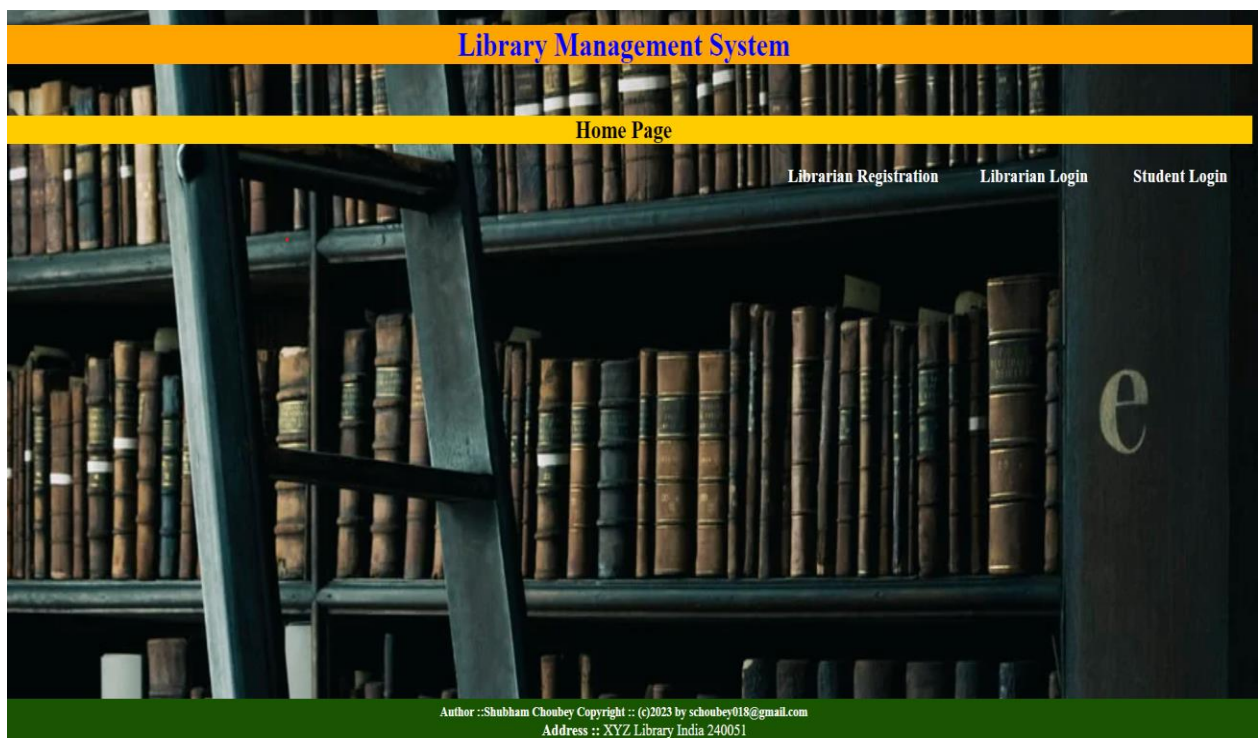# PROJECT REPORT

LIBRARY MANAGEMENT PROJECT

Library management system is a project which aims in developing a computerized system to maintain all the daily work of library. It has a facility where student after logging in their accounts can see list of books issued and its issue date . This system will store all the books and members information that consist book numbers, book titles, author names . It also provides search function to help students find the book by number of book. Search function will search through the books database to look for the book.

Overall this project is being developed to help the students as well as staff of library to maintain the library in the best way possible and also reduce the human efforts.

HOME PAGE

Library Management System

Home Page

Librarian Registration   Librarian Login   Student Login

LIBRARIAN LOGIN PAGE

STUDENT LOGIN PAGE

LIBRARIAN HOME PAGE

Library Management System

BOOKS   STUDENT DETAILS   ISSUED BOOKS   LOG OUT

Author ::Shubham Choubey Copyright :: (c)2023 by schoubey018@gmail.com   Address :: XYZ Library India 240051

