INSTITUTE MANAGEMENT SYSTEM

A SOFTWARE PROJECT PROPOSAL PRESENTED BY

D.K.C.N. ANANDA

(S/17/308)

to the Department of Statistics and Computer Science of
the **FACULTY OF SCIENCE**

in partial fulfillment of the requirement
for the award of the degree of

BACHELOR OF SCIENCE

of the

UNIVERSITY OF PERADENIYA
SRI LANKA
2022

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CHAPTER 1

INTRODUCTION

1.1 Problem Statement

Collecting data and managing data is an overwhelming task when you do it manually. Especially when your institute is growing fast, you will have to maintain lots of files and spend more hours filling spreadsheets to organize data and records. Earlier, managing and handling every aspect of institute was a difficult task. Keeping records of every student and teachers, the fee management, setting up the course and other activities wasn't easy. However, with Institute Management Software, all these tasks are now not only comfortable but also more efficient.

1.2 Aim(s)

The aim of my project is develop a quality standalone management system for resolving problems in the current paper base system and to make a proper combination between class staff/instructors and students using information technology.

1.3 Objectives

- The main objectives are to carry out this project is to achieve the most efficient and effective way for development of high-quality Institution management system and better documentation. In order to automate the essential function which are currently running on manual base and implementation of an Institution management system.
- Increase the performance, accuracy & provide better service in the Institution.
- To provide user friendly system and efficient system to client.
- To retrieve the students and instructors' information.
- To reduce the workload and minimize the paper work & storage.
- Provide a high security for the system, it will safe-guard the privacy for the Institution.
- Providing accurate and up to date update details about all relevant details.

CHAPTER 2

LITERATURE REVIEW

Background and Related Work:

This document contains information about the Institution Management System. This project deals with the various functioning in Institute management system process. Under this project, I am planning consider each Students take different types of subjects and paying payments in the Institution. Correspondent maintains paper-based record of every Students and handles the operations manually. Correspondent wants a management system for managing each Student details and their records. Because of that, I decided to create this Institution management system.

Institute has many different kinds of processes. In here, the administrator has the authority to use this system. This allows authorized members to access the record of academically registered students. Allow students to register online. Student can access to this system over the internet. Admin can creation of new record, deletion of records, updating in record, display of data in record and searching records. Using this system admin can add new student details, Payments records and Exam Progress, not only see all function of the records but also individual report also. According to the Subjects Chosen, exam's marks grade also calculate their marks obtained. Web-based application system reduces effort to maintain data in effective manner. Teacher can easily see the status and progress of the students. Student can see gets information when they need by simply accessing the site. Data management system is much easier in this way as because there is no way to loss of data.

The system facilitates handling the admission process, maintaining and reporting of student and teachers data, maintaining records of attendance, recording details of about payments of students. It also allows to views class schedules online, viewing report of student (marks, grades and academic progression). The institute management also can communicate with student and parents. This Web based Institute Management System can help to solving the problems in existing manual system. This system helps to minimize wasting time, effort resources and frauds, lack of communication and also make the system secure.

This system is very easy to operate and maintain information about Institute, Students, Teachers(instructors), Courses, etc. This system has two types of users, one is the administrator and the other one is the users (Teachers, Students). The admin can manage all data and has access to all features and functionalities of the system. The users can access the system through own account. Students can visit the web page and register online. The system facilitates handling the admission process, maintaining and reporting of students and teachers data, recording details of payments of students and sending notification of payments, academic progress report, managing exams, etc.

