

### **Use Case Documentation for issueBook()**

1. Students (Users) will log in to the LMS system via their credentials (UserID, Password).
  - a. Each user has a unique UserID which the system uses to identify the person.
  - b. If they have not registered yet, they can create their account. After verification, their account is activated.
2. Once verified, they head over to select the book they wish to issue. They can either do this by searching for the book or directly visit the book.
  - a. This request is issueBook(UserID, BookID)
3. Once this request is received,
  - a. The system checks the status of the book - Is it available? Is it under some form of processing?
  - b. If the book can be issued, the request is relayed to the librarian in-charge.
4. Librarian will then check the request and process it.
5. If issued, status updates are done as follows:-
  - a. Book status is updated to 'Issued' from 'Available'.
  - b. The available quantity of the book is reduced by one (this is helpful, especially in case there are multiple copies of the same book).
6. Transaction updates are done in the following way:-
  - a. The issued book is attached to the UserID as an issuer.
  - b. The transaction details like timestamp, UserID, BookID, transaction status, etc. are shared with the librarian for book-keeping purposes.
7. Success! If everything goes well, the student can take the book with them. A record of this issuance is maintained in the database.