CONTROLLER FLOW OF JAVA CODE

```
                        ┌─────────────────┐
                        │    STUDENT      │
                        └────────┬────────┘
            ┌────────────────────┼────────────────────┐
   ┌────────┴────────┐  ┌────────┴────────┐  ┌────────┴────────┐
   │  ADD STUDENT    │  │ DELETE STUDENT  │  │  STUDENT LIST   │
   └─────────────────┘  └─────────────────┘  └─────────────────┘


                        ┌─────────────────┐
                        │     BOOKS       │
                        └────────┬────────┘
     ┌──────────────┬───────────┼──────────────────┬──────────────┐
┌────┴─────┐  ┌─────┴──────┐  ┌─┴────────┐  ┌───────┴──────┐
│ ADD BOOK │  │ DELETE BOOK│  │ BOOK LIST│  │ SEARCH BOOK  │
└──────────┘  └────────────┘  └──────────┘  └──────────────┘
```

```
┌─────────────────────┐
│   ISSUE BOOK AND    │
│      STATUS         │
└─────────────────────┘
```

```
┌───────────┐  ┌───────────┐  ┌──────────────────┐  ┌──────────────┐
│ISSUE BOOK │  │RETURN BOOK│  │ STUDENT ISSUE    │  │ ISSUED BOOK  │
│           │  │           │  │ BOOKS RECORD     │  │ LIST         │
└───────────┘  └───────────┘  └──────────────────┘  └──────────────┘
```

