Functional requirement

* **Cataloguing:** Creating and managing records for all library materials (books, journals, multimedia, etc.).
* **Circulation:** Tracking items borrowed and returned by users, managing due dates, and handling renewals.
* **Acquisitions:** Managing the process of purchasing new materials, including tracking orders, invoices, and budgets.
* **Serial Control:** Managing subscriptions to journals and other periodicals.
* **Reporting:** Generating reports on various aspects of library operations, such as circulation statistics and collection usage.
* **Online Public Access Catalog (OPAC):** Providing a searchable interface for users to find library materials.
* **User Management:** Managing patron accounts, including registration, borrowing privileges, and fines.
* **Interlibrary Loan (ILL):** Facilitating the exchange of materials between libraries.
* **Mobile Access:** Allowing users to access library services and resources through mobile devices.

Book class:

* title
* author
* unique book id
* common book id
* language
* number of pages
* series
* shelf location
* genres to genre
* content
* rating
* possession
* date of loan
* price
* year of publication
* publisher

Shelf class:

* name of the shelf
* id of shelf
* capacity
* all books
* current books
* genre

Create shelf:

* name of shelf
* capacity of shelf
* id of shelf
* CreatShelf(nameofShelf, capacityofShelf, idofshelf)

Create book:

* title
* author
* unique book id
* common book id
* language
* number of pages
* series
* shelf location
* genres to genre
* content
* rating
* possession
* days-
* Price
* year of publication
* publisher
* -GenerateBookId()
* CreateBook(Title,Author,ID,Shelf)

Database:

* Pdfs or word documents saved, with all their ids as their access point.
* List of members (clients/staff), each identified with their unique member ID
* List of transactions
* Status of each book
* GetBookPdf()
* GetMemberById()
* GetBook()
* GetStatusofBook()

Functional requirements:

* Add\remove book
* Multiple types of users (client/staff)
* Manage books:
  + Rent/buy book (client)
  + Rent\sell book (library)
* Manage shelfs:
  + Set capacity of shelf
  + Set genre of shelf
  + Add/remove books from shelf
* Overdue trackability
* Fine calculation for late returns or never returned book
* Book search
* Track availability of book
* Ability to categorize a book
* Book database

Nonfunctional requirements:

* Secure authentication
  + Input Username -
* Accessibility
* Responsiveness
* Scalability

Area of improvement:

* Responsiveness:
  + Bigger and faster server space
* Implement an interface/website

List of tasks: