Final Project Report

For

MyLibrary

Prepared by

Group 7

Iman Bin Baharuddin	192658
Fatin Nabilla binti Muhamad Zaini	193576
Imran Bin Zakaria	192659
Muhammad Izwan Bin Suhaime	193907

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1. Project Background

1.1. Purpose

MyLib is a web platform system that will provide a systematic system to manage and store book information automatically. The system will provide great help for both students and library staff to keep a constant track of all the books available in the library. With the presence of this system, all the work will become much more easier as the process of adding new books, updating the books description and so on can be done via online. The admin can manage all the books record and this process only takes a few minutes to be completed. Students will be able to view all the list of books available at the moment and can request to borrow their desired books. This task if carried out in a manual system, it will be hard and includes chances of mistakes. These errors can be avoided by allowing the system to keep track of information systematically and thus there is no need to keep manual track of this information which will help in avoiding any mistakes. This system will also enable students to check and borrow books without having to go to the library.

1.2. Scope

MyLib will be used mainly in institutions such as universities. This system will enable both library staff and students to have direct access towards the books in the library. This system will help students a lot as the students can check the availability of the books via online and do not have to go to the library in order to do that. After making sure that their desired book is available, they can straight away place an order upon the book and go collect it whenever they want. The students then will be the borrower. Besides, the librarian can also add new books and update the information about the books. This is seen to be practical compared to manual way.

2. System Analysis

2.1. User Class and Characteristics

1. Borrower:
    - Search for books by using titles following the categories.
    - View available books in the library.
    - Place a request to borrow a book.
2. Librarian:
    - Add new books into the system.
    - Update description about books in the system.
    - Record the borrower details.

2.2. Functional Requirements

Table 2: Functional Requirement

Use Case ID	Use Case	Description	Actors Involved
SRS_REQ_001	Add Book	Librarians add new books into the MyLibrary system.	Librarian
SRS_REQ_002	Search Book	Search the available books in the system's database.	Librarian, Borrower
SRS_REQ_003	Log in	Log in as authorize user	Librarian
SRS_REQ_004	View Book	View book descriptions	Librarian, Borrower
SRS_REQ_005	Borrow Book	Borrower can borrow books	Librarian
SRS_REQ_006	Manage Book Info	Manage the book's information	Librarian
SRS_REQ_007	Manage Borrower Info	Manage the borrower details and status.	Librarian
SRS_REQ_008	Return Book	Borrower returning book to the library	Librarian

2.3. Use Case Diagram

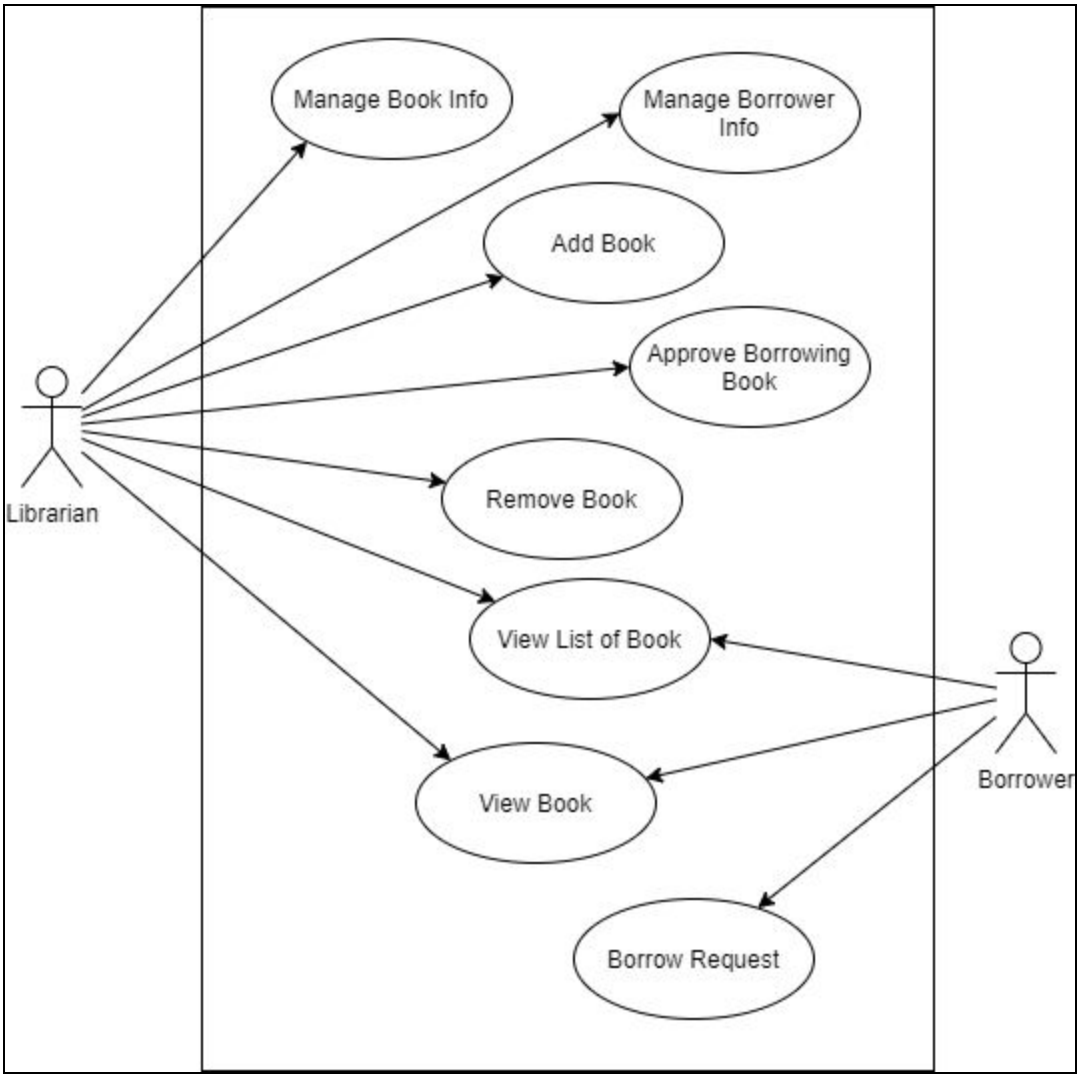


Figure 4.2 Use Case Diagram for MyLibrary system

2.4. Non-Functional Requirement

Table 11: Non-Functional Requirement

QA ID	Quality Attributes	Attribute Refinement	ASR ID	Architecture Significant Requirement (ASR)
1	Performance	Response Time	1.1	Our Application will be interactive, and the delays involved will be less, so in every action-response of the application, there are no immediate delays and will be complete in less than 5 second.
2	Reliability	Connection	2.1	The system will be able to operate and be accessed by multiple users even when it is flooded with requests or if one of the servers is down. There will be a backup server to make sure the system is always connected.
3	Security	Confidentiality	3.1	The system will use define user type in database to authorize in order to grant them the privilege and access to the application
		Integrity	3.2	The system will resist unauthorized access and report the attempts
4	Availability	No downtime	4.1	Our system is accessible and available from 7.30a.m. until 11.00p.m. since that is 30 minutes before and after closing hour

