Table of Contents

List Of Figures
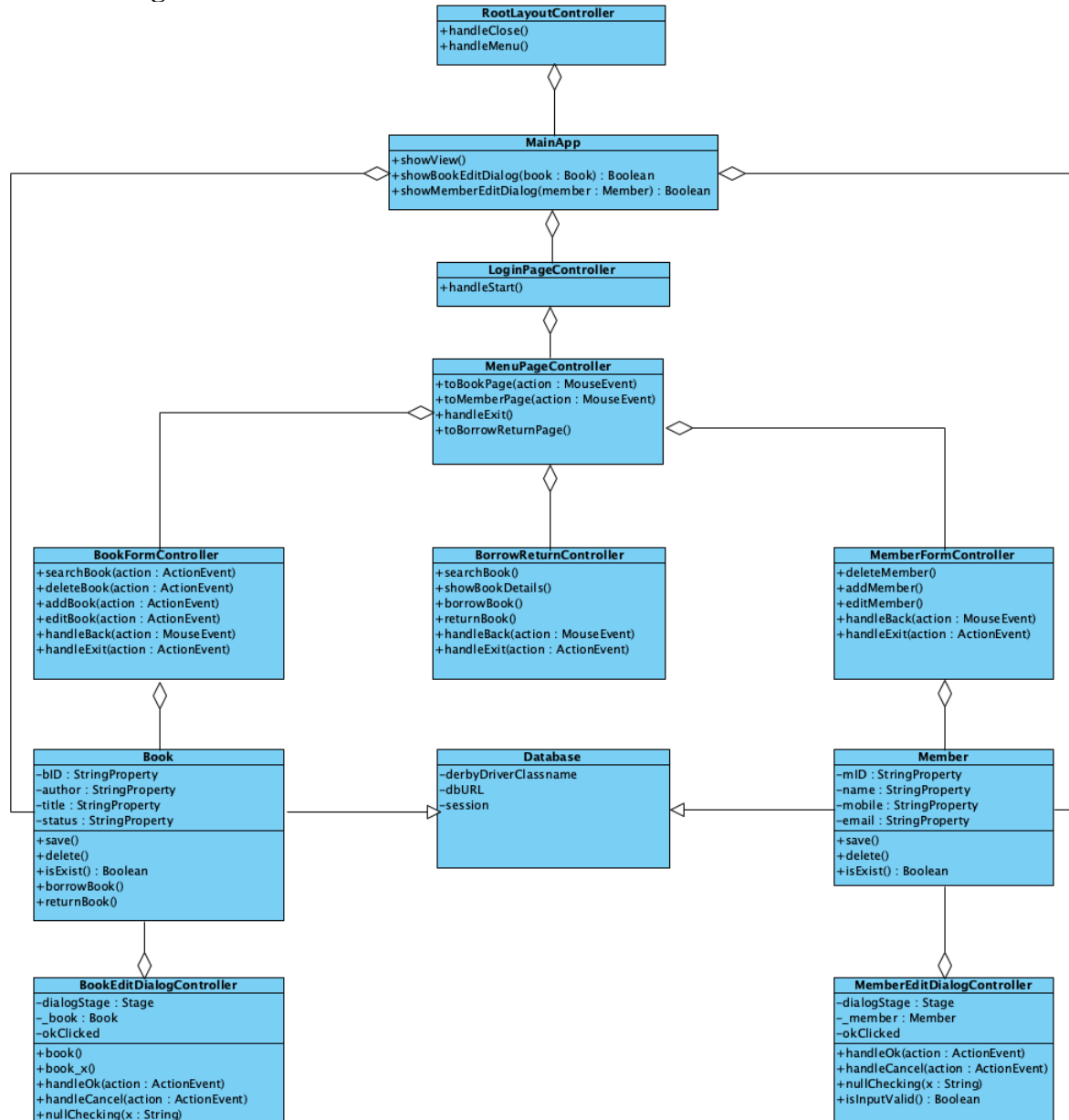
1.0 UML diagrams

Figure 1: Class diagram of Library Management System

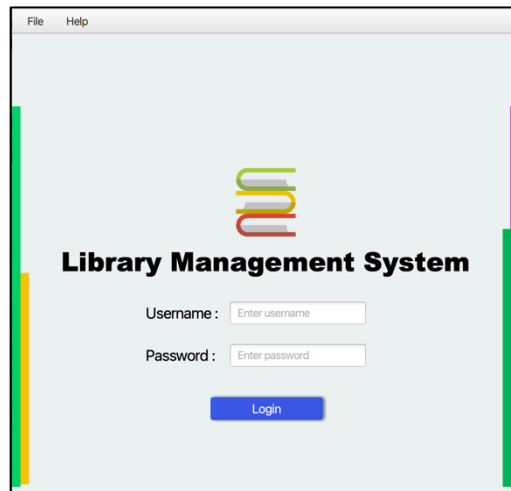**2.0 Features**

2.1 Home Page

Figure 2: Login Page
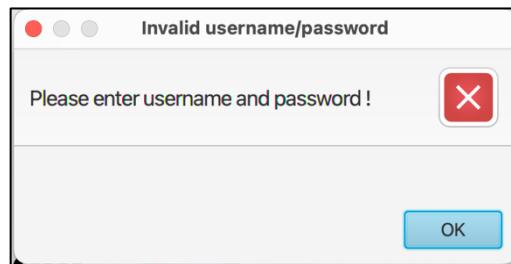
Figure 3: Alert Message Dialog Box

When entered into the system, the login page is shown, where it requires the user to enter the username and password for validation purposes. Once the 'login' button is clicked, the system will get and validate the username and password. If either one of the columns is not entered, the system