

SOFTWARE TEST PLAN STP FOR LIBRARY MANAGEMENT SYSTEM

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What is Software Test Plan?

A test plan is a detailed document which describes software testing areas and activities. It outlines the test strategy, objectives, test schedule, required resources (human resources, software, and hardware), test estimation and test deliverables.

The test plan is a base of every software's testing. It is the most crucial activity which ensures availability of all the lists of planned activities in an appropriate sequence.

The test plan is a template for conducting software testing activities as a defined process that is fully monitored and controlled by the testing manager. The test plan is prepared by the Test Lead (60%), Test Manager(20%), and by the test engineer(20%).

Test Case For Library Management System:

The library management system under test is – rider library management system (hosted on SourceForge). It is a very simple and effective system for the management of library users and books. It has the features that you can expect from most of the competitive library systems.

It is also free of cost to download the software. So you can download and start testing the software manually for the bugs. You can also report the errors to the owner, and this will, in turn, help the development of the software. The application under test – ‘rider library system’ is written using Java Swing. So the test cases can be explicitly added to the programming language.

What are the requirements of the library management system?

- User can register and log in.
- The user can search the added books and check-in or out.
- The user can pay the fine or extend the duration of the borrowed period.
- The user can change the password and other profile details.

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- The user can add books.
- The user can place the holds and modify existing holds.
- The user can manage the inventory of the books.

These are some of the common features expected from the library management system. So you now have some test scenarios to check for. In addition to these test scenarios, you have GUI based software to check for the bugs, usability, and functionality.

Testing Login of Library System:

As you can see the screenshot of the application, you're presented with the login screen. This page has a feature to add a username and password. It also has the links to request username and password if the user has forgotten it.

- Check if the username field accepts a valid username, and the password field accepts a valid password.
- Check if the wrong username and valid password allow access to any specific account.
- Check if the valid username and wrong password allow access to any specific account.
- Check if the forgot username link leads to a username recovery page.
- Check if the forgot password link leads to the password recovery page.
- Check if the invalid username and password trigger any warning.
- Check if the invalid credentials open the random account.
- Check if the user is logged in, allows you to log out by using the link at the bottom of the application.
- Check if the logout link function as expected.

Testing User Management:

The screenshot below shows the member tab where you can add or modify the existing users. You can also check the transactions of the member and also

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search for the member. Please check the screenshot below for more information.

The screenshot shows the 'Members' tab of the RMS (Library Management System) interface. The window has a menu bar with 'File', 'Reports', 'Transactions', and 'Help'. Below the menu is a toolbar with icons for 'Search', 'Profile', 'Check-Out', 'Check-In', 'Resources', 'Members', 'Subscriptions', and 'Administration'. The main content area is divided into two sections: 'Member Search' on the left and 'Member Data' on the right. The 'Member Search' section has two radio buttons: 'Search by User ID' (selected) and 'Search by Last Name'. Below these are input fields for 'User ID' and 'Last Name', and a 'Search Member' button. The 'Member Data' section has a 'Create Member' button, an 'Edit Member' button, and a 'Save Changes' button. It also has a 'Reset Password' button and a 'Delete Member' button. The 'Member Data' section contains several input fields: 'First Name', 'Last Name', 'Email Address', 'Phone Number', 'User ID', 'Member Type' (a dropdown menu), 'Membership Status' (a dropdown menu), 'Number of Items Borrowed', 'Number of Items Allowed', and 'Membership Expiration Date'. There is also a 'Fine Amount Due' input field and a 'Pay Fine' button. Below the 'Member Data' section is a 'Transactions' section with a 'Renew Selected' button. The 'Transactions' section contains a table with the following columns: 'Resource Name', 'Copy ID #', 'Check Out Date', 'Check In Date', 'Due Date', 'Reserved Start', 'Reserved End', 'Fine Amount', and 'Fine Paid'. The table is currently empty. At the bottom of the window, it says 'Logged in as: Haanit Shah (Administrator)' and has a 'Logout' button.

