Customer account :

1. **username : tom**
   password : 123
2. **username : jerry**
   password : 123

Manager account:

username : manager
password : 123

Admin account :

username: admin
password : 123

Part 1 – Launch & Login

1. Launch the application. The **Login** screen appears.

2. The system supports three roles: **Customer**, **Manager**, and **Admin**, each with demo accounts:

   - Customer: tom / 123 or jerry / 123

   - Manager: manager / 123

   - Admin: admin / 123

Part 2 – Customer Flow

2.1 Log in as Customer

1. On the Login screen, enter:

   - Username: tom

   - Password: 123

2. After logging in, you will see the **Customer Home** screen with five main buttons:

- **Borrow Book**
- **Wishlist**
- **Ready to Pick Up**
- **Return Book**
- **Overdue**

2.2 Borrowing Books – "Borrow Book"

1. Click **"Borrow Book"** to open the borrowing screen.
2. On this screen you can:
   - **Reorder** the book list by **Title**, **Author**, or **Category**.
   - **Search** for a book by **title**.
3. Select a book in the table:

   If the book has already been borrowed by you, you cannot add it to the list again and cannot place hold on it since it is unnecessary. The system will offer two friendly error messages to users.

   - If the book is **not currently borrowed by you, no matter it is available or not**:

     You can **add it to your Wishlist**.

     If the book is available, you can directly borrow it and no need to and also cannot place a hold on it.

   - If the book **was borrowed by someone else and hence unavailable,** :
     - Click **"Place a Hold"**.
     - A dialog shows the **current waiting list length** for this book.
     - Click **"Place a Hold"** again to confirm.

If you log in as tom, you can try Book: Eloquent Javascript. After placing the hold, the waitlist will be updated by 1 after you place the hold. By comparing the before and after waitlist length and displaying the two numbers, customers can easily get the information.

4. Click **“Back”** to return to the Customer Home screen.

2.3 Wishlist & Holds – “Wishlist”

1. On the Customer Home screen, click **“Wishlist”**.
2. This view lists:
    - All books you added to your **Wishlist**. The books on which you **placed a hold are set to be added to wishlist at default**
3. For a book whose status is **available to borrow**:
    - Click **“Borrow”** , the book will be automatically shown in your ready to pickup
4. For a book that is **not yet available**:
    - You can simply **wait** until it becomes available, or
    - Use **“Freeze Hold”** to temporarily pause your place in the queue, and **“Unfreeze Hold”** to reactivate your hold later.

2.4 Ready to Pick Up – “Ready to Pick Up”

1. Return to the Customer Home screen and click **“Ready to Pick Up”**.
2. This view shows books that are **ready for you to pick up / currently assigned to you**.
3. If the book is borrowed successfully, it will be automatically put into the **“Ready to Pick Up”** page

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2.5 Return & Renew – “Return Book”

1. From the Customer Home screen, click **“Return Book”** to open the return screen.
2. This screen lists **all books you are currently borrowing**.
3. Select a book:
   - If the book’s **waiting list is empty**:
     - You can **renew** the book (up to **two times**).
   - If the book **has a waiting list**:
     - You **cannot** renew this loan.
4. Click **“Return”** to return the selected book.

2.6 Overdue Books – “Overdue”

1. On the Customer Home screen, click **“Overdue”**.
2. This screen displays **all books that are overdue**, i.e., not returned by the due date.

Part 3 – Manager Flow

3.1 Log in as Manager

1. Log out or restart the app to return to the **Login** screen.
2. Log in with the manager account:
   - Username: manager
   - Password: 123
3. The **Manager** screen will appear, which includes:

- A title such as **“Malden Library Management System – Manager”**
- A **“Check loans due in next 7 days”** button
- A **“Back”** button to return to Login
- A table listing current loans with columns:
  - Branch
  - Book Title
  - Borrower
  - Due Date
  - Status

When the Manager screen loads, it automatically **loads all current loans** from the LibrarySystem and displays them.

3.2 Check Due Loans & Auto-Renew

1. Click **“Check loans due in next 7 days”**.
2. The system will:
   - Find all loans **due within the next 7 days**.
   - **Automatically try to renew** eligible loans (e.g., not over the renewal limit, no waiting list if that rule is implemented).
   - Update the table with **new due dates** and **statuses**.
3. The manager receives different alert dialogs:
   - If **no loans can be renewed**:
     - An information dialog appears, e.g.:

       “There are no loans that can be renewed at this time.”

        - If some loans **cannot be renewed** (e.g., already at max renewals):
            - A warning dialog lists each affected loan with:
                - Book title
                - Branch
                - Borrower
            - This helps the manager identify loans needing manual follow-up.
4. Click **“Back”** to log out manager in the app logic and go back to the **Login** screen.

Part 4 – Admin Flow

4.1 Log in as Admin

1. On the **Login** screen, log in with:
    - Username: admin
    - Password: 123
2. The **Admin Panel** will open. It includes:
    - A title such as **“Malden Library – Admin Panel”**
    - A **“Create New User Account”** section
    - A form with:
        - **Role** dropdown (Customer or Manager)
        - **Name**
        - **Email**
        - **Username**
        - **Password**

- A message label for success/error messages
- Buttons:
  - **“Create User”**
  - **“Clear”**
  - **“Back to Login”**

4.2 Create New User Accounts

1. In **Role**, choose whether to create a **Customer** or **Manager** account.
2. Fill in:
   - Name
   - Email
   - Username
   - Password
3. Click **“Create User”**.
4. The system will:
   - **Validate** the form:
     - If any field is empty or role is not selected, it shows an **error message** and stops.
   - If valid:
     - Generate a simple **ID**:
       - e.g., C100, C101 for customers; M100, M101 for managers.
     - Create the corresponding Customer or Manager object.

        - Register the new user in LibrarySystem via system.registerUser(newUser).
        - Show a **success message**, e.g.:

          "User created successfully: Customer – tom"

        - Optionally clear the form fields.

4.3 Clear & Back to Login

- Click **"Clear"** to:
    - Reset the role selection.
    - Clear all text fields.
    - Clear the message label.
- Click **"Back to Login"** to:
    - Close the Admin Panel.
    - Return to the **Login** screen, where you can log in with any existing or newly created Customer/Manager account for testing.