INSTITUTE MANAGEMENT FEATURES YOU WILL GET;

- ✓ Course Management -Add Courses, their durations and fees.
- ✓ Batch Management – Add new batches to a course or edit them.
- ✓ Enquiry Management – Receive enquiry from front-end or add it from admin panel directly.
- ✓ Student Management – Register a new student for a course, which can also be done from the enquiry. Then, enquiry can be removed or marked as inactive. Also, mark the course as completed.
- ✓ Staff Management - Teachers to be managed by simply entering their name, age, residence, contact information, class, and photo
- ✓ Fee Management – Easy to manage fee, shows pending fees, supports payment in installments for a student enrolled in a course.
- ✓ Access Control – Assign task to an administrator having certain permissions to perform the task.
- ✓ Dashboard – View popular courses, recent enquiries and number of active courses, batches, students, enquiries, etc.
- ✓ Manage Discussion forum – Create a common discussion forum to discuss problems with the instructor.
- ✓ Manage group chat – If student do the same course code then, create a space to chat with batchmates via WhatsApp.
- ✓ Manage past paper download system – Download the past papers from this system
- ✓ Examination management system - update the exam schedule

Drawbacks of current system

- Normally, small institutions have manual system. So, it is facing problems which lead to less accuracy and reliable.

- Speed and accuracy are decreased. More space is required to store the paperwork involved. Lot of space is needed to store manual files and it is a time-consuming process.

- No proper record keeping methods available handling the customer details is difficult because of without maintaining old details of activities

- There is no backup facility to maintain. As a result, if one document is misplaced or destroyed there are no other sources to recover it.

Fedena (Similar nature system)

Fedena is one of the best college and school management software. This tool can be easily integrated with video conferencing software like Zoom and Google Meet. It enables you to effortlessly conduct and reset online examinations.

Features:

- This is one of the best school ERP software that can automatically calculate tax on fee transactions.
- It helps you to easily take the attendance.
- Allows teachers to effortlessly collaborate with parents.
- It simplifies the process of admission tracking and document submission.
- Offers applications for Android and iOS devices.
- Free trial: 14 Days
- Demo: Yes
- Mobile App: Yes
- Link: https://fedena.com/

CHAPTER 3
METHODOLOGY

3.1 Approach

1. Study existing systems and gather requirements.
2. Designing user interfaces.
3. Creating databases and the server.
4. Create front-end

The Software Development Life Cycle (SDLC) (Figure 3.1) refers to a methodology with clearly defined processes for creating high-quality software. The SDLC methodology focuses on the following phases of software development: Planning, Requirement Analysis, Design, Implementation, Testing and Integration and maintenance. Planning is the first step in the SDLC. When the project plan is developed that identifies priorities and assigns the tasks and resources required to build the structure for project. Requirement analysis is the most important and fundamental state in SDLC.

Figure 3.1: SDLC

This document plays a vital role in the development of life cycle (SDLC) as it describes the complete requirement of the work done. Any changes made to the requirements in the future will have to go through formal change approval process. In the design phase, the system design is prepared from the requirements. Using the SRS (Software requirement specification) we able to create the ER (Entity Relationship) diagram and user interface design. The system design serves as input for the next phase of the model. In the stage of implementation, the work is divided into the modules. Now actual coding is started. This project is mainly developed by using Spring Boot. HTML, CSS, JavaScript, React technologies are using for develop front-end. Spring boot and MySQL technologies are using for develop back-end. The methodology we used for designing the system is “SPIRAL MODEL” (Figure 3.2). Spiral model was mentioned in 1988 article by Barry Boehm, “A spiral model of Software Development and Enhancement”

