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A PROJECT PROPOSAL ON

E-Library Management System

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Problem Statement

UNIVERSITY_A library systems are manually operated by a group of people. Many employees are involved in the library management, such as keeping records regarding books and students (borrowers), manually checking books, keeping records on issued books, etc. All of these things have to be carried out manually. It's a considerably more severe difficulty if the library's content management is extensive. On the other hand, keeping a large maintenance staff can be expensive and inefficient for a library. Manual record-keeping is also not a reliable method.

A manual method makes it hard to find a book strictly at once from a borrower's standpoint since it is not cleanly organized. Sometimes the user might be searching for a book that is not available in the library. People become annoyed in these situations. Therefore, there should be a reliable way to manage the library system.

Background Information

E-LLibrary Management System is an application that refers to library systems that are generally small or medium in size. A librarian uses it to manage the library using a computerized system to add new books, page sources, and other things.

The system includes different login options for students and faculties. All the books are arranged in such a way that anyone can quickly find a book they are searching for. This significantly reduces the time spent searching for books. In addition, they can instantly know if the books they are looking for are available in the library.

A trending segment is included in this system. It shows which books the majority of students and faculties have recently read. Apart from that, the system's algorithm recommends books based on what they have already read. Users can see how many times a book has been read and who has read it. They are also able to see the books their friend has read.

Books and user maintenance modules are included in this system to track the users using the library and a detailed description of the library's books. It can receive orders to borrow books from users, keep track of the borrowed books, and collect fines for books returned after the due date. With this computerized system, there will be no loss of book records or member records which generally happens when a non-computerized system is used.

These modules can help the librarian in managing the library with greater ease and efficiency than non-computerized library systems.

Related/ Similar Software Systems

The E-Library Management System has several unique features that set it apart from other similar systems on the market.

Most systems do not provide login option for faculties. Only students are permitted to access them. But this system has different ways to login for faculties and students. The trending and recommend modules make it completely unique from any other systems available out there.

Furthermore, all of the algorithms used in the system are designed to be extremely efficient, ensuring that the system always operates at the fastest possible speed. It saves the users a large amount of time.

Justifications

- The system offers a modern method of keeping records safe and secure.
- It is more efficient with order-related things than the present paper-based system.
- The system's database management is simple. That's why no professional staff is required.
- The whole system saves a significant amount of time for both the user and the librarian.

Goal

Build a web portal to manage employee records for UNIVERSITY_A.

Objectives

- Develop a system to replace the manual library management system.
- Build a web portal that can be accessed by devices of all sizes.
- Create a database that contains user and book information.
- Offer users a reliable search option.
- Assist users in discovering new books.
- Create a user-friendly environment that is simple to understand.
- Provide attractive user interfaces to help people traverse the system.

Modules

Modules	**Description**
User Management	User management module includes all operations related to user accounts – creation, deletion, edits, search and so on.
Records	This module tracks the users using the library and a detailed description of the library's books.
Recommend	Algorithms of this module recommend books based on what they have already read.
Trending	It shows which books the majority of students and faculties have recently read.
Placing Order	Users can register for a book they want to borrow.
Reminder	Remind users to return the borrowed books.

Scope

***If any scope changes are required by the client at a later date, then the scope, the time and budget may also change.

In Scope	**Out of Scope**
Design and development of web portal for employee data management system	Hosting server provision/ management
Testing of system	Database server provision/ management
Secure and manageable code	Security for application hosting and/or database server
Deployment	Network security
Inline Help file generation	Data entry

Deliverables

- The complete web application along with all its database schemas
- Help files

Plan of Work

A structured project management approach is being followed.
Note: The time allotted here is subject to change based on client availability to give details to project team.

#	Phases	Details	Duration	Cost
1	Initial works	Define the project in detail based on targeted business case. Stakeholders need to be identified, information should be collected to understand feasibility and business values.	1 weeks	10,000
2	Planning phase	Clearly define specific and attainable goals. We will set a timeline, decide on project milestones and determine project deliverables in this phase. Works will be done in collaboration of all team members. Project will be broken down into smaller parts in this phase for better handling.	1 weeks	20,000
3	Execution phase	Project development team will be created and works will be handed down to appropriate resources. Project progress will be monitored based on the schedule created in the previous phase. Design, development and testing of the product will be done by the development team.	7 weeks	1,00,000
4	Closing things up	Look back at things and determine success level of the project.	1 week	5,000
		Total Time	**10 weeks**	**1,35,000**

Product development work breakdown (7 weeks)

Traditional waterfall method is used for this breakdown.
Note: The time allotted here is subject to change based on client availability to give details/ guidance to the implementation team.

#	Phases	Details	Duration
1	Understand requirements	Requirements will be collected and documented in use case format.	1/2 weeks
2	Architecture and design	Architecture of the product will be determined. Detailed design will be created to start the actual development. Technology platform will be decided. Design for data storage (database design) will be created. We will also create an initial test plan and test cases in this phase.	1/2 weeks
3	Coding/ Implementation phase	Implementation of the use cases will be done based on established practices and standards. Unit testing may be enforced for cleaner code.	5 weeks
4	Testing	Testing will be done based on test plan and test cases. User acceptance testing will be done in closed groups. Bug fixes and regression testing will be done here.	1/2 weeks
5	Deployment	Deploy the system and make it live for general users.	1/2 week
		Total Time	**7 weeks**