Experiment: 01 Date:- 8-10-21

Aim:- Do the requirement analysis and prepare SRS

Procedure:-

Structure of an SRS

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Procedure :- Libsoft - A library software system

Introduction :-

purpose :-

The purpose of the libsoft is to have the book transactions (issuing and returning) take place in online mode which enables us to know about the books available. This software helps us get our need for books as fast as possible and helps us to manage our time as we come to know about the book availability This software maintain details of books and library members along with student/staff the one who is issued the book.

Scope :-

The project is designed for the library users. The libsoft will be a interface for library management process and library usage from the users. Library Management system can be used to manage books by book borrowing, insertion and monitoring. In this we can know details of the accounts, availability of books and maximum limit of borrowing.

## 1.3 Definitions, Acronyms and Abbreviations

libsoft - library software system
SRS - software Requirement specification
IEEE - Institute of Electrical and Electronics Engineers

## 1.4 References:-

1. "Software Engineering Standard", Technical Report, IEEE, 1987
2. Ian Sommerville, Software Engineering, Pearson Education, New Delhi, 2007
3. R.S. Pressman, Software Engineering, A Practitioners Approach, International Edition, Tata McGrawHill, 2005.
4. Ugrasen Suman, Software Engineering, Cengage learning

## Overview:-

In the introduction we come to know about the purpose of the library management system. The scope of the library management system gives us a view about the reach of our library management system.

The purpose of the Software Requirements specification document is to observe and describe the external behaviour of the library software system. Software Requirement specification defines and describes the operations, interfaces, performance of the library Software system. The document also describes the non functional requirements. It also describes the design constraints that are to be considered when the system is designed. The main purpose of this project is to maintain easy circulation of book transactions using computers and to provide different reports

Product perspective :-

It provides an advanced book search mechanism which will make it easy to borrow, insert and index a book in the library. The system provides books catalog and information to members and helps them decide on books to borrow from library. The librarian can keep the books catalog updated all the time so that the users get the updated information all the time.

Product functions:-

Librarian:-

1. Administrator (Librarian) should be able to insert, modify and delete books
2. Librarian gets the information of any member who has borrowed a book.
3. Librarian can edit book categories and arrange by books
4. Librarian can use Libsoft to send notifications
5. Librarian records books returned by users

Users:-

1. Users are provided with information about books catalog.
2. Users can check their accounts information and change it.
3. They can have ability to search through books by subject, title authors or any information related to book
4. They can suggest a book to be bought to library book collection.

User characteristics :-

User:-

1. They can check book availability and request for books Suggest some books.

Administrator(Librarian)

1. They issue books and get report of books issued, returned and their availability

## General constraints :-

1, Books are issued to only those who returned the previous issued book

2, Books are issued only to those who have paid the overdue charges if there are any

3, Restricted number of books are given to the user.

## Assumptions and dependencies :-

### Assumptions :-

1, The username should not be too long.

2, The user should give the correct & valid username and password

3, The user returns the issued book before the due date

### Dependencies :-

1, The librarian should have proper understanding of product (libsoft)

2, The system should have general report stored

3, Any update regarding the book from library is to be recorded correctly.

4, The users (student | staff) should know how to use the libsoft.

# Functional Requirements

1. Signup / Register

2.
   - 2.1 Search a book
   - 2.2 Reserve a book

3.
   - 3.1 Issue a book
   - 3.2 Return a book
   - 3.3 Alert book return

4. Maintain inventory

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   - 5.1 Feedback
   - 5.2 Recommend a book
   - 5.3 Help

6. Account maintenance

1. Signup:-

1, The login screen allows registered users to login or unregistered users to signup to access all the features that their account gives them access to.

2, If they type in their username and password and click Submit the user credentials are validated and if correct they are logged in

INPUT:- User need to enter login details
(email, rollno, name)

Processing:- App will read the details are validate or not

Output:- If the details are valid. The App will display the categories
else - Details are not valid the app will display as not valid or not found

Search Requirement:-

1, • The system shall accept an input as a bookname, author or publication and returns a list of them.