DTO LAYER

```
┌─────────┐
│   DTO   │
└─────────┘
```

```
┌───────────┐  ┌───────────┐  ┌──────────┐  ┌──────────────┐
│  STUDENT  │  │ LIBRARIAN │  │  BOOKS   │  │ ISSUED BOOKS │
└───────────┘  └───────────┘  └──────────┘  └──────────────┘
```
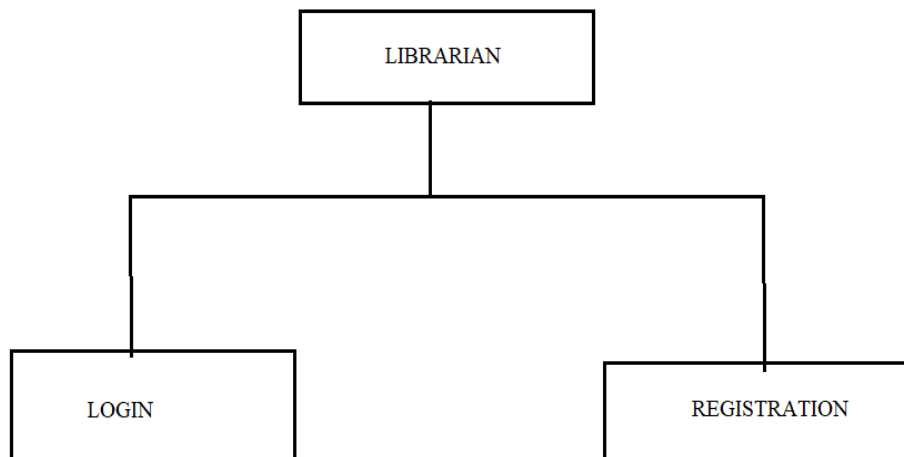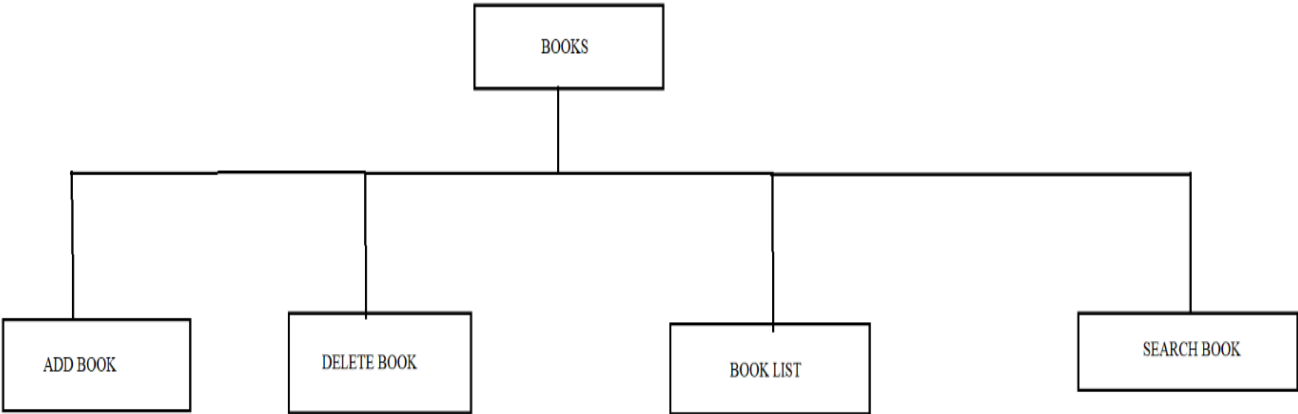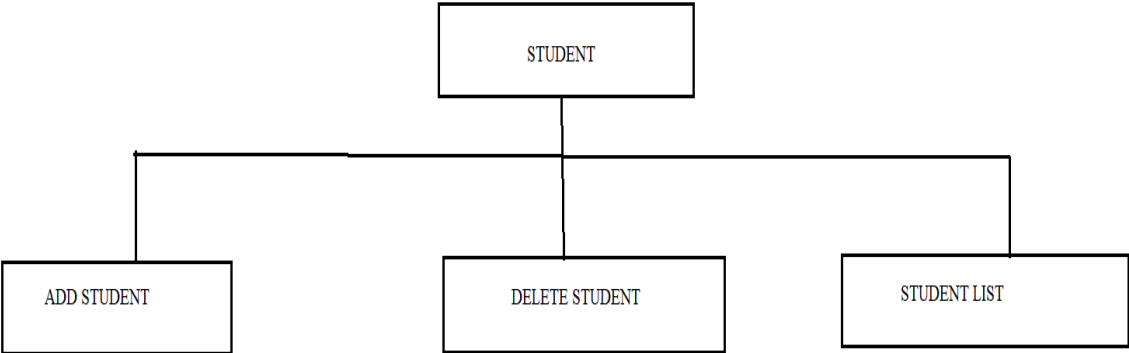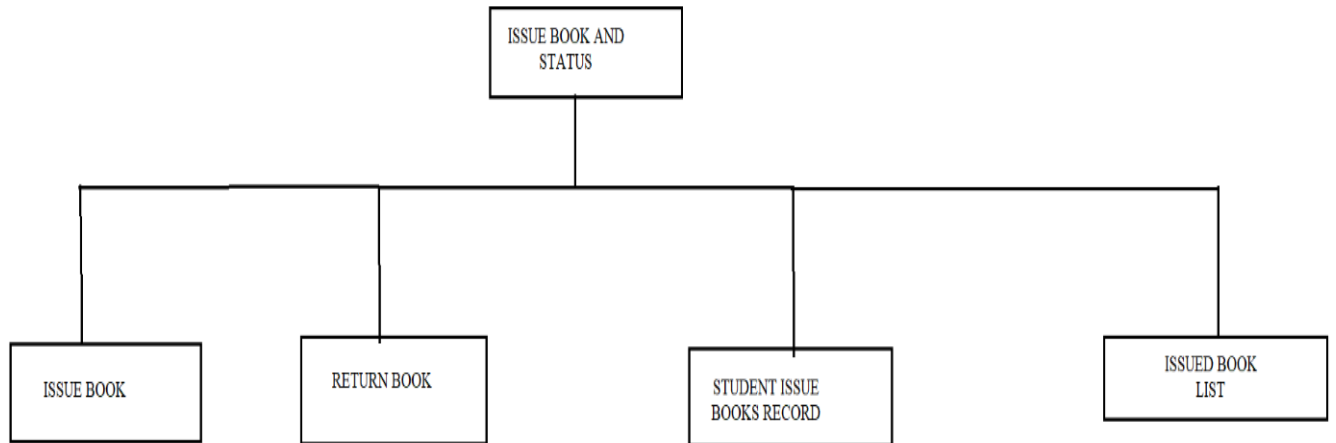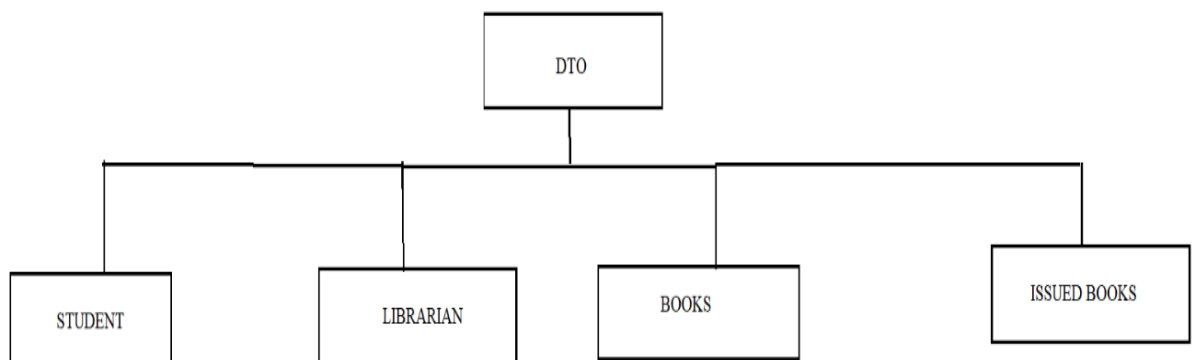
Student Fields:

```java
private String stdId;
private String stdName;
private Integer stdAge;
private String stdgen;
private String mob;
private String email;
private String password;
```