3. User Interfaces

3.1 User Interfaces

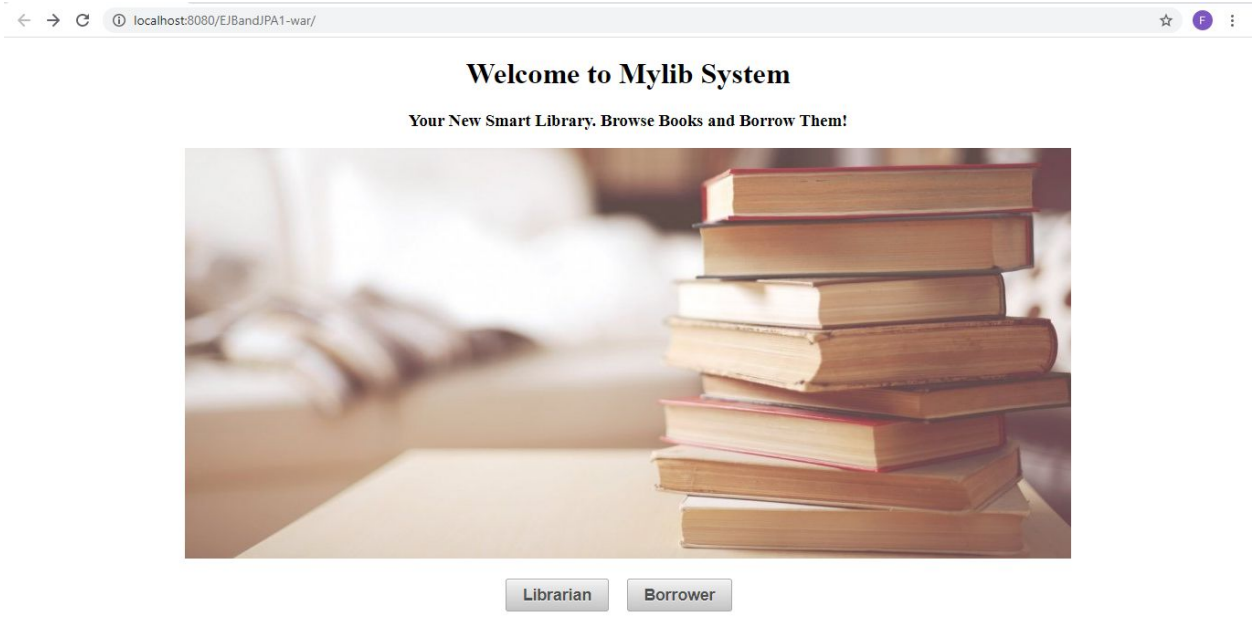


Figure 3.1.1 Main Page of MyLib

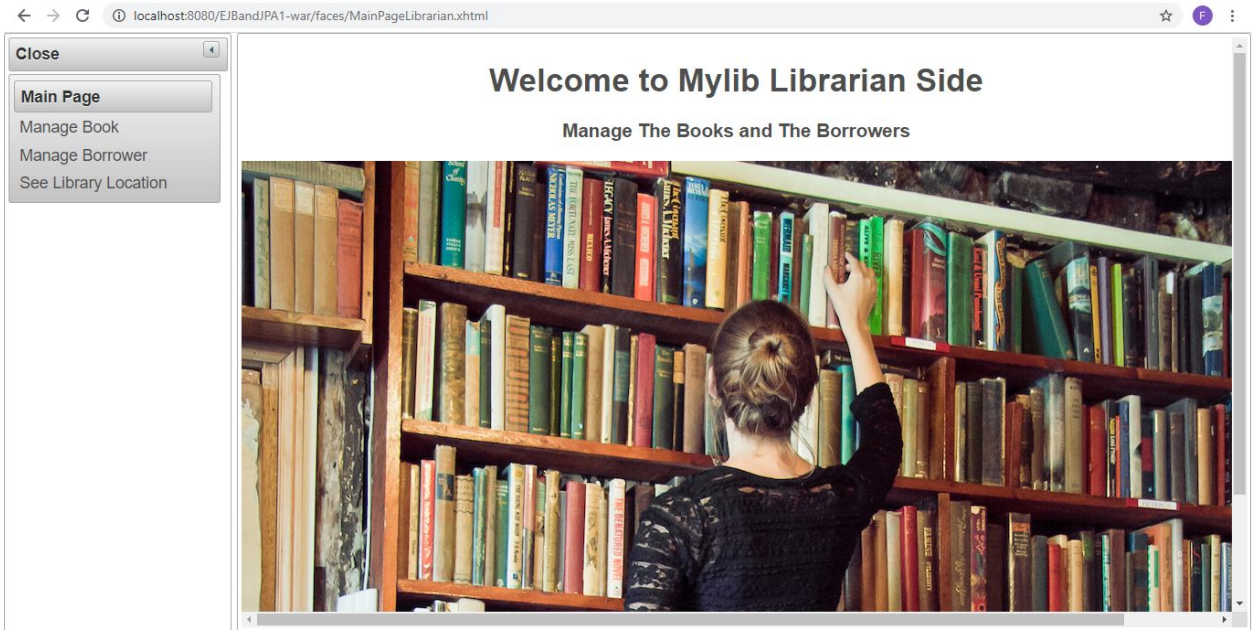


Figure 3.1.2 Main Page Librarian (Librarian)

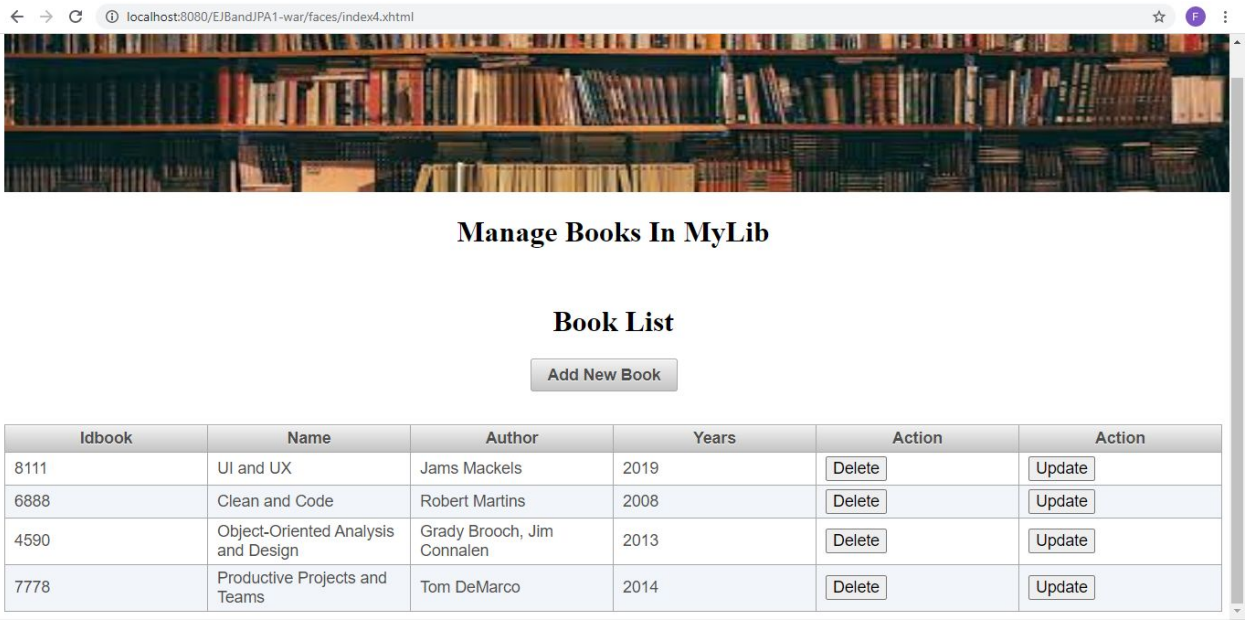


Figure 3.1.3 Manage Books View (Librarian)