will pop out an alert message stating "Invalid username/password" and ask the user to re-enter. If the username and password are the same as what the system has set (in this case, username = "admin", password = "admin123"), the user is successfully logged in to the system.

2.2 Menu Page

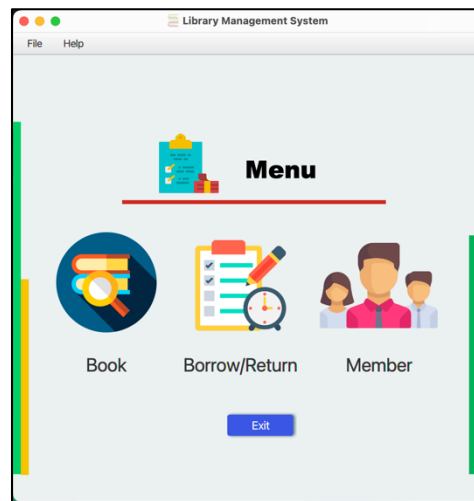Figure 4: Menu Page

After that, the user will be directed to the menu page where they can choose to click on the book icon, borrow/return icon or member icon. There is an exit button if the user wishes to exit the system.
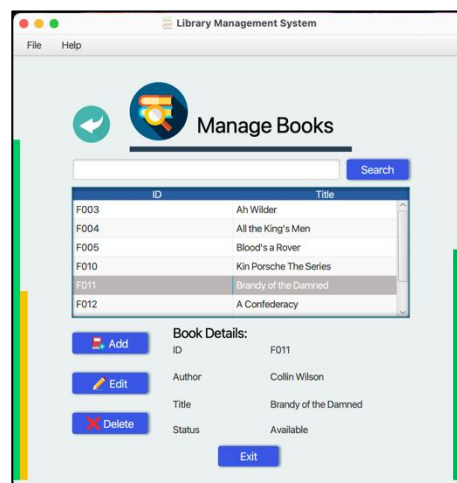
2.3 Manage Books Page

