Library Management Program Tool

Project Test Plan & Interface Control Document

Version 8

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CMSC 495 6380 Current Trends and Projects in Computer Science

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Revision History

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| --- | --- | --- | --- |
| Revision Number | Date | Description | Author |
| 1 | 11 Feb 2022 | Creation and formatting of this document | John Kucera |
| 2 | 11 Feb 2022 | Wrote tables for all data between GUI and class subsystems | John Kucera |
| 3 | 14 Feb 2022 | Wrote out Test Plan | Ursula Richardson |
| 4 | 15 Feb 2022 | Filled in Tables for data between SQL tables and application pages | Jason Martin |
| 5 | 15 Feb 2022 | Revised document formatting and some Default Values in ICD | John Kucera |
| 6 | 1 March 2022 | Revised ICD tables to use correct wording. Removed ICD tables that move data between the GUI and a Swing Panel/Dialog. Those were incorrect. | John Kucera |
| 7 | 2 March 2022 | Revised Test Cases to match our newly updated Sequence diagrams. | John Kucera |
| 8 | 5 March 2022 | Filled in actual results and pass columns of test cases. 100% passed. | John Kucera |

**TEST PLAN (100% PASSED)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Case #** | **Requ-irem-ent #** | **Test Description** | **Expected Result** | **Actual Result** | **Pass / Fail** |
| 1 | 1, 12, 13 | 1. The user types correct MySQL credentials in the Output Console.  2. The user types correct credentials into the Login Dialog and clicks the “Log In” button.  (Precondition: The user has started running the LMP Project and is prompted with MySQL credentials in the Output Console. | 1. The user successfully authenticates the connection between LMP project and MySQL database. The Login Dialog is displayed.  2. The Login Dialog is disposed of. The GUI (Input Subsystem) Frame is displayed. If the user is an admin, both the “Main Menu” and “Admin Settings” menus are present in the menu bar. Otherwise, only the “Main Menu” menu is present in the menu bar. | Exactly the same as “Expected Result”. | Pass |
| 2 | 11 | User clicks the “Log Out” menu item at top of GUI Frame.  (Precondition: User is logged in and the GUI Frame is displayed.) | User logs out. The GUI Frame is disposed of and the Login Dialog is displayed. | Exactly the same as “Expected Result”. | Pass |
| 3 | 2, 3, 4, 6, 7 | 1. GUI Frame is displayed and user clicks “Main Menu” menu, then clicks “Browse Books” menu item.   2. When Browse Books Panel is displayed in Frame, the user types their desired phrases in title/author text field, then clicks “Search” button.  3. When search results are displayed in “Results” table, user selects a book and clicks “Show Book Info” button.   4. After viewing the Book Info Dialog, user closes the dialog and clicks “Check Out Book” button.  (Precondition: User is logged in and the GUI Frame is displayed.) | 1. Clicking “Browse Books” menu item will cause Browse Books Panel to be displayed in Frame.  2. Correct search results are retrieved from Books Table and are displayed in “Results” table.       3. Clicking “Show Book Info” button will show correct information for selected book in dialog.  4. Clicking “Check Out Book” button will decrement “Quantity Available” for selected book in Books Table. It will also add selected book to user’s Checked-Books Table. | Exactly the same as “Expected Result”. | Pass |
| 4 | 8, 9 | 1. GUI Frame is displayed and user clicks “Main Menu” menu, then clicks “View Checked-Out Books” menu item.   2. When View Checked-Out Books Panel is displayed in Frame, the user selects a book and clicks “Return Book” button.  (Precondition: User is logged in and the GUI Frame is displayed.) | 1. Clicking “View Checked-Out Books” menu item will cause View Checked-Out Books Panel to be displayed in Frame. User’s correct checked-out books and information are displayed in table.  2. Return confirmation dialog pops up. The returned book is no longer in table. Book has been removed from Checked-Books Table. “Quantity Available” has been incremented in Books Table. | Exactly the same as “Expected Result”. | Pass |
| 5 | 10 | 1. GUI Frame is displayed and user clicks “Main Menu” menu, then clicks “Change Password” menu item.         2. When Change Password Panel is displayed in Frame, the user types correct credentials, a new password, and the new password again for confirmation. The user then clicks the “Confirm Password Change” button.  (Precondition: User is logged in and the GUI Frame is displayed.) | 1. Clicking “Change Password” menu item will cause Change Password Panel to be displayed in Frame. 2. Password change confirmation message is displayed in Panel. User’s password has been correctly changed in Users Table. | Exactly the same as “Expected Result”. | Pass |
