Sri Lanka Institute of Advanced Technological Education (SLIATE)

Higher National Diploma in Information Technology

Project Proposal

Title

BT/KK/Santhively Siththivinyakar Vidyalayam School Library Management System

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1. Introduction

This project proposal is submitted" to meet the software development requirements of the Individual Project module conducted by the"Sri Lanka Institute of Advanced Technological Education(SLIATE), 2019.

Information Technology has revolutionized the life of human beings and has made lives easier by the various kinds of applications. In the light of the rapid changes with the use of Information Technology, there are many tools, technologies and systems that have been produced and invented.

This project is concerned with developing a Library Management System for school Library in order to make library management more efficient and easy to handle. The Library management system enables a fully automated library service. It has the ability to display the details of the books available in various departments, the transactions of books and about the book holders.

The goals of this project are to provide simplicity as well as security and efficiency to the management of school Library.

2. Background and Motivation

I have selected to develop a Library Management System for an Santhively school Library. This Library Located in Main Street Santhively, Koralippattu South kiran Division, Batticaloa District. There two staff and A Librarian worked there. This library is started on 2010. The following are those we can consider in our study at this library.

1. Member and Book Registration.
2. Issue and Return Book

This is only libraryat this Santhively.They have the expertise to handle the most challenging Librarian with daily library process, supported by trained library staff. Now this library has more the 5000 books and more than 1200 members.

This Library Management System provides a simple GUI (Graphical User Interface) for the Library Staff to manage the functions of the library effectively. The Library Management System is designed & developed for the Manage Books and Members details, Issuance and Submission of books in the library.

In a non-computerized Library management system, when a book is issued or returned, it is noted down in a register after which data entry is done to update the status of the books. This process takes some time and proper update of this information cannot be guaranteed. Anomalies in the update process can cause loss of books. So a more user friendly interface which could update the database instantly has a great demand in libraries, hence the need for this project.

3. Problem in brief

Many libraries are operated manually by a group of people. These people keep records regarding the books & members (borrowers), check the books manually and keep records on issued books. All these things have to be carried out manually and if the library is very large, proper record keeping will become a major problem as manual record keeping has never been a reliable method because people tend to forget things.

Other problems of the existing system are:

- Fast report generation is not possible
  - This current System keeps in manually by the Library Staff. So not easy to get the Book Issue, Return and there details quickly.

- Tracing a book is difficult
  - The Library Contain more than 3000 Books. So User or Members can't Search particular book is difficult.

- Details Duplicated and Missing
  - This current System keeps in manually by the Library Staff. Sometime Book Details or Members Details Registered again and again with the Staff.

- Information about issue/return of the books is not properly maintained.
  - This current System keeps in manually. So sometimes Library Staff or Librarian forget to add the issue or return book details in the Book Issue and Return Register Book.

- Access Time
  - The manual system takes long time process compare with computerized System. Example User search the particular book from book record its can take long time.

4. Aims and Objectives

4.1 **Aims**
Aim of my project is to develop aLibrary Management System for addressing the problems in the current Library Management process with the use of IT Solutions. (Santhively School Library Management System, 2019)

Library Management System

4.2 **Objectives**

- Help to improve the library services.

- Help the Liberians with management information.

- Help the librarian in reporting on the various operations of the library.

- Increase the rate at which Tasks are completed accurately

- Obviate the need to hire additional staff with increased demand for services.

4.3 Requirements

- The details will be added

  - Member, Book, Damaged Book Details will be incorporated into the system.

- Notification Alert for late book submission

  - A Notification will be programmed by the system to submit the borrowed book to the administrator which was not submitted to the particular days.
    Ex: 07 Days for book borrowed

- Borrow details will update

  - Provide accurate and up to date information regarding to the borrowed details.

- Search Option for book , member submission and issuance

  - Search option will be programmed by the system to members and library staff or librarian can easily locate the book and their details.

- Report for monthly and annual

  - Monthly and annual report of the member registration, book registration, book issue details and damage book details will be generated by system.

- Automated fine calculation for late book submission.

