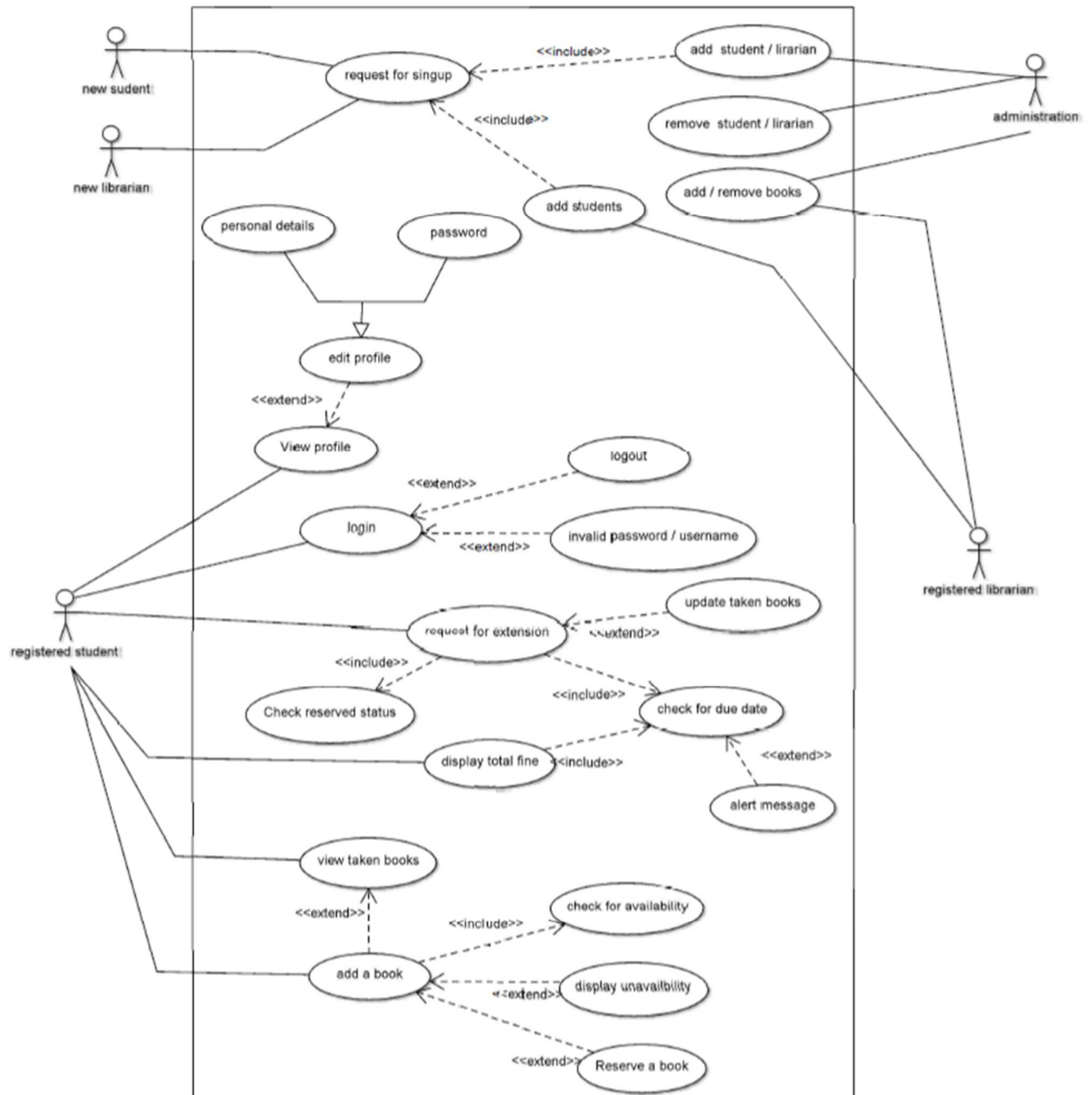


Use Case Diagram



Following are the descriptions for the major use cases:

1. Student Registration:

- **Actors Involved:** New Student, Librarian
- **Relationships:** Association, Include

Scenario-1: Mainline Sequence

1. **New Student:** Enters the credentials and sends request for registration.
2. **Librarian:** Verifies the credentials and adds the student to the data base.

2. Student Login:

- **Actors involved:** Student, System
- **Relationships:** Association, extend

Scenario 1: Mainline sequence

1. **Student:** Enters the username and password
2. **System:** verifies the username and password
3. **System:** Student gets logged in to the home page and displays welcome message

Scenario 2: (at line-2 of scenario-1)

- 2.1. If the username or the password is invalid the student is redirected to the login page.

3. Add a book:

- **Actors involved:** Students, System.
- **Relationship:** Association, Include, Extends.

Scenario 1: Mainline Sequence

1. **Student:** Search for required book and clicks on 'Add Book' option.
2. **System:** Check for availability.
3. **System:** Adds the book to the taken books and changes the availability status of the book in book data base.

Scenario 2:

- 2.1] **System:** If the book is not available check whether it will be available in 3-4 days .
- 2.2] **Student:** Selects the 'reserve book' option.
- 2.3] **System:** Updates the reservation status

Scenario 3:

2.1.1] **System:** if the book is not available in next 4 day's displays the 'unavailable message'.

4.Request for extension:

- **Actors:** Student, System
- **Relationships:** Association, Include

Scenario 1: Mainline Sequence

1. **Student:** Requests for extension.
2. **System:** Check the due date and reservation status.
3. **System:** Update the due date of the extended book.

Scenario 2: (at line-2 of scenario-1)

2.1] **System:** If the book is reserved displays "book cannot be extended".

5. Display total fine:

- **Actors:** Student, System
- **Relationships:** Association, include

Scenario 1: Mainline Sequence

1. **Student:** Chooses the "Display fine" option.
2. **System:** Checks the due date of every book the student taken and calculate the total fine.
3. **System:** Displays the table of Individual book fines and the accumulated fine.