Librarian Fields:

```java
private String name;
private String userid;
private String password;
private String gender;
private Integer age;
```

Books Fields:

```java
private String bTitle;
private String bAuthor;
private String bCategory;
private String status;
private Integer copy;
```

IssuedBooks:

```java
private String stdid;
private String bTitle;
private String bAuthor;
private String bCategory;
private Float fine;
private Date issueDate;
private Date submitDate;
```

DATABASE

Database used : library

Table used are:

- librarianrecord
- stdrecord
- bookrecord
- issued_books

librarianrecord table:

Column Name	Datatype	PK	NN	UQ	B	UN	ZF	AI	G
userid	VARCHAR(30)	☑	☑	☐	☐	☐	☐	☐	☐
pass	VARCHAR(35)	☐	☐	☐	☐	☐	☐	☐	☐
name	VARCHAR(35)	☐	☐	☐	☐	☐	☐	☐	☐
age	INT	☐	☐	☐	☐	☐	☐	☐	☐
gender	VARCHAR(15)	☐	☐	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐	☐

stdrecord table:

Column Name	Datatype	PK	NN	UQ	B	UN	ZF	AI	G
stdid	VARCHAR(25)	☑	☑	☑	☐	☐	☐	☐	☐
stdname	VARCHAR(45)	☐	☐	☐	☐	☐	☐	☐	☐
stdage	INT	☐	☐	☐	☐	☐	☐	☐	☐
stdgen	VARCHAR(25)	☐	☐	☐	☐	☐	☐	☐	☐
stdmob	VARCHAR(25)	☐	☐	☐	☐	☐	☐	☐	☐
stdemail	VARCHAR(25)	☐	☐	☐	☐	☐	☐	☐	☐
stdpass	VARCHAR(45)	☐	☐	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐	☐

bookrecord table:

Column Name	Datatype	PK	NN	UQ	B	UN	ZF	AI	G
bId	INT	☑	☑	☑	☐	☐	☐	☑	☐
bTitle	VARCHAR(45)	☐	☐	☐	☐	☐	☐	☐	☐
bAuthor	VARCHAR(45)	☐	☐	☐	☐	☐	☐	☐	☐
bCategory	VARCHAR(45)	☐	☐	☐	☐	☐	☐	☐	☐
status	VARCHAR(25)	☐	☐	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐	☐

Issued_books table:

Column Name	Datatype	PK	NN	UQ	B	UN	ZF	AI	G
bTitle	VARCHAR(500)	☐	☐	☐	☐	☐	☐	☐	☐
bAuthor	VARCHAR(45)	☐	☐	☐	☐	☐	☐	☐	☐
bCategory	VARCHAR(45)	☐	☐	☐	☐	☐	☐	☐	☐
stdid	VARCHAR(45)	☐	☐	☐	☐	☐	☐	☐	☐
doi	DATE	☐	☐	☐	☐	☐	☐	☐	☐
dor	DATE	☐	☐	☐	☐	☐	☐	☐	☐
		☐	☐	☐	☐	☐	☐	☐	☐