Figure 5: Manage Books Page

If the user clicks on the book icon, they will be directed to the book form page. On this page, the user can access all the book details that are stored in the book database. The user can add a new book, edit the book details, and delete the book by clicking on 'Add', 'Edit', and 'Delete' accordingly. The system will retrieve the book records from the database and store them in an

observable buffer called bookdata, which will be displayed in the table view. There is an exit icon that can be clicked to go back to menu page.
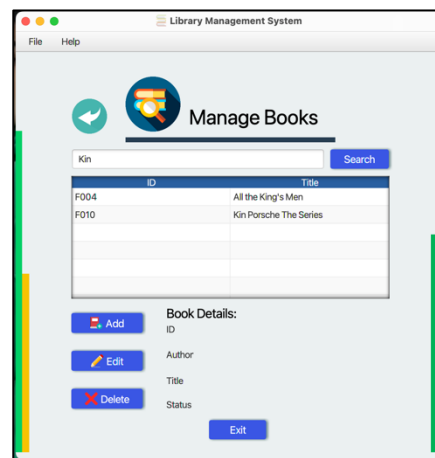

Figure 6:Results of Search Function

There is a search feature provided by the system. When the 'search' button is clicked, the system will search within the book table in the database and filter results that match the keyword.

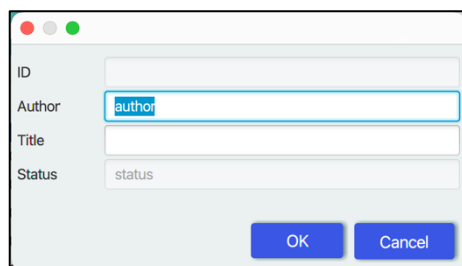**2.4 Book Edit Dialog Box**

Figure 8: Dialog box to add a new book details
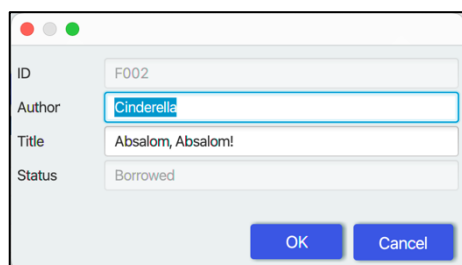

Figure 7: Alert message dialog box

Figure 9: Dialog box to edit book details

When adding or editing the book, the system will pop out a book edit dialog box to get the user's input. Upon clicking on the 'Ok' button, the system will perform a null check process on the input field. If any of the fields is not filled in, the system will pop out an alert message and state which field has invalid input. Otherwise, the information in the book will be modified and saved in the database.
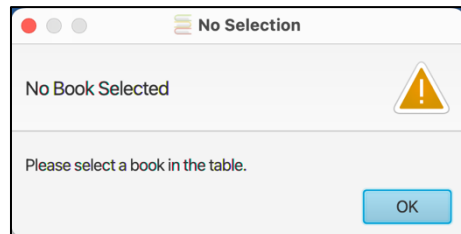

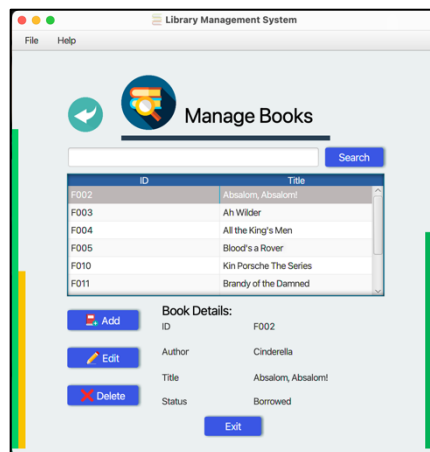Figure 10: Alert message dialog box
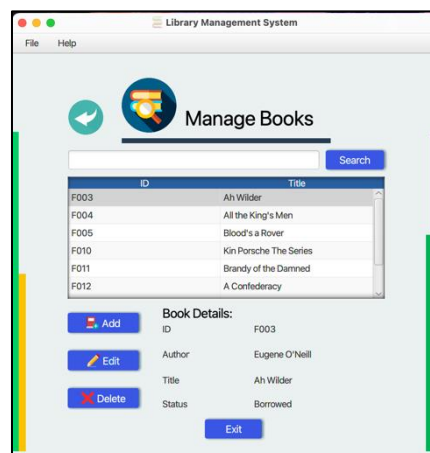

