Project Requirements

Katherine Galvin, Ryan Buckmaster and Maureen O’Malley

University of Maryland Global Campus

CMSC 495 6380 Current Trends and Projects in Computer Science

Group 4

Revision 4

31 May 2022

**Revision History Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **Revision Number** | **Date** | **Description** | **Name** |
| 1 | 5/22/2022 | Created the Document with basic details | Maureen O’Malley |
| 2 | 5/22/2022 | Added various Requirements | Ryan Buckmaster |
| 3 | 5/22/2022 | Added sections according to rubric such as functional requirements table and project schedule | Maureen O’Malley |
| 4 | 5/24/2022 | Create separate Project Requirements and Project Plan documents | Maureen O’Malley |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**Topic**

The purpose of this project is to create a library management system that allows the user to register, to check out books, and to renew books. The program will use a graphical user interface to generate registration and login pages. The authentication information will be stored in a separate location and hashed for increased security. The user information and book information will be stored using a Glassfish server and SQL databases. The following table lists the functional requirements of the system.

**Requirement**

|  |  |
| --- | --- |
| **Requirement ID** | **Requirement Description** |
| R001 | Shall implement a registration page to take user input for a username and password. |
| R002 | Shall implement a login page to allow a registered user to sign in with their established credentials. |
| R003 | Shall implement a GUI which includes text fields for the username and password and buttons for registration, login, and clearing out the text fields if needed. |
| R004 | Shall utilize an SQL database to specify which accounts have elevated privileges and only allow those admin accounts to make changes to the database records as needed, such as adding, modifying, or deleting books/user information. |
| R005 | Shall store user credentials in a separate file location and hash passwords for additional security. |
| R006 | Shall include both user (username, hashed password, any outstanding fines attached to that account, and any books currently rented out by that user) and book (title, year of release, and author) information in the SQL database. |
| R007 | Shall only succeed login if the user already has an account registered. |

Possible Requirements to address:

* The program will need a registration page to take user input for a username and password. This will represent the user’s account being added to the system.
* The program will then need a login page to allow a registered user to sign in with their established credentials. This authentication should only succeed if the user has an account already registered.
* The GUI should include text fields for the username and password. It should also include buttons for registration, login, and clearing out the text fields if needed.
* The SQL database should specify which accounts have elevated privileges and only allow those admin accounts to make changes to the database records as needed, such as adding, modifying, or deleting books/user information.
* The user credentials should be stored in a separate file location and, in the case of the passwords, hashed for additional security.
* The SQL database should include both user and book information. For the books, the database should store the title, year of release, and author. For users, it should store the username, password(hashed), any outstanding fines attached to that account, and perhaps any books currently rented out by that user.