**Verification Test Plan**

The Verification Test Plan ensures that the Library Management System meets design specifications and functions. The following test cases are designed to target specific system features and verify desired functionality. We will be testing user the following:

1. User Account Management
2. Librarian Account Management
3. Search Function
4. Book Checkout and Return
5. Reservations and holding Management
6. Notification system
7. Payment System

Some of the examples are:

1. **Test Case: User Account Management**
   * **Features:** User Account Management System
   * **Test Vectors:** Valid username, password, and email address.
   * **Coverage:** This test ensures that the librarian can register a new account for the user successfully, and the system can access and store the new data in the database.
2. **Test Case: Librarian Account Management** 
   * **Features:** Librarian Account Management System
   * **Test Vectors:** Valid username, password, and email address
   * **Coverage:** This test ensures the admin can register a new librarian account successfully.
3. **Test Case: Search Function**
   * **Features:** Search Functionality
   * **Test Vectors:** Valid book titles and author
   * **Coverage:** The test ensures that the librarian and the user can search the books they seek in the database.
4. **Test Case: Book Checkout and Return**
   * **Features:** Books checkout and Return function
   * **Test Vectors:** Valid ISBN
   * **Coverage:** This test ensures that the users obtain and return the correct book stored in the database.
5. **Test Case: Reservations and Hold Management**
   * **Features:** Reservations and Hold Function
   * **Test Vectors:** Book availability
   * **Coverage:** This test ensures that the user can request to reserve and hold a certain book if the book is available
6. **Test Case: Notification**
   * **Features:** Reservations and Hold Function
   * **Test Vectors:** Book availability
   * **Coverage:** This test ensures that the user can request to reserve and hold a certain book if the book is available
7. **Test Case: Payment**
   * **Features:** Payment Function
   * **Test Vectors:** Valid card information
   * **Coverage:** This test ensures the user’s payment will go through.