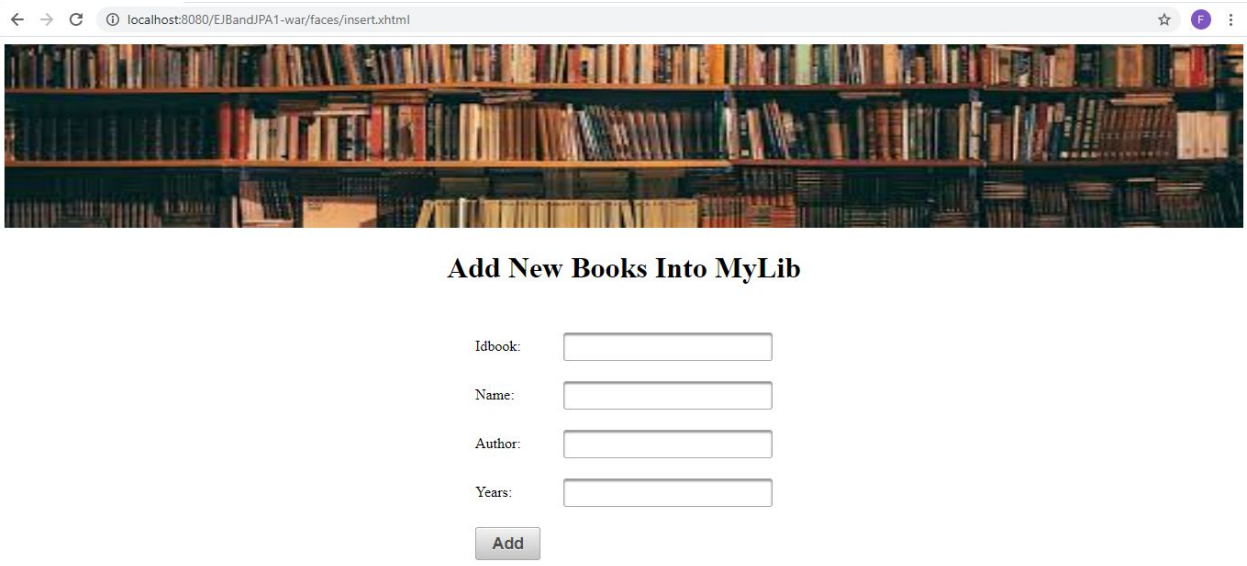


Figure 3.1.4 Add New Book (Librarian)

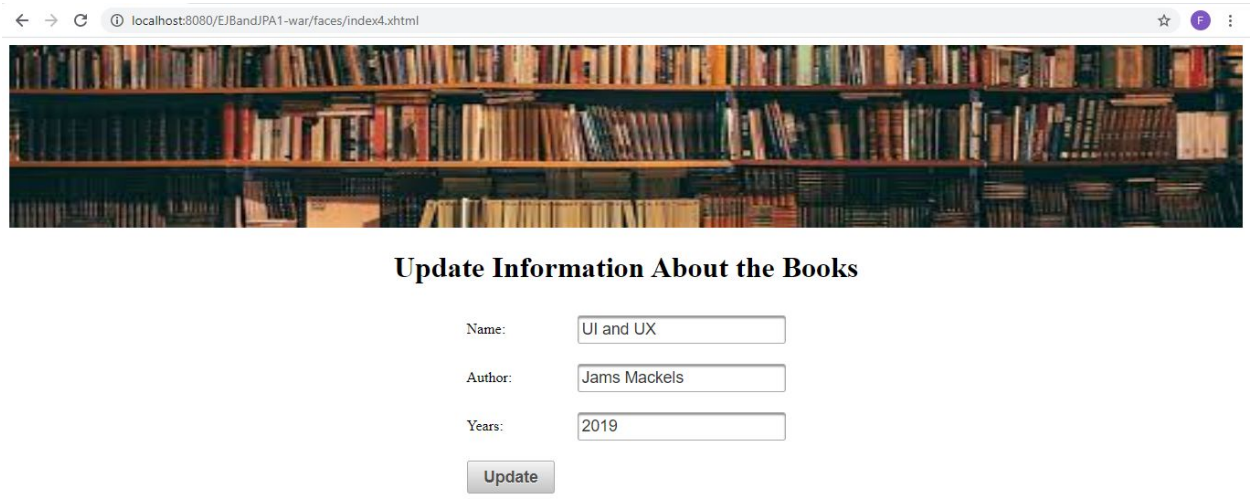


Figure 3.1.5 Manage Books Info and Update (Librarian)