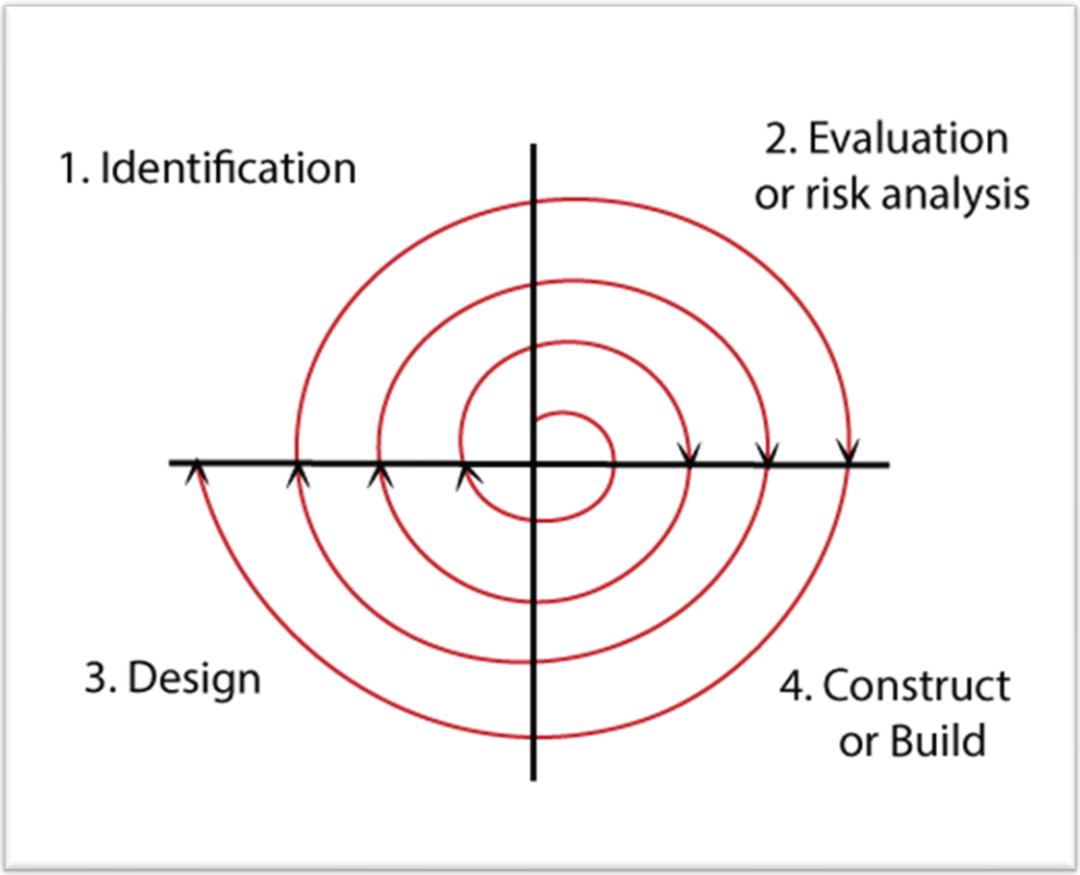


Figure 3.2: SPIRAL MODEL

3.2 Main modules of the system:

MAIN MODULE:

Table 3.1: Home page

1. Home
2. Login
3. Registration
4. Gallery
5. About us
6. Contact us

ADMIN MODULE:

Table 3.2: Admin

1. Registration Teacher
2. Info
3. Schedule
4. Rooms
5. Logout

TEACHER MODULE

Table 3.3: Teacher

1. View Profile
2. Attendance
3. Upload documents
4. Room details
5. Logout

STUDENT MODULE

Table 3.4: Student

1. Profile
2. Download past papers
3. Notice board
4. Logout

3.3 User characteristic:

The users for this system are,

- ADMIN – System administrator is the one who create, update, delete as well as manages the database of the whole system.

- STUDENT - The students can view marks/attendance/exam schedules/payments etc.

- STAFF – In this module, the staff can view the student details. The faculties updates attendance of the students using attendance module, upload notes, tutorials through upload document module, and also, they can add room details.

3.4 Functional Requirements:

- In this application teacher and students will register themselves. In this system, student will check their result and update their profile. Student will view their class routine.
- Teacher will publish and update students result. They will Update their profile. Administrative staff will add, remove and update teacher and student database via this application.
- This allows authorized members to access the record of academically registered students.
- Allow students to register online from anywhere.
- Creation of new record, Deletion of records, updating in record, Display of data in record and searching records.
- Mark attendance of students
- Insert marks for each student in each subject they taken.
- Generate various kinds of reports.
- Student can access to this system over the internet.

