

i) Library Management System.

1. Introduction: The purpose of this document is to give detailed overview of the Library Management system. the different functionalities of the system.

scope: The scope of this project is to implement different functionalities like maintaining catalog, keeping track of the books that are issued and membership plans to register members. The payment system, analysing state of books before and after issuing, keep record of cues and their history of issuing.

General description:

2.1 Objectives of cues.

Manager: Manager should get the Monthly report of library regarding stock and demand.

Staff: staff should be able to manage members detail and their history of books issued and return. he should be able to route the member in direction of target books.

member: they should be able to track the record of the books they have borrowed and due date to return the book.

2.2 user characteristics → Manager

→ receptionist staff.

→ member.

→ security.

→ Management staff.

3) functional requirements

member registration & authentication: members should be able to register themselves to the application and using their username & password.
membership plans: users must be made available with different plans with different number of access time and resource.

payment: users should be able to perform the payment through online with credit cards, or other payment gateways.

catalog: users should be able to scroll through the different books available which are of different niche or genre and should be categorized based on age, like children, adult and elders.

4) Interface Requirements

software interface: system uses restful APIs to communicate with external systems such as payment gateways and email address.

user interface: a web interface for library management system manages members data, history and section to find books.

communication interface:

sms / email integration for registration and payment confirmation.

5) Performance Requirements

→ Response time: should provide real time update for available books

- Response time for confirmation should be less.

6. B. Design constraints:

- front end uses reactJS
- backend implemented using ^{express,} MongoDB for database

7) Non-functional attributes

- Reliability
- scalability
- availability

8) preliminary schedule & budget.

schedule:

- Phase 1: requirement gathering (3 weeks)
 - Phase 2: system design & Architecture (4 weeks)
 - Phase 3: Development implementation (8 weeks)
 - Phase 4: Testing (2 weeks)
 - Phase 5: Deployment (2 weeks)
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