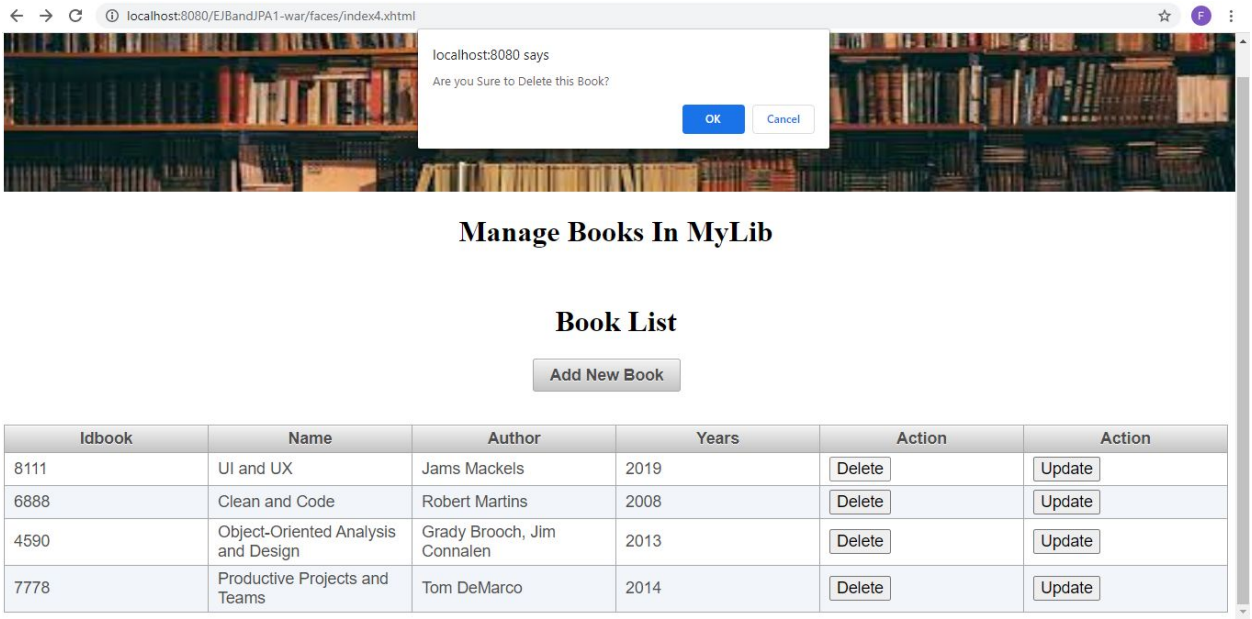


Figure 3.1.6 Delete Book (Librarian)

Figure 3.1.7 Manage Book Borrower (Librarian)

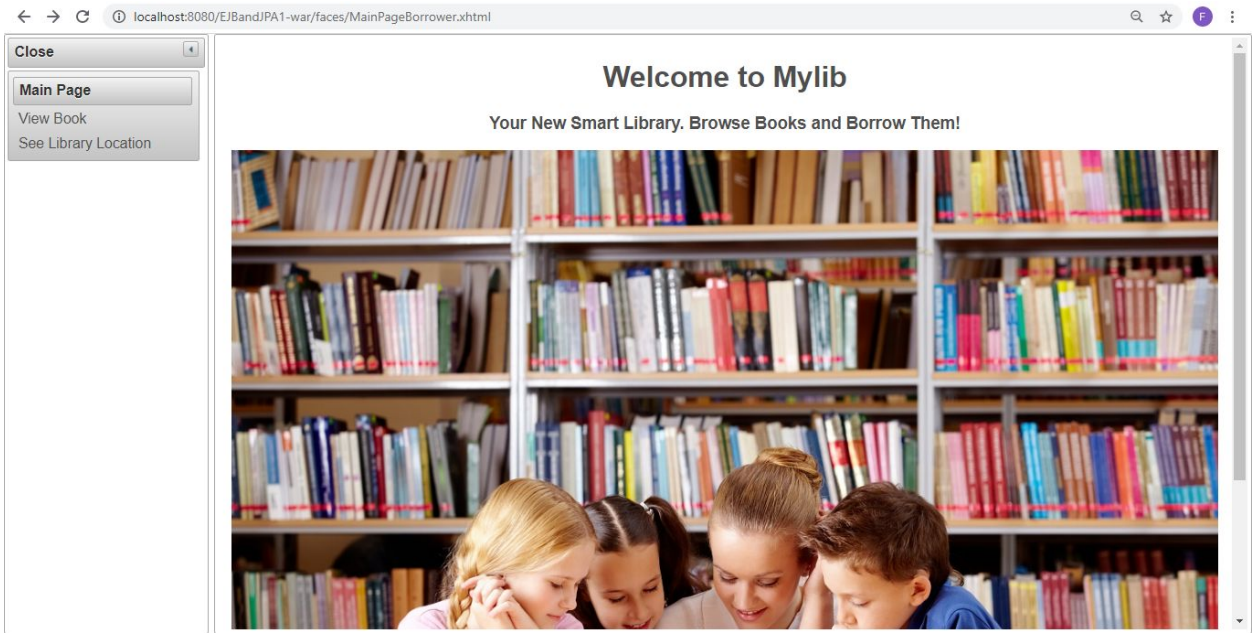


Figure 3.1.8: Main Page Borrower (Borrower)