2, • We can reserve a book under this requirement

3, On using this we can get the information the availability of books

INPUT:-
We need to type the bookname, author or publication we are searching for

processing:- App will check for the required book based on search

Output:-
The library software will display the search result for book

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Issue book :-

1. This helps us to get our required books
2. After we have put a request for particular book this process takes place

Input :- A request for a particular book is given by the user

processing :- The first request person will be selected and his details will be taken

Output :- the book will be issued to that person

Alert book return :-

1. It sends a notification when it two days before our return date
2. It alerts the user to return the book

Input :- A book needs to be issued to the student/staf.

Input :- Once a person is issued a book two days prior to processing the return date the system automatically sends a notification

Output :- A notification regaring the book details and return date is send to the user

Return a book :-

1. Once, we return our book the system updates as we have submitted the book

Input :- The user submits the book then the Librarian gives the details as submitted.

processing :- The system updates as he/she returned the book

Output :- It shows user's status as Submitted

Maintain inventory :-

1, The librarian maintains the inventory

Input :- The librarian updates the status of the books about their availability

Output :- The book availability details are updated.

feedback and Recommand a book

1, A feedback page will be there for the user to give feedback about the software so that they could improve it

2, In the feedback the users can recommand for a book to be in the library

Input :- The feedback option needs to be choosen by the user

processing :- the system automatically gives you the feedback option once in a week. or if the option is selected by the user.

Output :- The feedback given by the user is collected for further progress

Help :-

This helps us how to use the app

Input :- the user needs to click on help option

Output :- The description on how to use the app will be displayed

Account maintainence :-

This will be maintained by the librarian

Input :- When the librarian opens the accounts

Processing :- He can maintains the account deletion and other details

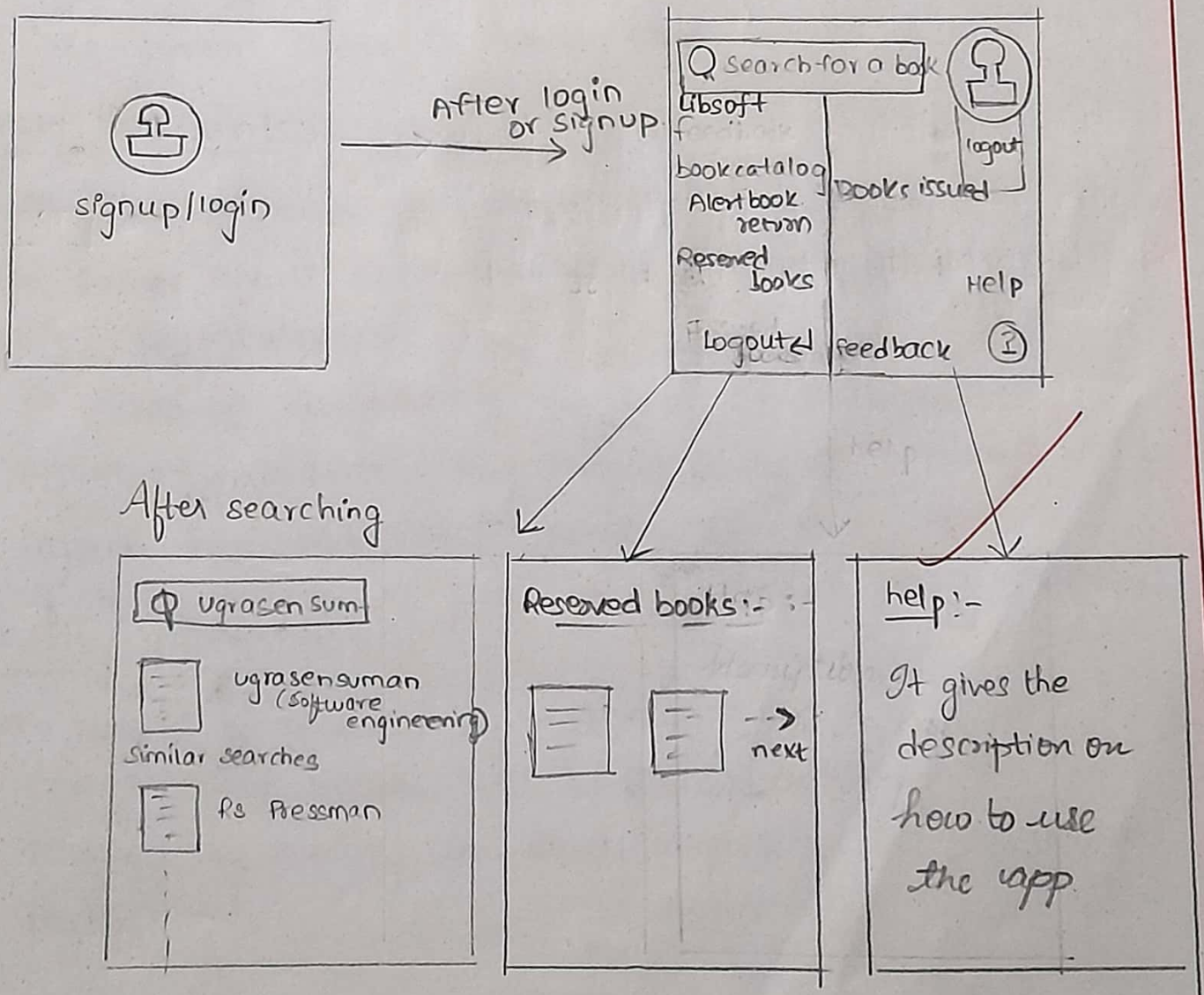
Output :- The accounts will be checked and verified.