3.5 Non-functional requirements:

Table 3.5: Hardware requirements

Processor - Minimum 1.2 GHz
Memory - Minimum 2 GB
Disk space- Minimum 1 GB of free disk space

Table 3.6: Software requirements

Operation System - Windows
Front-end - React
Back-end - Spring Boot
Database - MySQL

3.6 Proposed Technologies:

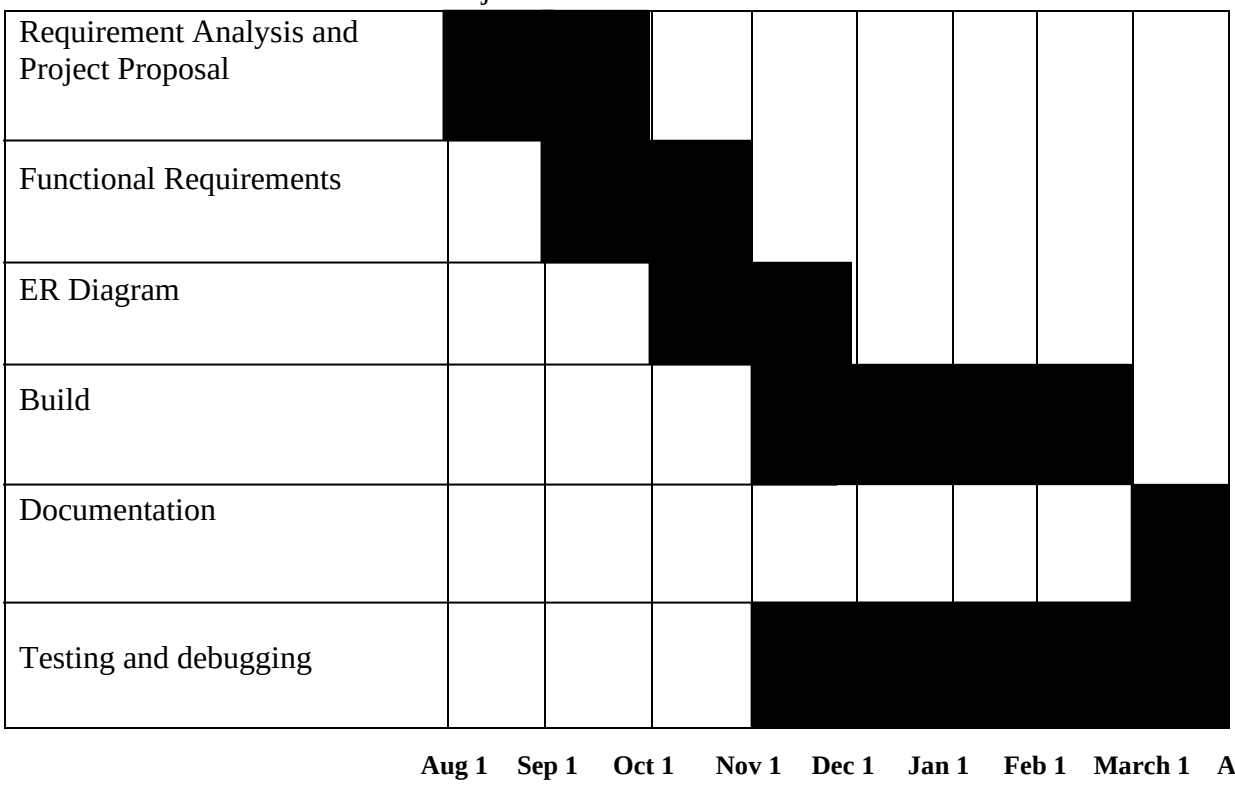
The project mainly developed by the Spring Boot framework.

- HTML – Hypertext Markup Language
- CSS – Cascading Style Sheets
- JavaScript – Programming Language
- MySQL – Relational Database Management System
- React – For front-end development
- Spring Boot – For back-end development

TIMELINE

The following table (Table 4.1) displays the project plan schedule in chronological order.

Table 4.1: Project Timeline



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