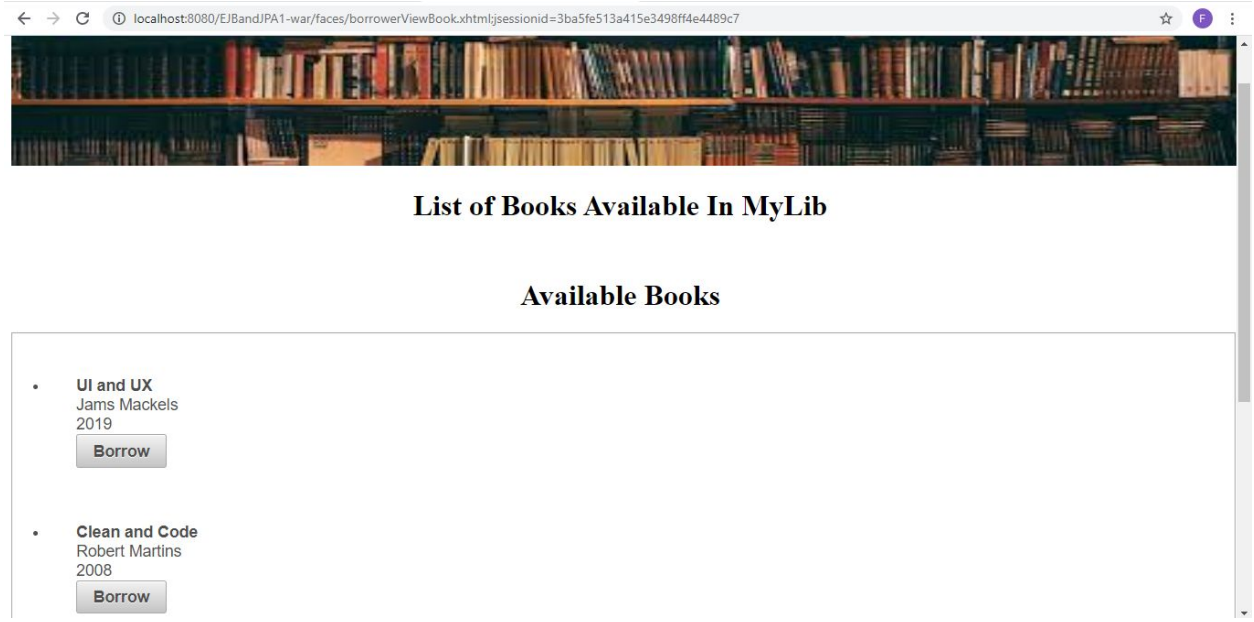


Figure 3.1.9 View Books Available (Borrower)

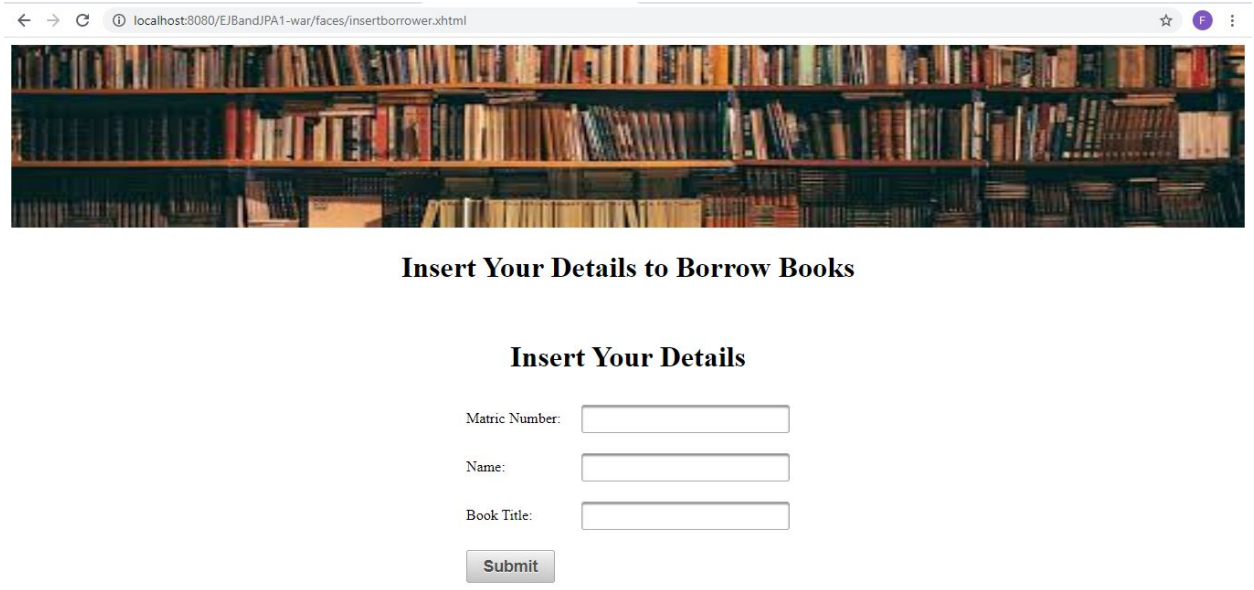


Figure 3.1.10 Borrow Book (Borrower)

