Library Management System

****Test Plan****

Version 1.0

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Revision History

|  |  |  |  |
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# INTRODUCTION

This test plan is a basic guideline for testing in the Library Management System. It mainly focuses on two problems:

1.what we will test

2.how we will test.

# 2.0 OBJECTIVES AND TASKS

**2.1 Objectives**

\* Identify existing project information and the software that should be tested.

\* List the recommended test requirements.

**2.2 Tasks**

\* GUI Test

\* Basic function test

\* Database test

\* Network test

## 3.0 SCOPE

**3.1 In scope:** These are the modules that need to be tested rigorously (in-detail). Like Add, Update, Delete, Backup etc.,

**3.2 Out scope:** These are the modules, which need not be tested rigorously. Like Help desk, and so on.

4.0 FEATURES TO BE TESTED

\* GUI Test:

System should provide a GUI for librarians to interface with the backend library database.

\*Database Test:

### Basic operations: add/update/delete/query records in each table

### Advanced operations: start/stop, backup, recover the database

## \*Basic function test:

### #Add a student #Add a book

### #Update/delete student #Update/delete book

### #Search for a book #Check-in book

### #Search for a student #Check-out book

### #View book detail #Pay late fee

### #View student detail

## \*Network test:

Check connectivity of the system in the LAN environment

# 5.0 FEATURES NOT TO BE TESTED

## \*Maximum simultaneous online-users is no more than 5

Reason: This is only an assumption condition in requirement specification

## \*Licensing requirement

Reason: Since they are free software, they need not be tested.

# 6.0 TESTING METHODOLOGY

## Unit testing (class testing)

## Integrity testing (thread-based testing)

## Validation testing

# 7.0 ITEM PASS CRITERIA

## 7.1 GUI Test:

Pass criteria: librarians could use this GUI to interface with the backend library database without any difficulties.

## 7.2 Database Test:

Pass criteria: Results of all basic and advanced operations are normal.

## 7.3 Basic function Test:

### #Add a student

Pass criteria:

* Each customer/student should have following attributes: Student ID/SSN (unique), Name, Address and Phone number.
* The retrieved customer information by viewing customer detail should contain the four attributes.

### #Update/delete student

Pass criteria:

* The record would be selected using the student ID
* Updates can be made on full. Items only: Name, Address, Phone number
* The record can be deleted if there are no books issued by user.
* The updated values would be reflected if the same customer's ID/SSN is called for.
* If customer were deleted, it would not appear in further search queries.

### #Add a book

Pass criteria:

* Each book shall have following attributes: Call Number, ISBN, Title, Author name.
* The retrieved book information should contain the four attributes.

### #Update/delete book

Pass criteria:

* The book item can be retrieved using the call number
* The data items which can be updated are: ISBN, Title, Author name
* The book can be deleted only if no user has issued it.
* The updated values would be reflected if the same call number is called for
* If book were deleted, it would not appear in further search queries.

### #Search for book

Pass criteria:

* The product shall let Librarian query books’ detail information by their ISBN number or Author or Title.
* The search results would produce a list of books, which match the search parameters with following Details: Call number, ISBN number, Title, Author
* The display would also provide the number of copies which is available for issue
* The display shall provide a means to select one or more rows to a user-list
* A detailed view of each book should provide information about check-in/check out status, with the borrower’s information.
* The search display will be restricted to 20 results per page and there would be means to navigate from sets of search results.
* The user can perform multiple searches before finally selecting a set of books for check in or checkout. These should be stored across searches.
* A book may have more than one copy. But every copy with the same ISBN number should have same detail information.
* The borrower’s list should agree with the data in students’ account.

### #Check-in book

Pass criteria:

* Librarians can check in a book using its call number
* The check-in can be initiated from a previous search operation where user has selected a set of books.
* The return date would automatically reflect the current system date.
* Any late fees would be computed as difference between due date and return date at rate of 10 cents a day.
* A book, which has been checked in once, should not be checked in again.

### #Check-out book

Pass criteria:

* Librarians can check out a book using its call number
* The checkout can be initiated from a previous search operation where user has selected a set of books.
* The student ID who is issuing the book would be entered
* The issue date would automatically reflect the current system date.
* The due date would automatically be stamped as 5 days from current date.
* A book, which has been checked out once, should not be checked out again
* A student who has books due should not be allowed to check out any books
* The max. No of books that can be issued to a customer would be 10. The system should not allow checkout of books beyond this limit.

### #View book detail

Pass criteria:

* This view would display details about a selected book from search operation
* The details to be displayed are: Call number, IBN, Title, Author, Issue status (In library or checked out), If book is checked out it would display, User ID & Name, Checkout date, Due date
* Books checked in should not display user summary
* Books checked out should display correct user details.

### #View student detail

Pass criteria:

* Librarians can select a user record for detailed view
* The detail view should show:

a. User name, ID, Address & Phone number

b. The books issued by user with issue date, due date, call number, title

c. Late fees & Fines summary and total

* The display should match existing user profile
* The books checked out should have their statuses marked
* The book search query should show the user id correctly.

## 7.4 Network Test:

Pass criteria: Results of operations (ping, ftp and ODBC connectivity check) are normal.

# 8.0 TEST DELIVERABLES

* **Test plan**
* **Test Cases**
* **Test Scripts**
* **RTM(Requirement Traceability Matrix)**
* **Defect Report**
* **Test Execution Report**

# 9.0 ENVIRONMENTAL NEEDS

**9.1 Software Requirements**

\*Server:

|  |  |
| --- | --- |
| **Operating system** | Linux |
| **Webserver** | Apache Tomcat |
| **Application server** | Websphere |
| **Database server** | Oracle or MS-SQL Server |

**\***Client:

|  |  |
| --- | --- |
| **Operating System** | Window XP, Vista 7 |
| **Browsers** | Mozilla Firefox, Google Chrome, Internet Explorer, Internet Explorer 7, and Internet Explorer 8 |

**9.2 Hardware Requirements:**

\*Server: Sun StarCat 1500

**\***Client:

|  |  |
| --- | --- |
| **Processor** | Intal2GHz |
| **RAM** | 2GB |

# 10.0 RESOURCES

## Developers of the system are involved in testing process (debugging, unit testing, even integrity testing)

## Users of the system are involved in testing process (integrity testing)

# 11.0 ROLES AND RESPONSIBILITIES

Role: Test Manager

Name: Eesha

Responsibility:

* Prepare( write and review) the test plan
* Conduct the meeting with the development team
* Conduct the meeting with the testing team
* Conduct the meeting with the customer
* Conduct one monthly stand up meeting
* Sign off release note
* Handling Escalations and issues

Role: Test Lead

Name: Sharma

Responsibility:

* Prepare( write and review) the test plan
* Conduct daily stand up meeting
* Review and approve the test case
* Prepare the RTM and Reports
* Assign modules
* Handling schedule

Role: Test Engineer 1, Test Engineer 2 and Test Engineer 3

Name: Pavan, Satya and Akhila

Assign modules: M1, M2, and M3

Responsibility:

* Write, Review, and Execute the test documents which consists of test case and test scenarios
* Read, review, understand and analysis the requirement
* Write the flow of the application
* Execute the test case
* RTM for respective modules
* Defect tracking
* Prepare the test execution report and communicate it to the Test Lead.

# 12.0 SCHEDULES

## Test plan is due on June 30.

## Test report is due on July 15.

13.0 RISKS CONTINGENCIE

Should prototype of the system not be due before June 28, test report could not be guaranteed to be available on July 15

14.0 APPROVALS

Name(In Capital Letters) Signature Date

1.

2.

3.

4.

5.

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