| 6 | 19, 20, 21 | 1. GUI Frame is displayed and user clicks “Admin Settings” menu, then clicks “List Books” menu item.   2. When List Books Panel is displayed in Frame, the user selects a book and clicks the “Edit Book Info” button. After editing the book information in the “Edit Info” dialog, the user clicks “Confirm edits” button.   3. After closing the dialog, the user selects another book and then clicks “Remove Book” button.  (Precondition: User is logged in and the GUI Frame is displayed. User is an Admin and therefore has access to “Admin Settings” menu.) | 1. Clicking “List Books” menu item will cause List Books Panel to be displayed in Frame. 2. Clicking “Edit Book Info” causes dialog to pop up that has editable info text fields. Clicking “Confirm edits” causes input edits to be stored in Books Table. Edit confirmation message is displayed in dialog. 3. The removal confirmation dialog is displayed. Selected book is removed from Books Table. | Exactly the same as “Expected Result”. | Pass |
| 7 | 18 | 1. GUI Frame is displayed and user clicks “Admin Settings” menu, then clicks “Add Book” menu item.  2. When Add Book Panel is displayed in Frame, the user types in information for new book. User then clicks “Add Book” button.  (Precondition: User is logged in and the GUI Frame is displayed. User is an Admin and therefore has access to “Admin Settings” menu.) | 1. Clicking “Add Book” menu item will cause Add Book Panel to be displayed in Frame. 2. Addition confirmation dialog is displayed. Book with input info has been added to Books Table. | Exactly the same as “Expected Result”. | Pass |
| 8 | 16, 17 | 1. GUI Frame is displayed and user clicks “Admin Settings” menu, then clicks “List Users” menu item.   2. When List Users Panel is displayed in Frame, the user selects a user and clicks the “Remove User” button.  (Precondition: User is logged in and the GUI Frame is displayed. User is an Admin and therefore has access to “Admin Settings” menu.) | 1. Clicking “List Users” menu item will cause List Users Panel to be displayed in Frame.   2. The removal confirmation dialog is displayed. Selected user is removed from Users Table. | Exactly the same as “Expected Result”. | Pass |
| 9 | 14, 15 | 1. GUI Frame is displayed and user clicks “Admin Settings” menu, then clicks “Add User” menu item.       2. When Add User Panel is displayed in Frame, the user types in information for new user. User then clicks “Add User” button.  (Precondition: User is logged in and the GUI Frame is displayed. User is an Admin and therefore has access to “Admin Settings” menu.) | 1. Clicking “Add User” menu item will cause Add User Panel to be displayed in Frame.    2. Addition confirmation dialog is displayed. User with input info has been added to Users Table. | Exactly the same as “Expected Result”. | Pass |
| 10 | 1 | 1. User types incorrect username and correct password into the Login Dialog and clicks the “Log In” button.  2. User types correct username and incorrect password into the Login Dialog and clicks the “Log In” button.  (Precondition: The user has opened the LMP project in their IDE and has successfully built and started running the project. The Login Dialog is displayed on the screen, awaiting user input.) | 1. Denial message is displayed, notifying user of their incorrect input. Login Dialog is still displayed.  2. Denial message is displayed, notifying user of their incorrect input. Login Dialog is still displayed. | Exactly the same as “Expected Result”. | Pass |
| 11 | 5 | In Browse Books Panel, user selects a book and clicks “Check Out Book”. For this book, “Quantity Available” = 0.  (Precondition: User is logged in and the GUI Frame is displayed containing the Browse Books Panel. Search terms have been searched for, displaying matching books in the “Results” table.) | Since the “Quantity Available” = 0 for that book, a message is displayed that notifies user that book is unavailable and cannot be checked out. | Exactly the same as “Expected Result”. | Pass |
| 12 | 10 | 1. In Change Password Panel, user enters incorrect current password (but matching “new password” and “confirm new password”) and clicks “Confirm Change” button.  2. User enters mismatched “new password” and “confirm new password” input (but correct current password) and clicks “Confirm Change” button.  (Precondition: User is logged in and the GUI Frame is displayed containing Change Password Panel.) | 1. Denial message is displayed, notifying user of incorrect “current password.  2. Denial message is displayed, notifying user of mismatched “new password” and “confirm new password”. | Exactly the same as “Expected Result”. | Pass |
| 13 | 17 | In List Users Panel, user selects their own username and clicks “Remove User” button.  (Precondition: User is logged in and the GUI Frame is displayed containing List Users Panel.) | Denial message is displayed in dialog, notifying user that they cannot delete themself. | Exactly the same as “Expected Result”. | Pass |

