Library View End-to-End User Testing Script and results

# Overview:

The bulleted list below represents a nested tree representing the steps to test each scenario. Multiple keypresses in sequence can be represented as comma separated values such as (1,2). Variables can be represented as XX wherein the user must select a value at the time of testing based on criteria which are stated (such as selecting a record number from a lest view).

Lines Highlighted in Green represent tests and / or test groups successfully completed.

Lines Highlighted in Yellow represent tests that have passed, but for which there are design comments.

Lines Highlighted in Red are tests that have failed.

# Test Plan / Script:

* List users
* Enter invalid user
  + (-10)
  + (“asdfasdf”)
* Enter valid Patron (1)
  + List all books (enter 1)
  + List all book copies (enter 2)
    - Enter a valid Book number ( 748 )
      * List all copies with availability and if unavailable expected return date
    - Enter an integer invalid Book number ( 9999 )
      * Prompt book not found and return to main menu
    - Enter an invalid integer (-1)
      * Prompt entry invalid and re-prompt for new entry
    - Enter a non-integer (“asdf”)
      * Prompt entry invalid and re-prompt for new entry
  + Check book copy availability (enter 3)
    - Enter a valid book copy that is available ( 2440 )
      * Expect “book is available”
    - Enter a valid book copy that is unavailable (1 )
      * Expect book unavailable w/ expected return date
    - Enter an integer that is an invalid book number (-1)
      * Expect prompt invalid and re-prompt for entry
    - Enter a non-integer (“asdf”)
      * Expect prompt invalid and re-prompt for entry
  + Print a list of my borrowed copies (enter 4)
    - List of Borrowed Titles OR
    - Empty list
  + Checkout a book (enter 5)
    - Enter a valid available book copy ID (2440)
      * Report book checked out with due date
      * CONFIRM UNAVAILABLE (2, 748)
        + Should be available = false
      * Return Book to revert test status (6, 2440)
    - Enter a valid unavailable book copy ID (1)
      * book is checked out. Return to main
    - Enter an integer invalid book copy ID (999999)
      * Book copy not found, return to main
    - Enter an invalid integer (-1)
      * Invalid entry re-prompt
    - Enter a non-integer (“asdf”)
      * Error invalid entry, re-prompt
  + Return a book (enter 6)
    - Enter a valid checked out book copy ID ( 814 )
      * Confirm that book was checked out (2, 748)
      * Recheckout book to reset state (5, 814)
    - Enter a valid book copy ID which is not currently checked out ( 2440 )
      * Currently does nothing, is that what we want?
    - Enter a valid book copy ID which is currently checked out by a different user. ( 3254 )
      * Book is checked out by a different user – return to main
    - Enter a valid integer which is not a valid book copy ( 999999 )
      * Prompt invalid and return to main
    - Enter a valid integer which is an invalid book copy id ( -1)
      * Prompt invalid and reprompt
    - Enter a non-integer (“asdf”)
      * Prompt invalid and reprompt
* Enter valid Librarian (86)
  + List all books (1)
  + List all book copies (2)
    - Enter a valid Book number ( 748 )
      * List all copies with availability and if unavailable expected return date
    - Enter an integer invalid Book number ( 9999 )
      * Prompt book not found and return to main menu
    - Enter an invalid integer (-1)
      * Prompt entry invalid and re-prompt for new entry
    - Enter a non-integer (“asdf”)
      * Prompt entry invalid and re-prompt for new entry
  + Check a book copy for availability (3)
    - Enter a valid book copy that is available ( 2440 )
      * Expect “book is available”
    - Enter a valid book copy that is unavailable (1 )
      * Expect book unavailable w/ expected return date
    - Enter an integer that is an invalid book number (-1)
      * Expect prompt invalid and re-prompt for entry
    - Enter a non-integer (“asdf”)
      * Expect prompt invalid and re-prompt for entry
  + Add new user (4)
    - Case 1 – valid data entry
      * Enter String (Jim)
      * Enter String (simms)
      * Enter valid int (1)
      * Check that user has been added (7)
    - Case 2 – invalid type
      * (Jim, Simms, 3)
      * (Jim, Simms, -1)
      * (Jim, Simms, “asdf”)
        + All invalid entries should reprompt for valid entry
    - Case 3 – invalid name
      * “”, simms, 1
      * Jim, null, 1
        + All invalid entries should prompt to reenter name
  + Get valid user (6) Remove a user (5)
    - Remove a real user (from bove)
      * Confirm user was removed (7)
    - Remove invalid user (9999)
      * No prompt returns to main
    - Invalid integer (-1)
      * No prompt returns to main
    - Invalid non-integer (“asdf”)
      * Invalid string format: returns to main
  + List all users (6)
    - List of all users
  + Add a book record (7)
    - Valid entry
      * “Dans book \*# Record”
      * “Dan”
      * 10 or 13 digit alphanumeric (4455667789)
      * Check list of books for record (1)
    - Invalid ISBN
      * ASD
      * ADFJDF
      * 1234
      * Reports error and reprompts for valid entry
  + List books (1) Remove a book record (8)
    - Remove valid record
      * XX book number from previous
      * (1) confirm book is deleted
    - Remove a nonexistant valid integer (9999999)
      * Return to main
    - Remove an invalid integer (-1)
      * Expected: prompt invalid and reprompr for entry
    - Remove a noninteger (“asdf”)
      * Prompt invalid and reprompt data entry
  + (1) List books. (2,XX) List copies. Add a book Copy (9)
    - Valid book number
      * (XX) enter book number from above
      * (2, XX) List copies of that book to confirm one has been added
    - Non-existant book number (9999)
    - Invalid book number (-1)
    - Non-integer book number (asdf)
      * Throw error and return to main
  + (1) list books. (2,xx) list copies. Remove a Book Copy (10)
    - Valid book number
      * (xx) enter copy number from above
      * (2, xx) list copies of that book to confirm one has been deleted
    - Non-existant copy number (999999999)
      * Should do nothing and return to main
    - invalid copy number (-1)
      * expected: prompt invalid and reprompt
    - Non-integer copy number (asdf)
      * Prompt invalid and return to main
  + List all loans (12)
* Type “Exit”

# Test Results

Tested on: 7/23/24

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Summary:

Manually performed E2E script, identified various bugs and corrected them. All tests passed representing full functionality in the covered area. One point of caution was identified with regard to the name entry prompt. The system correctly accepts blank space in names, but may also accept unexpected blank characters such as tabs and newlines. It was beyond the scope of testing to determine whether these were being stored to the database. Storage of such characters may result in unexpected behavior especially when retrieving those records and presenting them to STDOUT.