## External interface requirements:-

It should be simple and easy for consumers to understand and use. It should also be an immersive interface. There should be a proper input and output (login, main purpose, output)

## User interface:-

The software provides good graphical interface for the user so that it becomes for both the librarian and student/staff to use this software



## performance requirements:-

This should be used by both staff/students and librarian Therefore, it is expected to perform all the requirements specified by the particular user (customer.

1. The performance of system should be fast and accurate
2. All the information should be stored without any loss of data.
3. All the errors regarding the login should be handled (not accepting unwanted persons)
4. The system needs to handle large amount of data

## Design constraints:-

1. The Design should be simple and user friendly.
2. The Design should be as mentioned by the particular college requirements.
3. It should be designed in the idea of reaching more number of students. Any complex way of login and logout may reduce the number of users
4. If it is designed in Java it may provide more security.

## Security requirements:-

1. It should be secured by authentication
2. Unauthorized access will be avoided and can be tracked by sending an email regarding the unauthorized login

3, The users can just read the information they cannot edit or modify anything except their personal information

Maintainability requirements:-

1, The process of creating an account and operating through it should be maintained by the user

2, The librarian should maintain the details about the books, no of registered candidates etc.

Reliability requirements:-

Reliability is one of the most important quality attributes

1, It should be reliable by handling all the logical errors

2, Project complexity is major cause of software unreliability so the project needs to be maintained as simple.

3, Due to unreliable software, more than hundred failures were reported in a day. So the developers need to spend more than 75% of time of development in keeping the computer and software up to date

Availability requirements:-

1, It should be made available to all the students and staff, and the software needs to be implemented on various environments so various types of people using different softwares can use them.

2, It will be available until the app is running

## Database requirements :-

1, Database back up should be maintaind
2, Database should be secured by authentication process
3) The Database used should be an open-source technology

## Documentation requirements:-

1, The documentation should contains the information about all the requirements.
2, The documentation needs to be clear so that it could be implemented effictively.
3, All the requirements provided in the documentation should give a clear idea for the

## Safety requirements

1, system will have secured database
2, The data entered can be only accessed by librarian
3, Unauthorised login's are not allowed
4, Unauthorised persons cannot change our data

## Operatingal requirements:-

1, We will be operating in windows environment
2, We need to have Internet Explorer or Google chrome or Mozilla firefox
3, We will perform using Java language

# FAQ's

1. Why is SRS document necessary?
2. What are the advantages of SRS documents?
3. What is the drawback of SRS?
4. Who is responsible for writing SRS document?
5. What are fonctional and non functional requirements?
6. What is IEEE mean in SRS?