  - If someone missed to handover within the particular days on process each and every user has unique fine calculation within the system.

5. Proposed Solution

The Proposed Solution of the manual library management is to develop a computerized library management system. Before developing the proposed system, there is need to identify;

a) The design of the proposed system

b) The main users of the library management system

c) The activities of the main users

5.1 The Design

The proposed system will be designed using Net beans and Scene Builder as the front end and MySQL as the back end (the database used to store the Member details, Book details, Book Issue Details, Book type and Place Details, Damage Book Details and Book Submission Details). The size (in terms of memory) of the proposed system will be small.
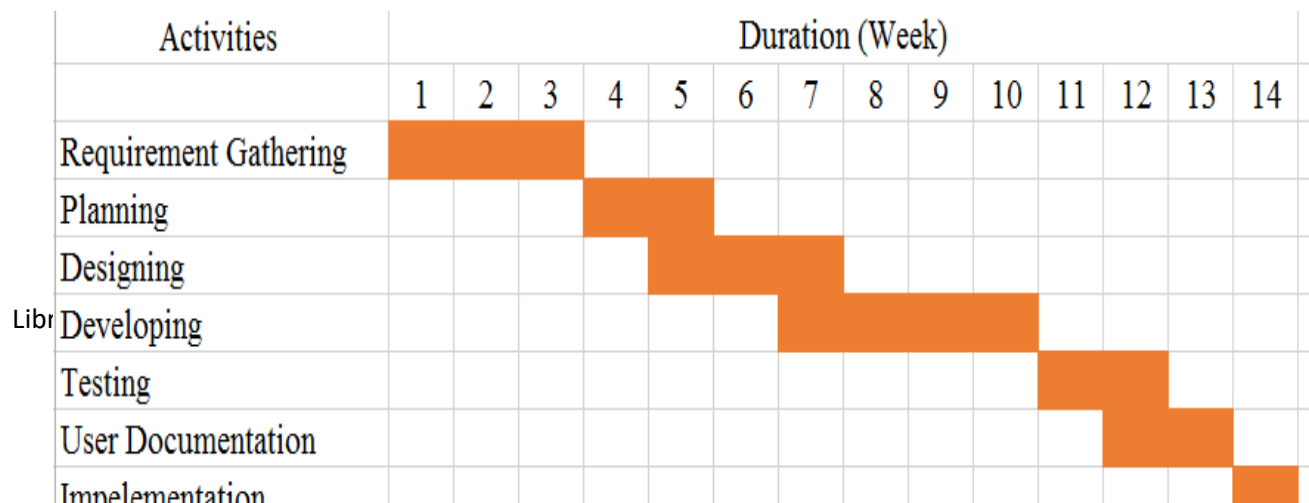
5.2 The main users

The main users of the proposed system are the Borrowers or Members and the Administrator or Librarian.

5.3 Their activities

The activities of the main users of the proposed system are listed in a table below.

Activities of Borrowers OR Members	Activities of Administrator OR Librarian.
• Search the Books • View the Books Details • Members can Register them Self. • Members can update their details them self. • Borrow the Books	• Add/Delete/Update Books and Members • Issue the Books • Return and Renew the Books • Add/Delete Damage Books • View and Maintain the Members and Books Details

5.4 Gantt Chart

Activities	Duration (Week)													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Requirement Gathering	■	■	■											
Planning				■	■									
Designing					■	■								
Developing							■	■	■					
Testing											■			
User Documentation												■		
Implementation														■

6. Resource Requirements

The proposed system will be develop using JavaFX.

6.1 Hardware Requirements

- PC or Laptop with Minimum Core 2 Duo Processor.

- Minimum 1 GB space in Hard Disk

- Minimum 1 GB Ram

- Internet Connection : At least 1 Mbps

6.2 Software Requirements

- Operation System : Windows 7 or Above

- Language : JavaFX

- IDE : NetBeans and Scene Builder

- DBMS : MySQL

7. References

- https://ampletrails.com/library-management-system.

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  _Sri_Lanka.

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- https://www.w3schools.com/sql/.

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