors in data structures or external database access
- Behavior or performance errors
- Initialization and termination errors

We have checked various functionalities of librarian and students like Testing the login functionality of librarian testing the add and manage book functionality of librarian, testing the dashboard functionality of the student, testing the password change and logout functionality of the student, testing my profile and update profile functionality of the student, testing the password change and logout functionality of the librarian,testing the add and manage author functionality of the librarian

2.3 User interface Testing

- Verify ease of navigation through a sample set of screens.
- Verify sample screens conform to GUI standards
- Ensuring the proper navigation using TAB key
- Making sure that the user faces no memory load
- Using the lucid and calm colors for the design

2.4 Performance Testing

- Verifying the response time to log in and log out.
- Verifying the response time to change the password
- Verifying the response time to open a new tab
- Verifying the response time to issue book
- Verifying the response time to search a particular book
- Verifying that no faulty books get issued.

2.5 Security and Access Control Testing

- Verifying login from remote and local PC
- Verifying the password change and proper authentication
- Controlling the access to librarian and students

2.6 Stability Testing

Stability testing checks to see if the software can continuously function well in or above an acceptable period. This activity of non-functional software testing is oftentimes referred to as load (or endurance) testing.

3 Test Deliverables

Here are the deliverables that will be delivered during different phases of the testing lifecycle.

- Test Plan
- Test Cases
- Requirement Traceability Matrix
- Bug Reports
- Test Strategy

4 Resource & Environment Needs

4.1 Testing Tools

The following are the tools required to test the project

- Requirements Tracking Tool(Visure)
- Bug Tracking Tool
- Manually checking various test cases with all possible variations

4.2 Test Environment

The minimum hardware requirements that will be used to test the application are:
Intel i5 (and above) processor with a good RAM(2GB and more)

Following software's are required in addition to client-specific software.

- Windows 8 and above
- Office 2013 and above
- MY SQL Database

5 Terms/Acronyms

TERM/ACRONYM	DEFINITION
API	Application Program Interface
AUT	Application Under Test
BRS	Business Requirement Specification
SRS	System Requirement Specification