**INTERFACE CONTROL DOCUMENT**

(In the real source code:

USERS TABLE = LMP\_Users

BOOKS TABLE = LMP\_Books

CHECKED-BOOKS TABLE = checkedouttable)

Data between USERS TABLE and LOGIN DIALOG

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **From** | **To** | **Name** | **Type** | **Value Range** | **Default Value** |
| Login Dialog | Users Table | usernameIn | String | Any length/ characters | “” |
| Login Dialog | Users Table | passwordIn | String | Any length/ characters | “” |
| Users Table | Login Dialog | UsersTable.Username | String | Any length/ characters | “” |
| Users Table | Login Dialog | UsersTable.Password | String | Any length/ characters | “” |

Data between USERS TABLE and BROWSE BOOKS PANEL

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **From** | **To** | **Name** | **Type** | **Value Range** | **Default Value** |
| Users Table | Browse Books Panel | UserID | String | Any length/ characters | “” |

Data between USERS TABLE and VCOB (VIEW CHECKED-OUT BOOKS) PANEL

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **From** | **To** | **Name** | **Type** | **Value Range** | **Default Value** |
| Users Table | VCOB Panel | UserID | String | Any length/ characters | “” |

Data between USERS TABLE and CHANGE PASSWORD PANEL

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **From** | **To** | **Name** | **Type** | **Value Range** | **Default Value** |
| Change Password Panel | Users Table | usernameIn | String | Any length/ characters | “” |
| Change Password Panel | Users Table | currentIn | String | Any length/ characters | “” |
| Change Password Panel | Users Table | newIn | String | Any length/ characters | “” |

Data between USERS TABLE and (Admin Settings) LIST USERS PANEL

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **From** | **To** | **Name** | **Type** | **Value Range** | **Default Value** |
| Users Table | List Users Panel | UsersTable.Username | String | Any Length/ Characters | “’ |
| Users Table | List Users Panel | UsersTable.UserID | Int | Positive integers. Not Null, Unique | 0 |
| Users Table | List Users Panel | UsersTable.FirstName | String | Any length/ characters | “” |
| Users Table | List Users Panel | UsersTable.LastName | String | Any length/ characters | “” |
| Users Table | List Users Panel | UsersTable.AdminStatus | Boolean | True, False | False |

Data between USERS TABLE and (Admin Settings) ADD USER PANEL

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **From** | **To** | **Name** | **Type** | **Value Range** | **Default Value** |
| Add User Panel | Users Table | usernameIn | String | Any length/ characters | “” |
| Add User Panel | Users Table | adminStatusIn | Boolean | True, False | False |
| Add User Panel | Users Table | passwordIn | String | Any length/ characters | “” |
| Add User Panel | Users Table | firstIn | String | Any length/ characters | “” |
| Add User Panel | Users Table | lastIn | String | Any length/ characters | “” |

Data between USER TABLE and CHECKED-BOOKS TABLE

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **From** | **To** | **Name** | **Type** | **Value Range** | **Default Value** |
| Checked-Books Table | Users Table | CheckOutNumber | int | Any Positive integer | 1 |
| Users Table | Checked-Books Table | User\_Table.UserId | int | Any Positive integer | 1 |
| Users Table | Checked-Books Table | User\_Table.FirstName | String | Any length/ characters | “” |
| Users Table | Checked-Books Table | User\_Table.LastName | String | Any length/ characters | “” |

