PRACTICAL 3

AIM: Study Software Requirement Engineering. Student should include SRS document for current semester project.

SRS(Software requirement specification):

+ The production of the requirements stage of the software development process is Software Requirements Specifications (SRS) (also called a requirements document).

+ This report lays a foundation for software engineering activities and is constructing when entire requirements are elicited and analyzed. SRS is a formal report, which acts as a representation of software that enables the customers to review whether it (SRS) is according to their requirements.

+ Also, it comprises user requirements for a system as well as detailed specifications of the system requirements.

+ The SRS is a specification for a specific software product, program, or set of applications that perform particular functions in a specific environment. It serves several goals depending on who is writing it.

+ First, the SRS could be written by the client of a system. Second, the SRS could be written by a developer of the system.

+ The two methods create entirely various situations and establish different purposes for the document altogether. The first case, SRS, is used to define the needs and expectation of the users. The second case, SRS, is written for various purposes and serves as a contract document between customer and developer

SRS should address:

The basic issues that the SRS shall address are the following:

a) Functionality. What is the software supposed to do?

b) External interfaces. How does the software interact with people, the system's hardware, other hardware, and other software?

c) Performance. What is the speed, availability, response time, recovery time of various • software functions, etc.?

d) Attributes. What are the portability, correctness, maintainability, security, etc. considerations?

e) Design constraints imposed on an implementation. Are there any required standards in effect, implementation language, policies for database integrity, resource limits, operating environment(s)

Name of System:

Library Management System

Assumptions:

Users are already registered

Requirement 1: Register

First the user will have to register/sign up. There are two different types 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 has to provide details about his/her name of address, phone number, email id.

Req1.1: 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.

Req 1.2: Login

- Input: Enter the membership number and password provided.

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

Requirement 2: Manage books by user.

Req 2.1: Book issued

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

Req 2.2: Search

- Input: Enter the name of author's name of the books to be issued.
- Output: List of books related to the keyword.

Req 2.3: Issued 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

Req 2.4: 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.

Req 2.5: 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.

Req 2.6: Return

- Input; Return the book to the library.
- Output: The issued list will be updated and the returned book will be listed out.

Req 2.7: 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.

Requirement 3: Manage book by librarian

Req 3.1 Update details of the books

Req 3.1.1 Add books

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

- Output: confirmation of addition.

Req 3.1.2 Remove books

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

- Output: Update the list of the books available.

Requirement 4: Payment

Req 4.1:Payment Gateway:

- Input: Card Details, Paytm Wallet.

- Output: User receives the message of debited amount and booking confirmation.

Requirement 5: Help me find a book

- Input: The customer will ask the admin, or users for the book

- Output: Admin, users will find the book and provide the link of the book.

Requirement 6: E-book

- Input: The user will ask for the e-book for the particular book.

- Output: The Admin will provide the E-book at minimal cost to the user.

- Processing: According to the book Prices set by the admin at the time of transaction the amount will be paid via the payment gateways.

Requirement 7: Security

- Passwords and value information is saved in database after hashing and AES encrypted, Admin has a separate login where he can add and modify user data if needed.

Requirement 8: Easy to use

- User Friendly.

Requirement 9: Reliability

- FAQ's

Requirement 10: Portability

- Website can be accessed on any device having any operating system.