



Shanto-Mariam University of Creative Technology

Department of CSE and CSIT

Course Name: Software Development Project-1

Course Code: CSE – 2100

Feasibility Study Document on

“Library Management system”

Submitted by,

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Introduction

A feasibility study assesses the practicality of a proposed plan or system. For a Library Management System, this evaluation ensures:

- Selection of an effective and efficient system to meet user requirements.
- Financial and technical viability of implementing the system.
- Analysis of the existing issues and potential improvements.

The primary objective is to determine whether implementing the Library Management System is beneficial and decide on the best course of action. The feasibility study is divided into the following sections:

1. **Background:** Discussion of the problem, need, or opportunity for the system.
2. **Outline of the System:** Description of the proposed solution and its features.
3. **Methodology:** Approach for feasibility analysis.
4. **Overview of Alternatives:** Exploration of potential solutions and their evaluations.
5. **Conclusion:** Summary of findings.
6. **Recommendation:** Suggested alternative based on the analysis.

Background

Problem:

Traditional library systems rely heavily on manual processes for cataloging books, lending, and tracking users. These methods are time-consuming, error-prone, and inefficient, especially for large libraries with significant inventory and user bases.

Need:

There is a critical need for a digitized Library Management System to streamline operations, reduce errors, and enhance user experience. The system must handle book cataloging, borrowing, returning, and user management efficiently.

Opportunity:

A Library Management System offers the following benefits:

1. **For Library Staff:**
 - Simplified tracking of books and inventory.
 - Automated reminders for overdue books.
 - Real-time updates on book availability.

2. For Users:

- Easier access to book information.
- Online borrowing and renewal capabilities.
- Notifications for due dates and new arrivals.

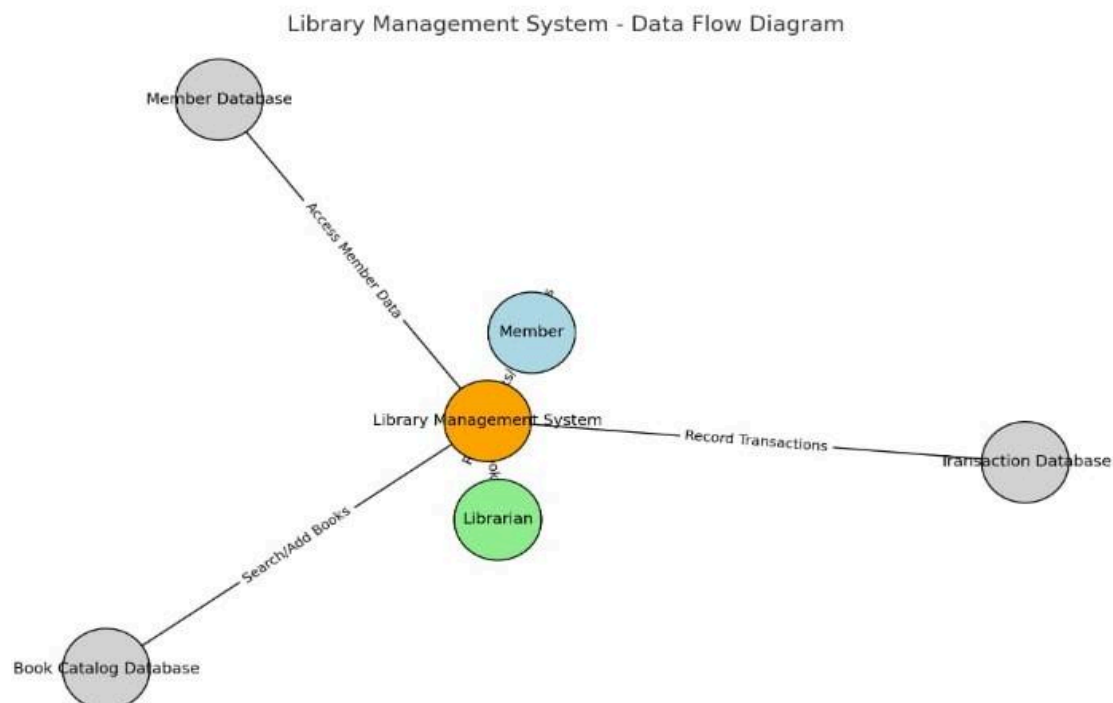
3. For Management:

- Improved reporting and analytics on library usage.
- Efficient resource allocation.
- Cost savings from reduced manual processes.

Outline of the System

The proposed Library Management System will include:

1. **Registration and Login**
2. **Members**
3. **Librarians**
4. **Book Catalog Database**
5. **Member Database**
6. **Transaction Database**
7. **Data Flow and Operations**



Method of Analysis/Methodology

The feasibility analysis evaluates technical, operational, and economic factors.

a) Technical Feasibility:

Ensures that the required technology, such as a web server, database, and user interface, is available and accessible. Tools like MySQL, PHP, and React can be used to implement the system effectively.

b) Operational Feasibility:

Assesses whether the system aligns with user requirements and is easy to use. The system is designed to be user-friendly for both library staff and users.

c) Economic Feasibility:

Calculates the cost-benefit analysis to ensure the system is financially viable. The analysis will include development, maintenance, and operational costs.

Overview of Alternatives

The following alternatives were considered:

Alternative 1: Implementing a Software-Based Library Management System.

Alternative 2: Increasing manual staff to manage library operations.

Alternative 3: Outsourcing library operations to a third-party service provider.

Alternative 1: Software-Based Library Management System

Technical Feasibility:

- Uses modern technologies like MySQL, PHP, and cloud-based hosting.
- Technologically feasible and sustainable.

Operational Feasibility:

- Streamlined processes and user-friendly interface.
- Highly operationally feasible for staff and users.

Economic Feasibility:

Particulars	Cost (BDT)
Software Development	1,50,000

Database Setup	50,000
Maintenance (Yearly)	20,000
Total	2,20,000

Net return per year: **50,000 BDT.**

Alternative 2: Increasing Manual Staff

Technical Feasibility:

- No new technology required.

Operational Feasibility:

- Inefficient for large libraries.
- Inconsistent user satisfaction.

Economic Feasibility:

Particulars	Cost (BDT)
Salaries	3,00,000
Additional Costs	50,000
Total	3,50,000

Net return per year: **Negative.**

Alternative 3: Outsourcing Library Operations

Technical Feasibility:

- Requires third-party technology integration.

Operational Feasibility:

- Dependent on third-party efficiency.
- Limited customization options.

Economic Feasibility:

Particulars	Cost (BDT)
Outsourcing Fees	5,00,000
Operational Costs	50,000
Total	5,50,000

Net return per year: **Negative**.

Conclusion

Among the three alternatives:

- Alternative 1: Technically, operationally, and economically feasible.
- Alternative 2 and Alternative 3: Not cost-effective and inefficient.

Recommendation

Based on the analysis, **Alternative 1: Software-Based Library Management System** is strongly recommended. It is cost-efficient, user-friendly, and technologically advanced, making it the best choice for implementing a robust library system.