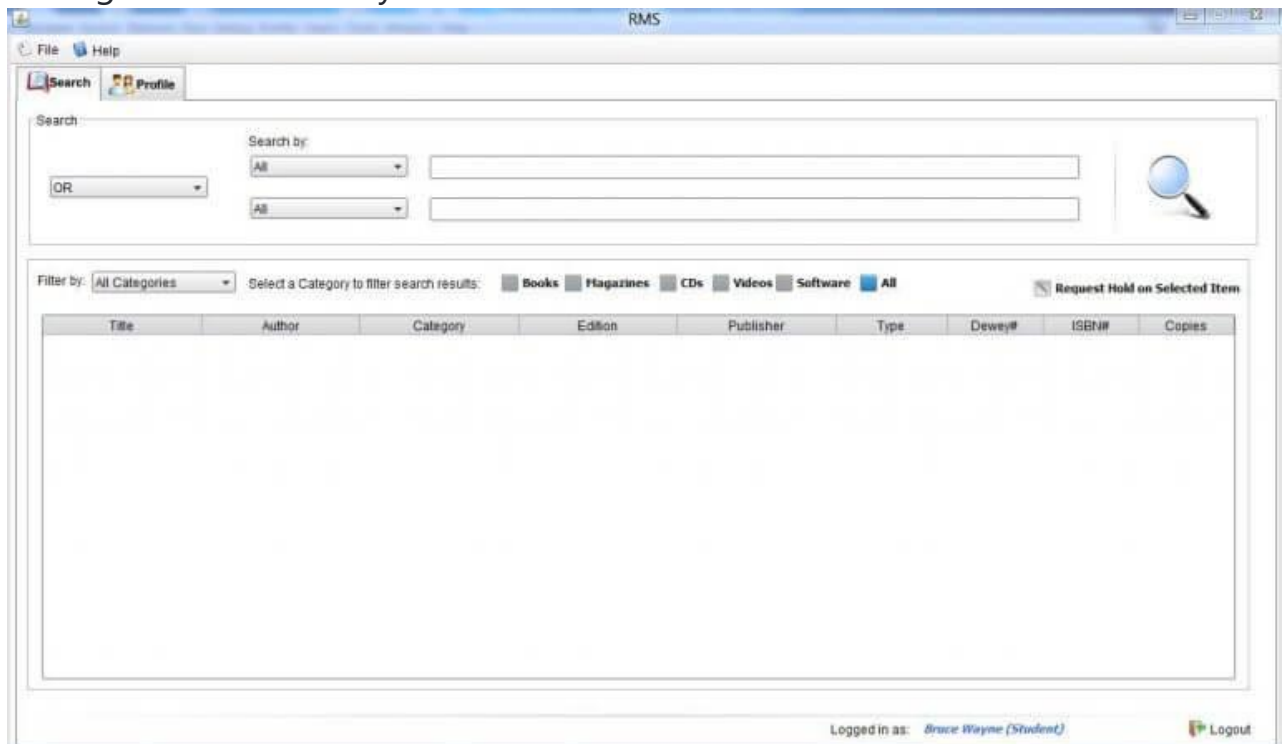
Library Management System Members Tab test cases

- Check if the member can be searched using the first name or last name.
- Check if the member transactions are updated.
- Check if the member transactions are shown in the table with sorted column information.
- Check if the user data can be modified if you are an admin.
- Check if the new user is possible to add to the system using the member's tab.
- Check if the password can be presented in this tab.
- Check if the user can be removed using the delete member feature.

Testing Search system of Library:

he search system should allow you to search for either member profiles or books. The tabs should let you choose between the user and the book. Please check the screenshot below for the options regarding the library

management's search system.



