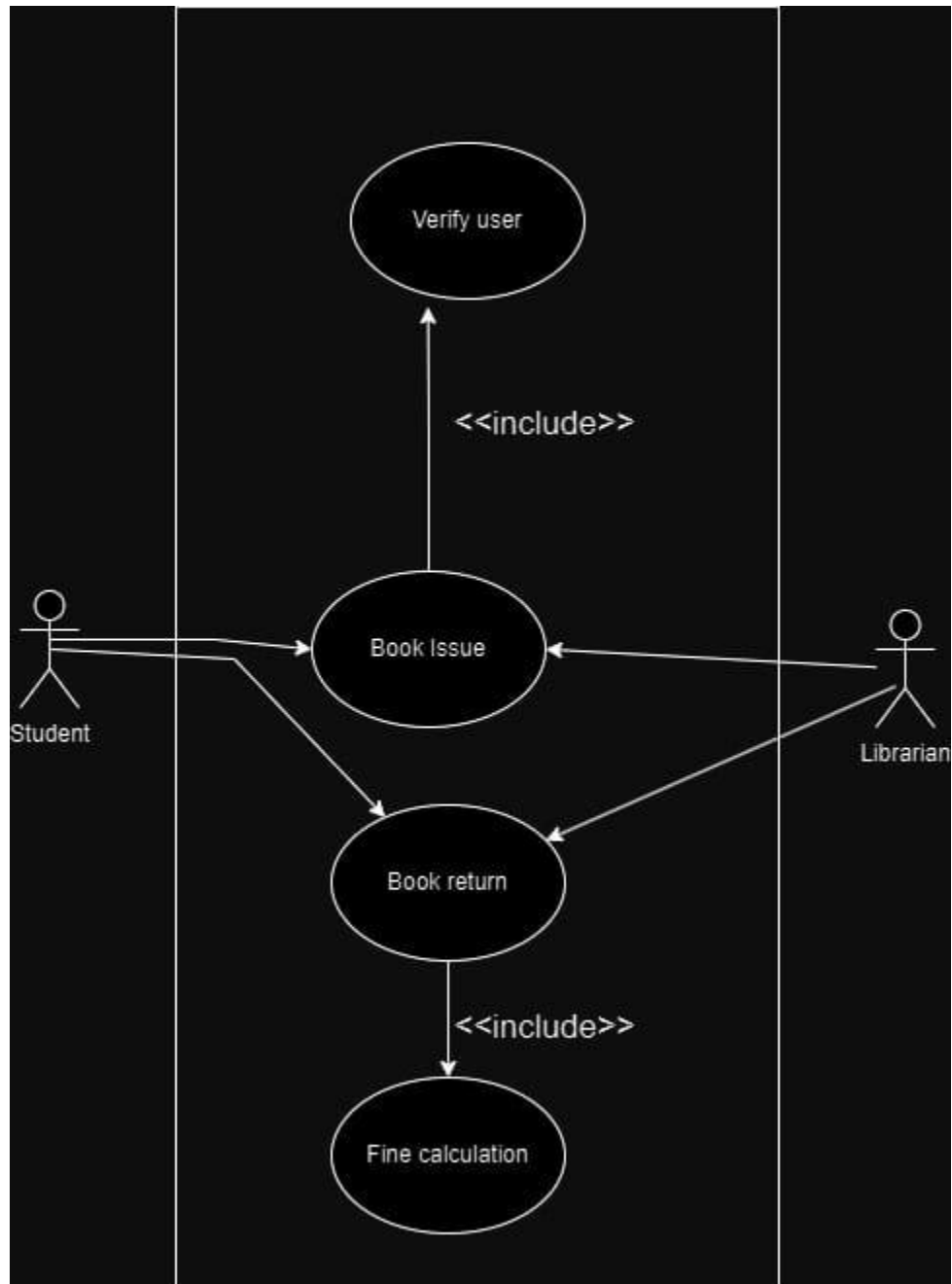


Name: Keni Patel
Student Id: 202101194

Use Case diagram:



Use Case Documentation: Issue Book

Use Case Name: Book Issuance

Primary Actor: Librarian

Other Actors: Student, Database (Book Catalog, Members) Stakeholders and Interests

Preconditions: Librarian must be identified and authenticated.

Goals:

- The book's status in the catalog is updated to "issued."
- The student's profile records the book issuance information.

Main Scenario:

1. The student arrives at the librarian's desk with a book for issuance.
2. The librarian verifies the student's library membership.
3. The librarian updates the book's status to "issued."
4. The librarian updates the student's profile to reflect the book issuance.
5. The student receives the issued book.