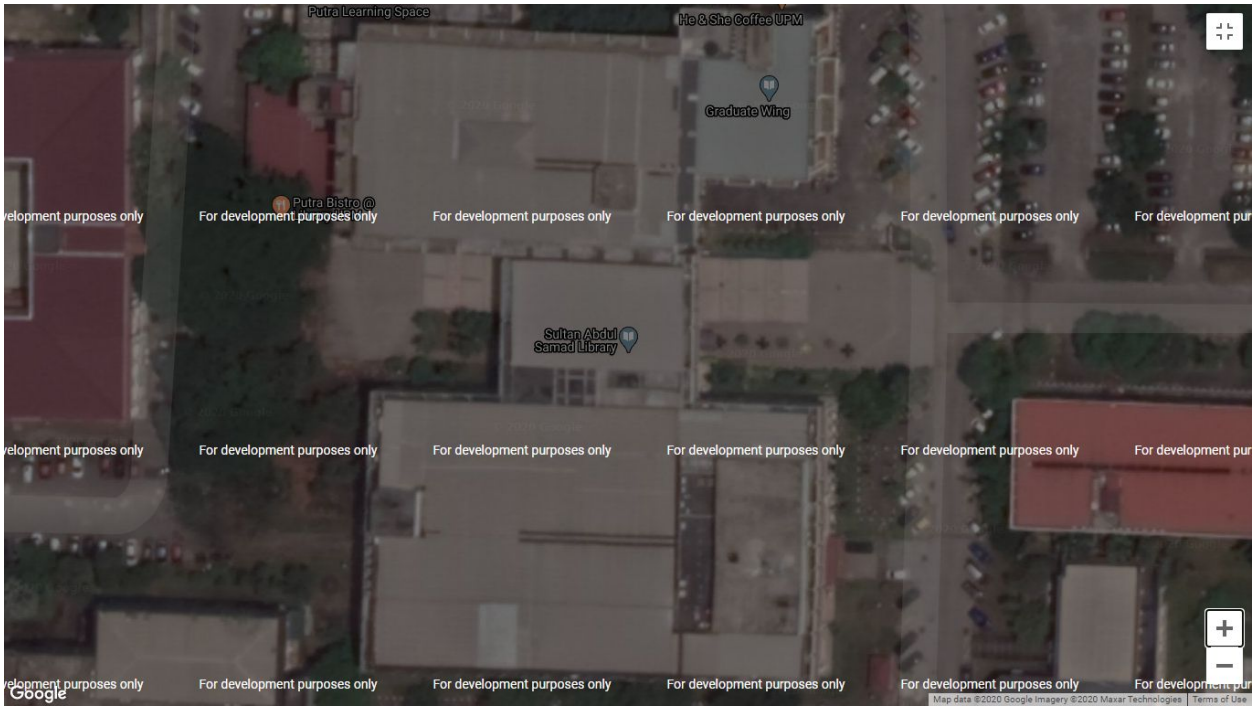
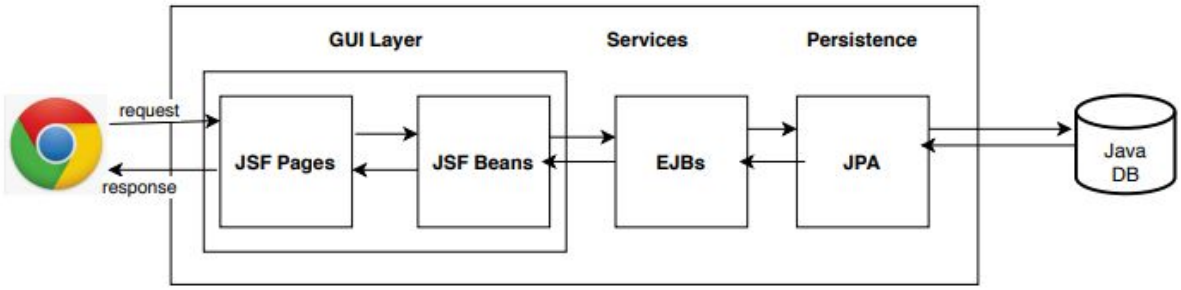


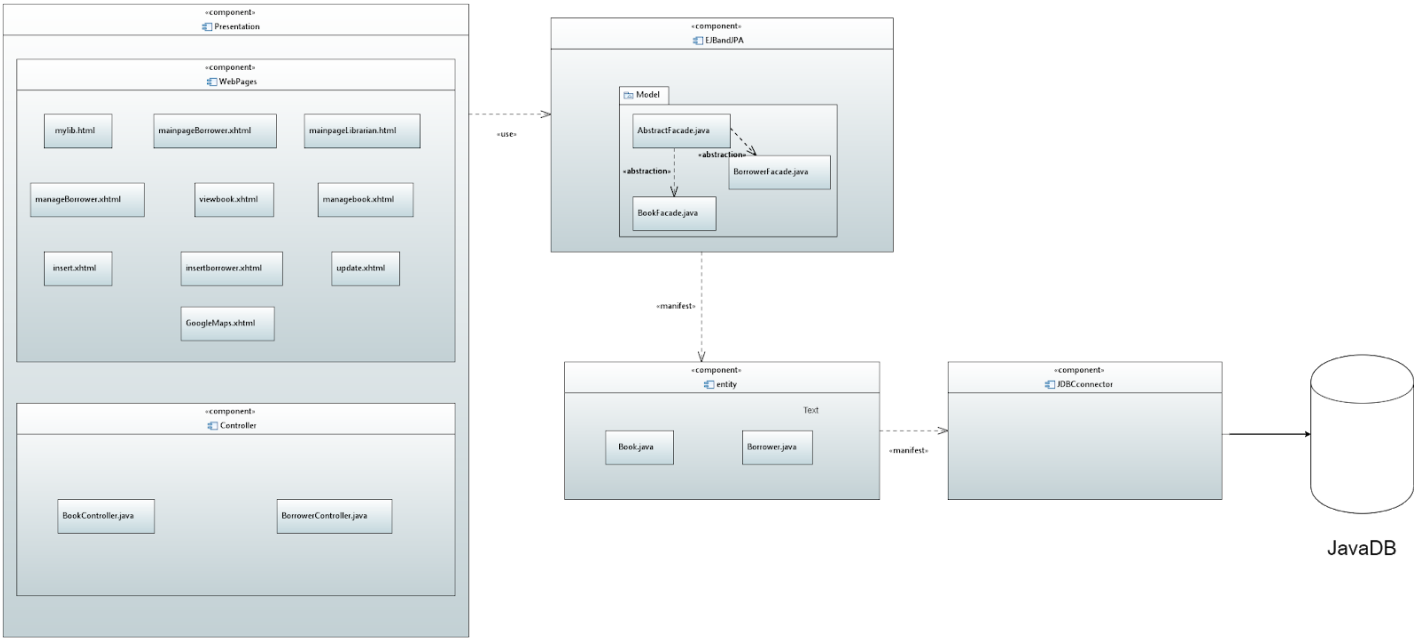
Figure 3.1.11 View Library Location (Borrower & Librarian)

