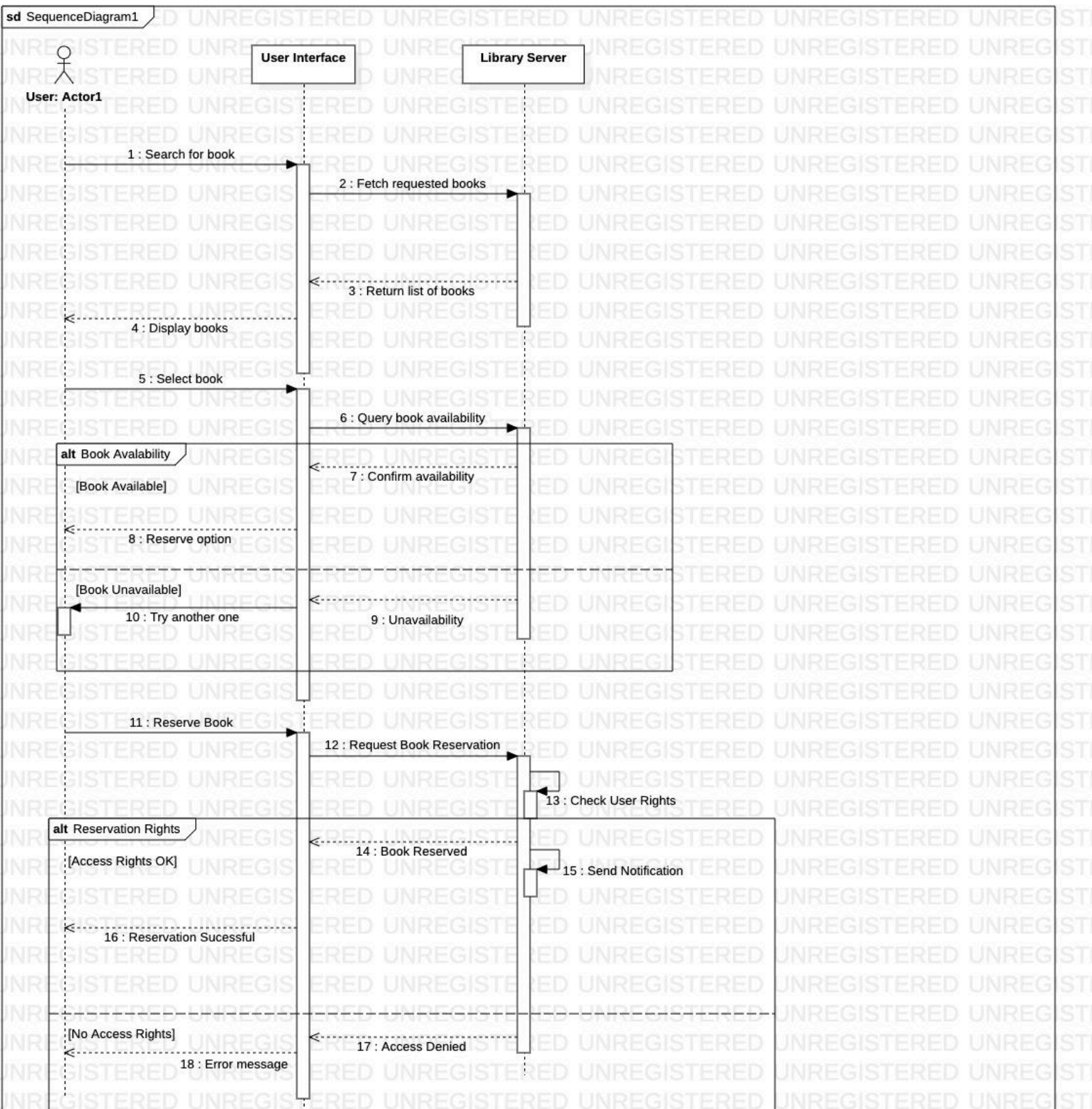


Luku

Sequence Diagram

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Actors & Components:

- **User (Actor1):** The library user searching for and reserving books.
- **User Interface:** The front-end system that interacts with the user.
- **Library Server:** The backend system storing book and reservation data.

Flow of Events:

Searching for a Book

1. The **User** initiates a book search.
2. The **User Interface** sends a request to fetch the relevant books from the **Library Server**.
3. The **Library Server** processes the request and returns a list of available books.
4. The **User Interface** displays the retrieved books to the **User**.

Selecting a Book

5. The **User** selects a desired book.
6. The **User Interface** sends a request for book availability to the **Library Server**.

Handling Book Availability (Alternative Flow)

If the book is available:

7. The **Library Server** confirms the availability.
8. The **User Interface** displays the option to make a book reservation.

If the book is unavailable:

9. The **Library Server** rejects the availability request.
10. The **User Interface** prompts the **User** to try another book.

Reserving a Book

11. The **User** initiates a reservation in the **User Interface**.
12. The **User Interface** sends a reservation request to the **Library Server**.
13. The **Library Server** checks **User's** access rights.

Handling Reservation (Alternative Flow)

If the User has Access Rights:

14. The **Library Server** confirms the book reservation.
15. The **Library Server** generates Notification with a book's due date.
16. The **User Interface** displays a successful reservation message to the **User**.

If the User does not have Access Rights:

17. The **Library Server** rejects book reservation.
18. The **User Interface** displays the error message to the **User**.