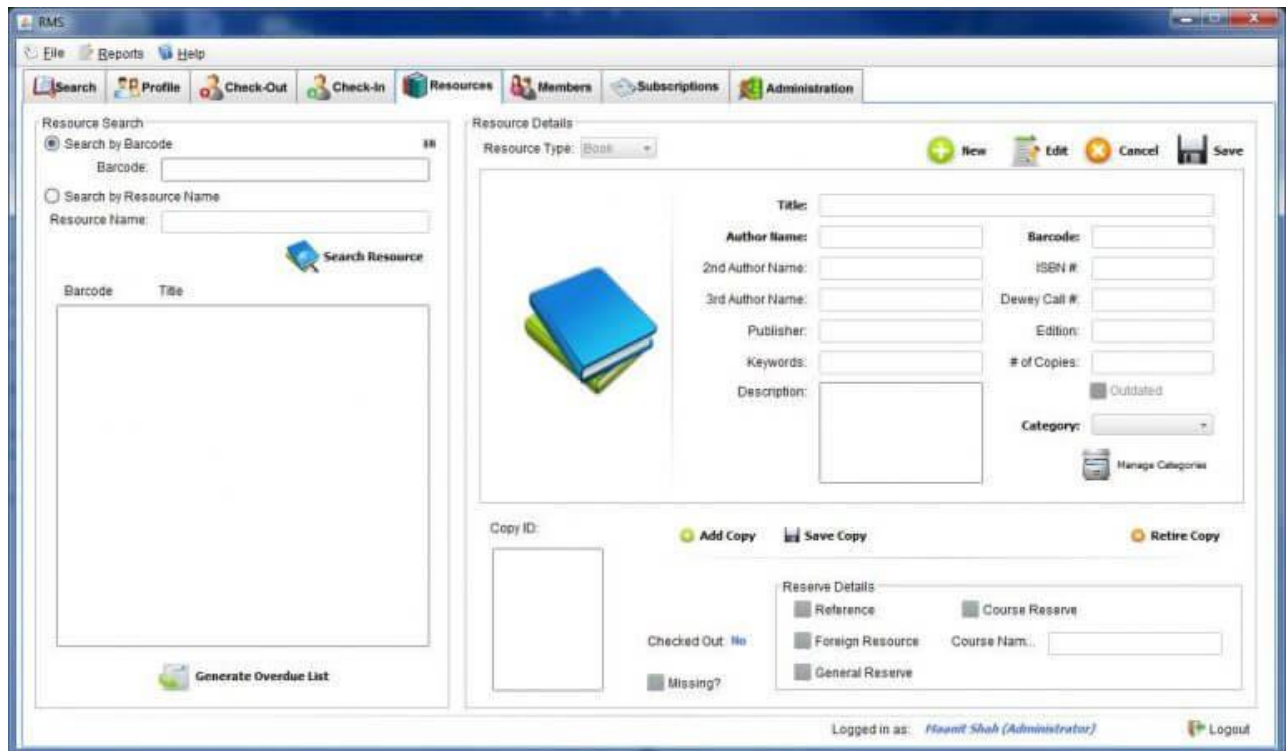
- Check if the search function allows searching of books as per title, ISBN, author, genre, or all of the criteria.
- Check if the search filter exists as per – books, CDs, magazines, videos, and software or all of them.
- Check if the search filter has categories feature.
- Check if the search system has the table for listing the search results.
- Check if the search system has either enter button functionality or ‘magnify” glass button to perform a search query.
- Check if the search system has a profile searching filter and categories options.
- Check if the profile search has the results listed as a table with profile information containing member info.

Testing Library Resources Inventory:

The library has the resources system where you can either search for the books available, or you can add or remove the books in the system. This tab should

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have resources like books, [magazines](#), courseware, CDs, or other resources. Check the screenshot below for more visual information.



- Check if the resources can be searched using the search feature.
- Check if you can add the resource using type, and other categorized information.
- Check if the resources can be searched using the barcode or the category title.
- Check if you can modify or edit the resource.
- Check if you can save the resource information.
- Check if you can add copy information for the resource.
- Check if you can add a category for the resource.
- Check each field for the limit of the text fields and also a valid input for the form.