Figure 11: Before clicking 'Delete' Button

Figure 12: After clicking 'Delete' Button

To delete a book, the user must select the book record. Otherwise, the system will pop out an alert message (figure).
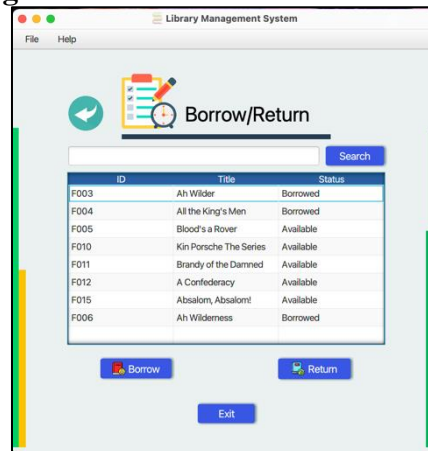
2.5 Borrow/Return Book Page
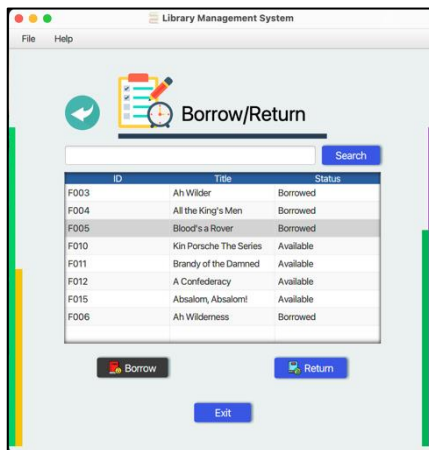

Figure 13: Borrow/Return Page
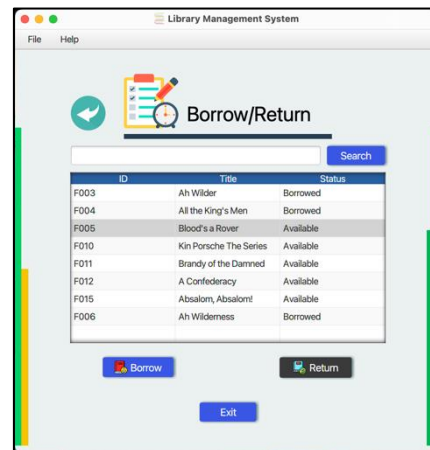

Figure 14: Clicking 'Borrow' Button

Figure 15: Clicking 'Return' Button

In the Borrow/Return page, the user can issue the books by clicking 'Borrow' button. The status of the selected books will become 'Borrowed'. When the user clicked the 'Returned' button, the status of the selected books will become 'Available'. There is an exit icon that can be clicked to go back to menu page.
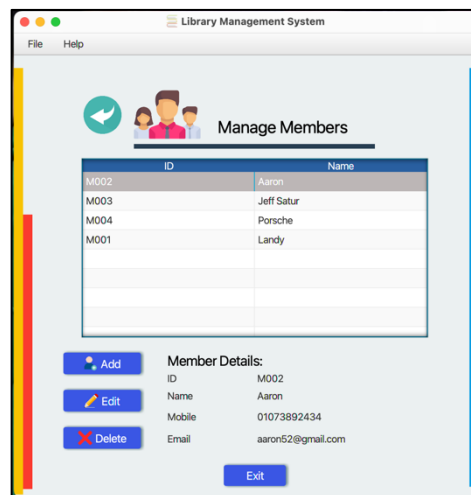
2.6 Manage Members Page

Figure 16: Manage Members Page

If the user clicks on the member icon, they will be directed to the member form page. On this page, the user can access all the member details that are stored in the member database. Similarly, the user can add a new book, edit the book details, and delete the book by clicking on 'Add', 'Edit', and 'Delete' accordingly. The system will retrieve the book records from the database and store them in an observable buffer called memberdata, which will be displayed in the table view. There is an exit icon that can be clicked to go back to menu page.