Extensions (Alternative Flow):

- If the system fails at any point:

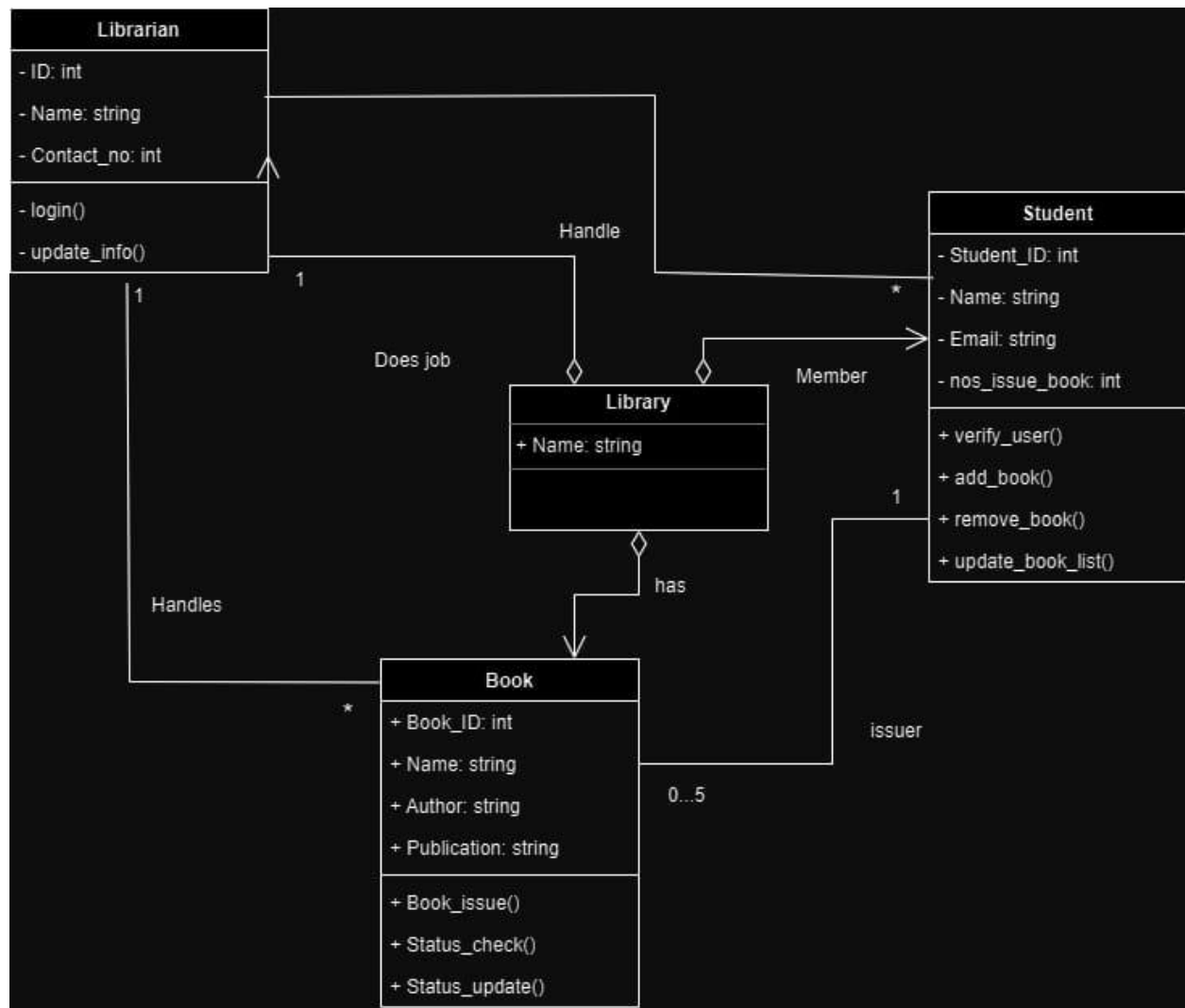
1. The system initiates a robust recovery process.
2. If anomalies are detected in the prior state,
 - a. The issuance process is canceled and restarted.
 - b. The librarian can manually update the issuance process.

-If the student requests not to issue the book at any time:

1. The issuance transaction is canceled, and the book is returned to the librarian.
2. If the student's membership is invalid: The issuance transaction is canceled, and the book is returned to the librarian.
3. If the book is currently held by someone else: The issuance transaction is canceled, and the book is returned to the librarian.

Postconditions: The system returns to the dashboard, ready for another book issuance or return transaction.

Object diagram:



Sequence diagram:

