**FUNCTIONAL REQUIREMENT**

**Register**

**Description:**

* First the user will have to register/sign up. There are two different type of users.
* The library manager/head : The manager have to provide details about the name of library ,address, phone number, email id.
* Regular person/student : The user have to provide details about his/her name of address, phone number, email id.

**Sign up**

**Input:** Detail about the user as mentioned in the description.

**Output:** Confirmation of registration status and a membership number and password will be generated and mailed to the user.

**Processing:** All details will be checked and if any error are found then an error message is displayed else a membership number and password will be generated.

**Login**

**Input:** Enter the membership number and password provided.

**Output:** User will be able to use the features of software.

**Manage books by user.**

**Books issued.**

**Description:** List of books will be displaced along with data of return

**Search**

**Input:** Enter the name of author's name of the books to be issued.

**Output:** List of books related to the keyword.

**Issues book**

**State :** Searched the book user wants to issues.

**Input :** click the book user wants.

**Output :** conformation for book issue and apology for failure in issue.

**Processing :** if selected book is available then book will be issued else error will be displayed.

**Renew book**

State : Book is issued and is about to reach the date of return.

Input : Select the book to be renewed.

Output : conformation message.

Processing : If the issued book is already reserved by another user then error message will be send and if not then conformation message will be displayed.

**Return**

Input ; Return the book to the library.

Output : The issued list will be updated and the returned book will be listed out.

**Reserve book**

Input ; Enter the details of the book.

Output : Book successfully reserved.

Description : If a book is issued by someone then the user can reserve it ,so that later the user can issue it.

**Fine**

Input : check for the fines.

Output : Details about fines on different books issued by the user.

Processing : The fine will be calculated, if it crossed the date of return and the user did not renewed if then fine will be applied by Rs 10 per day.

**Manage book by librarian**

**Update details of books**

**Add books**

Input : Enter the details of the books such as names ,author ,edition, quantity.

Output : confirmation of addition.

**Remove books**

Input : Enter the name of the book and quantity of books.

Output : Update the list of the books available.

**Non Functional Requirements**

**Usability Requirement**

The system shall allow the users to access the system from the phone using android application. The system uses a android application as an interface. Since all users are familiar with the general usage of mobile app, no special training is required. The system is user friendly which makes the system easy.

**Availability Requirement**

The system is available 100% for the user and is used 24 hrs a day and 365 days a year. The system shall be operational 24 hours a day and 7 days a week.

**Efficiency Requirement**

Mean Time to Repair (MTTR) - Even if the system fails, the system will be recovered back up within an hour or less.

**Accuracy**

The system should accurately provide real time information taking into consideration various concurrency issues. The system shall provide 100% access reliability.

**Performance Requirement**

The information is refreshed depending upon whether some updates have occurred or not in the application. The system shall respond to the member in not less than two seconds from the time of the request submittal. The system shall be allowed to take more time when doing large processing jobs. Responses to view information shall take no longer than 5 seconds to appear on the screen.

**Reliability Requirement**

The system has to be 100% reliable due to the importance of data and the damages that can be caused by incorrect or incomplete data. The system will run 7 days a week, 24 hours a day.