

Experiment No.:-

Date:- 22-10-21

Aim:- To Analyze requirements and prepare SRS for Attendance Management System Software Requirements specifications for Attendance Maintenance System.

Sample Structure of SRS :-

## 1. Introduction

### 1.1 purpose

### 1.2 Scope

### 1.3 definitions, acronyms, and abbreviations.

### 1.4 References

### 1.5 Document overview

## 2. Specific requirements

### 2.1 Functional requirements

#### 2.1.1 Functional requirement 1

##### 2.1.1.1 Introduction

##### 2.1.1.2 Input

##### 2.1.1.3 processing

##### 2.1.1.4 output

## 1. Introduction:-

### 1.1 purpose

This SRS document contains functional and non-functional requirements for attendance maintenance system. It maintains library book database and provides it to registered members. The requirements maintained to be utilised by software developer to implement the system.

### 1.2 Scope.

This system allows a record book to maintain each class. It provides easy way to keep track of books available in library.

Updating the library system into an android based applications to know the user the details of books available in library. Students can borrow through computer and also by their phones.

### 1.3 Overview

This system provides an easy solution to keep track of books available in the library.

### 1.3 Definitions, acronyms, and abbreviations.

Use case means what the different "uses" of a System are. It means what the different functions performed in a System by the users are. Task of usecase and actors are different.

UML provides nine different diagrams. These diagrams are designed to visualize a system from different perspectives.

UML - Unified participating actors:- the persons or systems that interact with the developing system.

Class diagram describes structural description of system. To construct the structural description i.e class diagram, various classes, their attributes and operations are identified.

### Acronyms and Abbreviations:-

UML - Unified Modeling Language

OOP - Object oriented programming.

OOA - Object Oriented Analysis.

"Software engineering"

References :- Hage Ugasen Suman, textbook, Cengage, 2017.

"Software Engineering", by Roger S Pressman's, A practical approach.

- 3.1 N Functional requirement M
- 3.2 External interface requirements
- 3.3 performance requirements
- 3.4 Design constraints
- 3.5 Security requirements
- 3.6 Maintainability requirements
- 3.7 Reliability requirements
- 3.8 Availability requirements
- 3.9 Database requirements
- 3.10 Documentation requirements
- 3.11 Safety requirements
- 3.12 operational requirements
- 3.13 Site adaptation.

### 3.1 Functional requirements

Functional requirements specify the functions that will accept inputs, perform processing on these inputs and produce outputs. Functions are carried out on the input data play an important role to obtain certain outputs. Such as login, register, borrow, search etc.

### 3.2 External Interface requirements

External interface specifications covers all interactions of software with people, hardware and other software. The working environment of the user and the interface features in the software must be specified in the SRS. It includes content presentation, application navigation, and user assistance.

### 3.3 performance requirements:

This specifies the performance characteristics or nonfunctional

aspects of software system. performance requirements are classified as static and dynamic. static requirements are fixed. The Library must contain a well computer systems with good efficiency. The website must be available free to students, faculty and management.

### 3.4 Design constraints:

In Library Management System there are certain limitations to the access of software like students do not have access to the maintain inventory. The data about books and the student data must be private and secure. In LMS the hardware constraints include the availability of number of servers, and limit to store the information.

### 3.5 security Requirements:

The access to the Library Management Software should be given to only limited people and the data of students and books must be kept private and access to the data must be only given to Librarian. Private passwords must be kept to every computer and to all information.

### 3.6 Maintainability requirements:

There should be a facility to add or delete or update the information regarding library books.

### 3.7 Reliability requirements.

Due to wireless connectivity, reliability can't be guaranteed. due to some server problems.

### 3.8 Availability requirements:

The website must be available everyday even during nights.

### 3.9 Database requirements:

The Database must contain all the information about students and the books borrowed and all the library books details.

### 3.10 Documentation requirements

Every information must be collected before documentation, such as no of workers, time, availability of hardware and complete knowledge about the project.

### 3.11 Safety requirements:

The faculty should provide password to log on to the system - He/she should be available during college to or able to see the record of his class. The access to log into their account must only be provided to students to maintain safety of the book records they have taken.

### 3.12 Operational requirements:

The user database will be provided. The user database will contain all the information regarding the user. There will be another database for books which stores all the information regarding it.

### 3. Functional requirements :-

The following are the functional requirements for Library Management System these are the functions carried out. Actors are faculty, student, librarian and management

#### 3.1. Login Register

- 2(a) Search a book
- 2(b) Reserve a book
- 3(a) Issue book
- 3(b) Return book
- 3(c) Alert book return
- 4(a) Maintain inventory
- 4(b) Report generation
- 5(a) Feed back
- 5(b) Recommend a book
- 5(c) Help
- 6(a) Account maintenance

#### 1. Login, Registered :-

Description:- To borrow a book Firstly the student must be get registered into the website and create a separate account.

Input:- The student should give his name, roll number, class, branch, section.

Processing:- while registering it asks user to keep a username and password and everyone's username must be different and password must contains atleast one numeric value.

Output:- After registering it must shows the message registration successful.

## 2. Search a book, Reserve a book:-

Description :- To Search a book the library catalog will be displayed the student search for a book and reserves the book he needed.

Input :- The student will give the bookname as input and after finding the book he wants he reserves the book by clicking the reserve button.