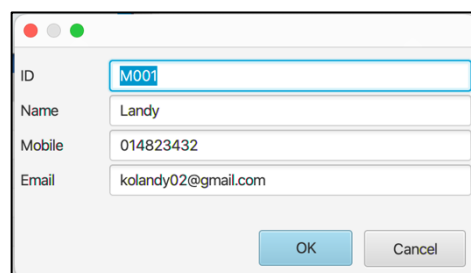**2.7 Member Edit Dialog Box**

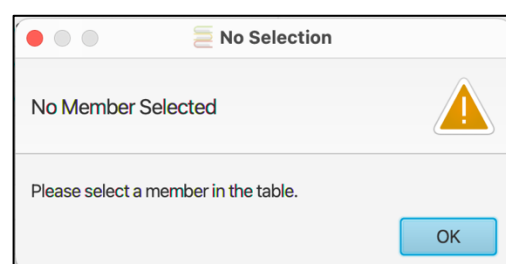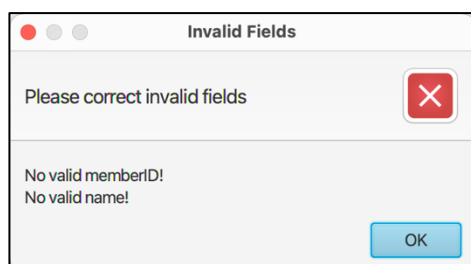Figure 17: Dialog box to edit members details

Figure 18& 19: Alert message dialog box

When adding or editing the user, the system will pop out a book edit dialog box to get the user's input. Upon clicking on the 'Ok' button, the system will perform a null check process on the input field. If any of the fields is not filled in, the system will pop out an alert message and state which field has invalid input. Otherwise, the member's information will be modified and saved in the database.
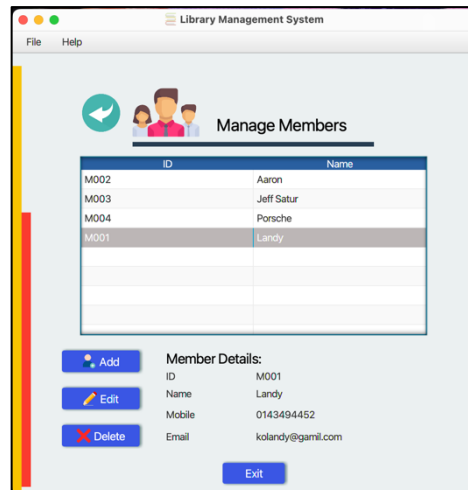

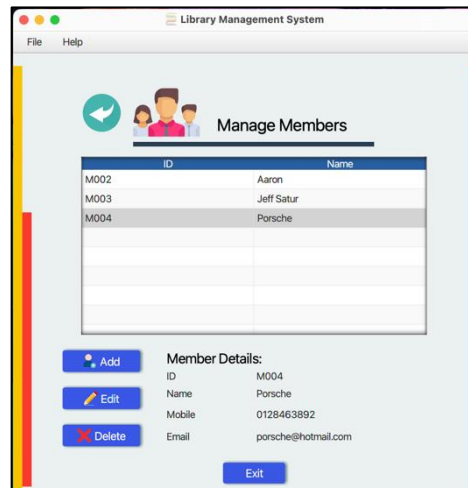*Figure 20: Before clicking 'Delete' Button*

Figure 21: After clicking 'Delete' Button

To delete a member, the user must select the member record. Otherwise, the system will pop out an alert message in (Figure 18).