4. System Design

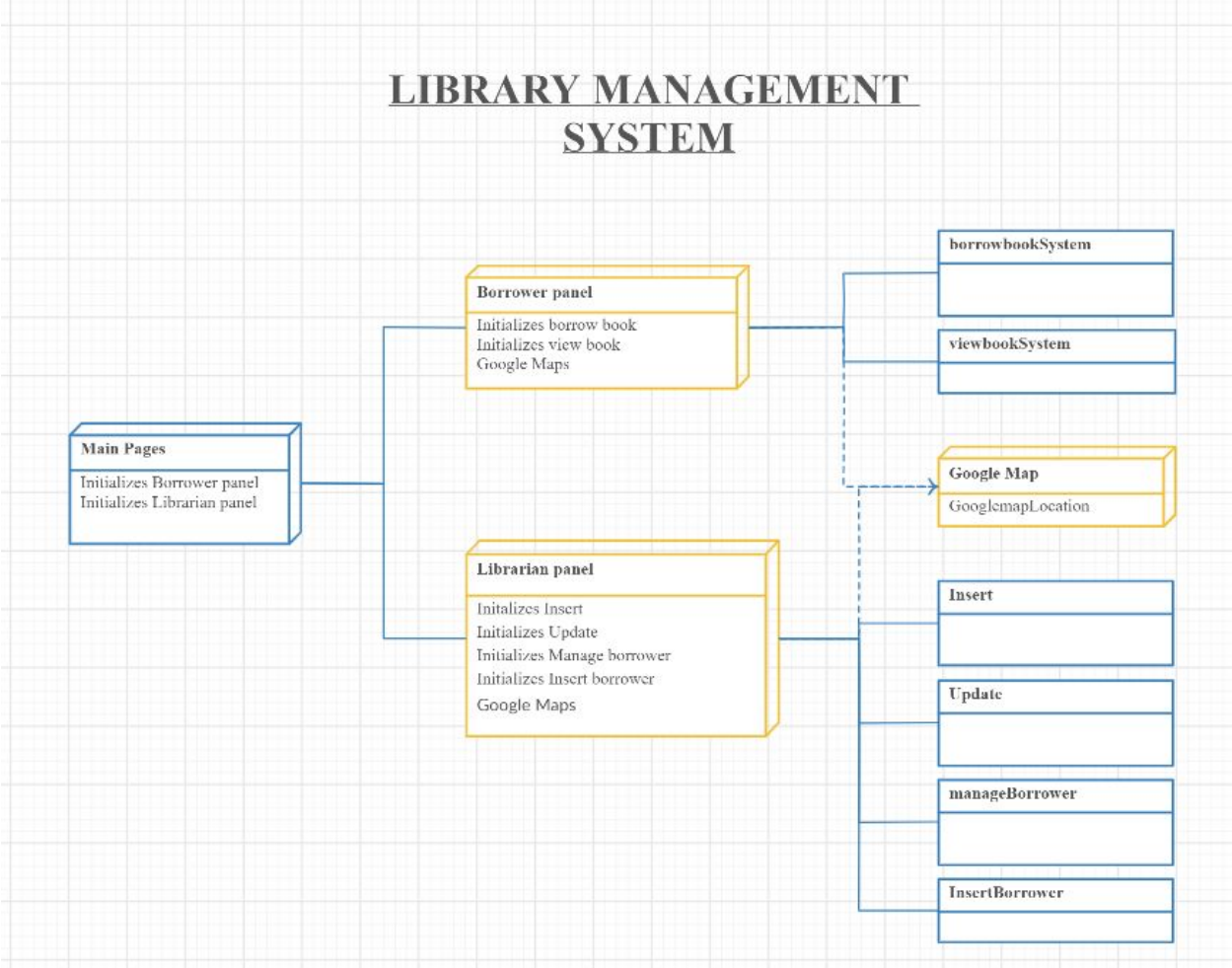
4.1. Physical View



4.2. Component Diagram



4.3. Deployment Diagram



5. Description of API and Third-Party Components

For MyLib management system, we are using third party components which google maps api that will show the location of the library. Both Librarian and Borrower can see the location of the library once they enter the website. They can see by clicking on the column to see the location, on the left side of the webpage.

6. Entity relationship Diagram