Design Document

Objective: The main objective of this application is to demonstrate CRUD operation on MySQL database by implementing Library Management System. Data and schema design were provided. Only librarian can use this system.

Library Management System application is designed with the latest technologies like Spring Boot, JPA, Bootstrap, Thymeleaf, jQuery followed by 3-tier architecture.

Application is made of with very simple html pages but very robust backend support.

MVC architecture is strictly followed in this application.

Above project architecture has been attached.

Components of this project are:

1.Spring Web

2. Lombok

3. nekohtml

4. Thymeleaf

5.JPA

6.Maven

7.MySQL Connector

8.Jdk 1.8

Database: MySQL

Database schema has been provided.

Application Server:

Spring boot's embedded apache tomcat has been used with port #8080

Request Propagation:

HTML, bootstrap, CSS, JavaScript and jQuery   has been used for designing responsive UI. The communication in between UI to controller is done by form submission and ajax call.

Binding Request Parameters:

Spring's Rest Controller by using @RequestMapping, @ModelAttribute annotation binds the request from UI to database and vice versa.

Transaction Management:

Spring's @Transactional is used for transaction management.

Paging:

On the search book page paging has been implemented.