Processing :- As soon as the student given the bookname matching results will be appears the students click on the book wanted and the whole information about the book will get displayed.

Output :- After searching and reserving book successfully the book will be stored at my reserves icon we can view the books reserved by ourself.

## 3.(a) Issue book

Description: When the student's reservation is completed he must be issued a book. The book will be given to the student.

Input :- The librarian checks the availability of book and issues that book to student by clicking the issue book button

Processing:- When issue book button was clicked by librarian the book will get into the user account and the date and time when the book is issued is recorded.

Output:- After issuing a book the student can check whether the book issued or not he/she can view the information in the books issued icon.

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### 3(b) Alert book return , Return book.

Description:- When a student's book period over it sends a alert book return to student and sends a message warning the student and reminds the student so that the student returns the book as soon as possible.

Input:- To alert a book return the system must have a separate software to send the alert message which is directly sent to the students.

Processing:- The message will be automatically send to user's phone it is coded was written to send the alert book return before 3 days to last date .To return book the user must submit the book at the library.

Output:- After returning the book the status of book return must be shown as returned and it should display all the information such as time of return and name of book in student's dashboard.

### 4. maintain Inventory, Report Generation :-

Description:- maintain Inventory must contain the information such as no of books, no of subjects, no of students registered, no of books borrowed, shortage of books etc.

Report Generation is a Report of all the information about library everything must be written as a report.

Input:- To maintain Inventory a separate software must be there which updates daily information about the new students registered, no of books borrowed, no of books returned, and shortage of books to the maintain

Inventory excel file. Which automatically stores the daily information to inventory.

Processing:- The information is processed itself and automatically sends to inventory. whenever a book is borrowed & return it must be updated accordingly.

Output:- Once all the information is updated to the Inventory the Report is generated in a excel file with the Parameters such as Total no of students registered, total no of books, total no of books borrowed upto date, amount of fine collected etc.

### 5a Feed back:-

Description : In this students can give the feedback about the book and the availability of books in a library and the services provided by the library.

Input:- Student give the username , the book he used the author of the book and the about the system is being carried in a library and he can give stars he wanted to give out of 5 stars and then submit it.

Processing:- It takes the following information entered by the user and stores it in the feedback section. It stores the feedback information in the user's account also.

Output:- It shows the all information entered by user and this have access to everybody to see the feedback and reviews.

### 5b) Recommend a Book :-

Description :- After studying the book a student can have access to recommend a book in the website. User can give like and dislikes and write comments on each book.

Input :- The student must be give his username and write the comments and recommends a book.

Processing :- The information given by user is stored in the website and everyone can have access to see it.

Output :- All the recommended books are can viewed on website and the book with highest stars and recommended by more people must be visible in a separate category.

### 5c) Help :-

Description :- The help icon should contain the information about how to login or register or how to borrow a book and how to recommend a book.

Input :- The student can click on the help icon in the main page of library management system.

Processing :- after clicking the help, the software must be take user to the page where all the instructions are provided.

Output :- The page with all the instructions are visible to login, register and how to borrow. Step wise instructions visible.

### 6) Account maintenance :-

Description :- The account maintenance can have access to

Librarian and management. They can delete membership or add member or can block someone's account if they are not doing good. It maintains everyone's account.

Input:- By clicking on the account maintenance icon all the students account are visible, Select the account on which changes need to carried out and click on the account.

Processing:- When the management selects the student's account on which changes had to be done he have complete access to the student account maintenance. If they delete membership the account will be deleted permanently by sending a message to student.

Output:- The output displays the accounts of all users and all the information of account.

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References :-

1. Software Engineering, by Ugrasen Suman , Cengage learning.
2. Software Engineering , by Roger S. pressman's , A practitioner approach.
3. " IEEE Recommended practice for software Requirements specifications". Technical Report , IEEE Computer Society , 1998 .
4. www.academia.edu.

# LIBRARY MANAGEMENT SYSTEM

WELCOME TO  
VVIT LIBRARY



**Help**

**Login**

**Reserve a book**

**ISSUE book**

**Maintain Inventory**

**Recommend , Feedback**

**Account maintenance**

## Login

Name :

EmailId :

Date of Birth:

Phone no:

bloodgroup:

section:

Address :

**Submit**

## Reserve a book

XXXXX

Book name:

Date of issue:

Author name:

return date:

**← back**

**Reserve**

## Issue book

Name of student:

Book name:

Date of issue:

Registered number:

Last date :

**← Back**

**issue book**

## Maintain Inventory

Total no of books : XXXXX

no of books borrowed: XXX

shortage of books: XXXX

damaged books: XXXX

no of students : XXXXX

blocked accounts: XXX

Fine Paid : XXXX

## Recommend , Feedback

Name :

Roll no:

Recommend book:

Author:

**OK**

Book name:

Comments:

**OK**

## Account maintenance

XXXXX

Name :

Roll no:

no of books borrowed:

no of books returned:

Total fine paid:

**Exit**

### Questions (FAQ) :-

- 1) what are the functional requirements for this SRS?  
use of
- 2) what is the software requirement specification?
- 3) what is SRS in a project?
- 4) what is requirement specifications of the system?
- 5) what are the requirements of software?
- 6) what is the need for an SRS document?
- 7) what are the external interface requirements used in this SRS?
- 8) what are the security requirements in this SRS?
- 9) what are the benefits of a good SRS?

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