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| **Test Cases** | **Test Case ID/Operator Value** | **Trials** | **Test Steps** | **Expected Result** | **Actual Results** | **Status**  **(Pass/**  **Fail)** | **Comments** |
| 1. **Adding an Book** | Add an author with a first name, last name, and nickname | 1 | User entered first name, last name, and/or nickname. | Author is successfully added to the system. | Same as expected | Pass | Result as Expected |
|  | Add an author with a duplicate nickname | 2 | User entered an author with a duplicate nickname. | Author is not successfully added to the system. | Same as expected | Fail | System rejected the addition of author |
|  | **2.** Add a book with an ISBN, genre,availability, and title | 1 | User entered ISBN, genre, availability, and title | Book is successfully added to the system. | Same as expected | Pass | Result as Expected |
|  | Add a book with a Duplicate ISBN format | 2 | User entered book with an duplicateISBN format | Book is not  successfully added to the system | Same as expected | Fail | ISBN already exists. |
| 1. **Registering a Patron (Student,**   **Faculty,General)** | Add a Patron with an  patron name, email, phone number, and student ID or Department. | 1 | User entered patron name, email, phone number, and student ID or department | Patron is  successfully added to the system | Same as expected | Pass | Result as Expected |
|  | Add a Patron with missing fields  (patron name, email, phone number, and student ID or Department) | 2 | User entered the patron’s name, email, phone number, and omitted the student Id | Patron is not  successfully added to the system | Same as expected | Fail | System rejected registering the Patron. |
| 1. **Checking Out a Book** | Get the Patron Id and ISBN of the book to check out | 1 | User entered patron ID and ISBN of the book to check out. | Book  successfully checked out. | Same as expected | Pass | Result as Expected |
|  | Get the Patron Id and ISBN of the book to check out. | 2 | User entered patron ID and non-existing ISBN of the book to check out. | Book is not  found to checked out. | Same as expected | Fail | Error! Book is not found to checked out. |
|  | Get the Patron Id and ISBN of the book to check out. | 3 | User entered ISBN and non-existing of the book to check out. | Book is not  found to checked out. | Same as expected | Fail | Error! Book is not found to checked out |
|  | Get the Patron Id and ISBN of the book to check out. | 4 | User entered ISBN and non-existing Patron Id of the book to check out. | Book is not  found to checked out | Same as expected | Fail | Error! Patron not found. |
| 1. **Returning Out a Book** | Get the ISBN of the book to check in | 1 | User entered ISBN of the book to check in | Book is  successfully returned. | Same as expected | Pass | Result as Expected |
|  | Get the ISBN of the book to check in | 2 | User entered invalid ISBN of the book to check in | Book is not  successfully returned. | Same as expected | Fail | Error! Book is not found. |
|  | Get the ISBN of the book to check out. | 3 | Check if the book is marked as available again. | Book is available. | Same as expected | Pass | Result as Expected |
| **6.** **Printing All Books/Patrons /Borrowing history /updating** | Update book details with invalid data (empty title, ISBN etc.) | 1. | User entered book details with invalid data | Book is not Updated | Same as expected | Fail | Error! Updating the Book. |
|  | Choose the option to print all books. | 2 | User chosen the option to print all books. | Verify whether the books are printed | Same as expected | Pass | Result as Expected |
|  | Choose the option to print all patrons registered | 3 | User chosen the option to print all  Patrons registered | Verify whether the patrons printed are registered | Same as expected | Pass | Result as Expected |
|  | Check borrowing history. | 4 | User entered the patron ID to view the borrowing history. | Verify that the borrowing history of the patron is displayed. | Same as expected | Pass | Result as Expected |
| 1. **Transaction** | Choose the option to print all library transactions. | 1 | User chosen the option to print all  Transaction. | Verify that the list of all transactions in the library is displayed. | Same as expected | Pass | Result as Expected |
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