Data between CHECKED-BOOKS TABLE and VCOB (VIEW CHECKED-OUT BOOKS) PANEL

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **From** | **To** | **Name** | **Type** | **Value Range** | **Default Value** |
| Checked-Books Table | VCOB Panel | CheckedBooks Table.CheckOutNumber | Int | Any positive integer | 1 |
| Checked-Books Table | VCOB Panel | CheckedBooksTable.ISBN | String | 17 numerical characters long (plus dashes) | “” |
| Checked-Books Table | VCOB Panel | CheckedBooks Table.CheckOutDate | String | Date Format (YYYY-MM-DD) | 0000-00-00 |
| Checked-Books Table | VCOB Panel | CheckedBooksTable.BookName | String | Any length  Any character | “” |
| Checked-Books Table | VCOB Panel | CheckedBooksTable.BookAuthor | String | Any length  Any character | “” |
| Checked-Books Table | VCOB Panel | CheckedBooks Table.UserID | int | Positive integers. Not Null, Unique. | 1 |
| Checked-Books Table | VCOB Panel | CheckedBooks Table.FirstName | String | Any length  Any character | “” |
| Checked-Books Table | VCOB Panel | CheckedBooks Table.LastName | String | Any length  Any character | “” |

Data between CHECKED-BOOKS TABLE and BOOKS TABLE

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **From** | **To** | **Name** | **Type** | **Value Range** | **Default Value** |
| Checked-Books Table | Books Table | CheckOutNumber | int | Any positive integer | 1 |
| Books Table | Checked-Books Table | BooksTable.ISBN | Varchar(17) | 17 numerical characters long (plus dashes) | “” |
| Books Table | Checked-Books Table | BooksTable.BookName | String | Any length/ character | “” |
| Books Table | Checked-Books Table | BooksTable.BookAuthor | String | Any length/ character | “” |

Data between BOOKS TABLE and BROWSE BOOKS PANEL

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **From** | **To** | **Name** | **Type** | **Value Range** | **Default Value** |
| Books Table | Browse Books Panel | BooksTable.ISBN | String | 17 numerical characters long (plus dashes) | “” |
| Books Table | Browse Books Panel | BooksTable.BookName | String | Any length/ characters | “” |
| Books Table | Browse Books Panel | BooksTable.AmountOwned | Int | Any positive integer | 1 |
| Books Table | Browse Books Panel | BooksTable.AmountInStock | Int | Any positive integer | 1 |
| Books Table | Browse Books Panel | BooksTable.BookAuthor | String | Any length/ characters | “” |

Data between BOOKS TABLE and VCOB (VIEW CHECKED-OUT BOOKS) PANEL

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **From** | **To** | **Name** | **Type** | **Value Range** | **Default Value** |
| Books Table | VCOB Panel | BooksTable.ISBN | String | 17 numerical characters long (plus dashes) | “” |
| Books Table | VCOB Panel | BooksTable.BookName | String | Any length/ characters | “” |
| Books Table | VCOB Panel | BooksTable.BookAuthor | String | Any length/ characters | “” |

Data between BOOKS TABLE and (Admin Settings) LIST BOOKS PANEL

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **From** | **To** | **Name** | **Type** | **Value Range** | **Default Value** |
| Books Table | List Books Panel | BooksTable.ISBN | String | 17 numerical characters long (plus dashes) | “” |
| Books Table | List Books Panel | BooksTable.BookName | String | Any length/ characters | “” |
| Books Table | List Books Panel | BooksTable.AmountOwned | Int | Any positive integer | 1 |
| Books Table | List Books Panel | BooksTable.AmountInStock | Int | Any positive integer | 1 |
| Books Table | List Books Panel | BooksTable.BookAuthor | String | Any length/ characters | “” |
| List Books Panel | Books Table | iSBNIn | String | 17 numerical characters long (plus dashes) | “” |
| List Books Panel | Books Table | bookNameIn | String | Any length/ characters | “” |
| List Books Panel | Books Table | amountOwnedIn | Int | Any positive integer | 1 |
| List Books Panel | Books Table | amountInStockIn | Int | Any positive integer | 1 |
| List Books Panel | Books Table | bookAuthorIn | String | Any length/ characters | “” |

Data between BOOKS TABLE and (Admin Settings) ADD BOOK PANEL

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **From** | **To** | **Name** | **Type** | **Value Range** | **Default Value** |
| Add Book Panel | Books Table | titleIn | String | Any length  Any characters | “” |
| Add Book Panel | Books Table | authorIn | String | Any length/ characters | “” |
| Add Book Panel | Books Table | amountOwnedIn | Int | Any positive numeral | 1 |
| Add Book Panel | Books Table | amountInStock In | Int | Any positive numeral | 1 |
| Add Book Panel | Books Table | iSBNin | String | 17 numerical characters long (plus dashes) | “” |