

School Management System Based

Contents

ABSTRACT	2
Background	3
Objectives.....	3
Definition	4
HTML:	4
CSS:	4
PHP:	4
MySQL Database:	4
FESAIBILITY REPORT	5
General requirement Feasibility Report	5
Problems in Current System.....	5
Technical Feasibility & Technical Description	6
Project Design Description	7
Purpose	8
Software Requirements Specifications	9
Hardware Requirements.....	9
Software Requirements	10
Data Flow Diagrams	11
Conclusion	12

ABSTRACT

School Management System helps Teachers, Student and Admin to get the most accurate information to make more effective decisions. Teachers and headmasters gain time saving administrative tools, students can track their own progress. School Management System equipped features makes it possible to generate schedules and reports in minutes and to retrieve attendance records, grade checks in just a few clicks.

School Management Systems helps Teachers to complete grade book, track students attendance, input class notes, create lesson plans and detailed reports

It also helps Students to access assignments and tests, and view attendance records, grades, report cards, and progress reports all online.

School Management System is a web enabled application developed in PHP and powerful MYSQL database backend. To implement School Management System application, schools do not need expensive hardware and software, they just need an internet connection and desktops. Our system works as a centralized database and application that schools can easily access the system from anywhere based on the login credentials. My School is a platform independent system that virtually any user can access from anywhere through a standard internet accessible system. We can also customize My School for individual school needs.

Introduction

Background

Nowadays education plays a great role in development of any country. Many of education organizations try to increase education quality. One of the aspects of this improvement is managing of school resources.

Our system is a major tool through this managing process by making a continuous communication between headmaster, Teachers, and Student. So, In order to achieve that goal, we need a Website that covers the needs of all users at the same time.

For Students, they can view their subject's grades, contact with the teachers for any complaint, recommendation, or an absence permission, and they also up to date with all school's news or posts that publish by the other users.

For Teachers, they can add student's grades or edit it for their own subjects only, and they have a direct connection with students.

Objectives

- To build a responsive website to manage the different school activities.
- To track student's grades from their parents.
- To facilitate distribution process of courses and classes for teachers.
- To facilitate grades entry process for students by teachers.
- To make a virtual community between the members of educational process.

Definition

HTML:

Is the standard markup language used to create web pages. Web browsers can read HTML files and render them into visible or audible web pages. HTML elements form the building blocks of all websites. HTML allows images and objects to be embedded and can be used to create interactive forms. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items.

CSS:

Is a Web page derived from multiple sources with a defined order of precedence where the definitions of any style element conflict. The Cascading Style Sheet, level 1 recommendation from the World Wide Web Consortium (W3C), which is implemented in the latest versions of the Netscape and Microsoft Web browsers, specifies the possible style sheets or statements that may determine how a given element is presented in a Web page. And describes how HTML elements are to be displayed on screen, paper, or in other media⁽¹⁾.

PHP:

Is an open-source server-side language which is used for creating dynamic web pages. It can be embedded into HTML. PHP is usually used in conjunction with a MySQL database on Linux/UNIX web servers. It is probably the most popular scripting language. And it is a widely used general-purpose scripting language and interpreter that is freely available. A full explanation of all the PHP tags.

MySQL Database:

MySQL is the world's most popular open-source database. With its proven performance, reliability and ease-of-use, MySQL has become the leading database choice for web-based applications, used by high profile web properties including Facebook, Twitter, YouTube, Yahoo! and many more.

FESAIBILITY REPORT

General requirement Feasibility Report

A school management system is a software application that is designed to streamline various administrative tasks in a school, such as attendance tracking, student information management, grade reporting, and communication with parents and teachers. When evaluating the feasibility of a school management system, there are several key factors to consider, including:

1. Needs assessment: Before implementing a school management system, it is important to identify the specific needs of the school and its stakeholders. This can be accomplished by conducting interviews, surveys, and focus groups with students, teachers, parents, and administrators.

2. Technical requirements: A school management system typically requires a robust IT infrastructure, including high-speed internet connectivity, secure data storage, and backup solutions. It is important to evaluate the school's existing IT infrastructure and determine if additional resources or upgrades are needed to support the new system.

Problems in Current System

The academic achievement for many students has decline, because of lake of care of them from their parents, and this refer to that their parents do not have a free time to come to school. Headmasters and Teachers are facing problems at the start of every new academic year, because of distribution process for courses and classes, in addition to this, through and at the end of every year another problem is facing them, which is the complexities of the grade's entry process for their students. Lack of communication after a school day between Headmasters, Teachers, and Students, which has a bad reflection on the educational process.

Technical Feasibility & Technical Description

A school management system is a software application designed to streamline and automate various administrative tasks within educational institutions. Its technical feasibility depends on several factors, including the availability of technology infrastructure, software development expertise, and integration capabilities with existing systems.

From a technical perspective, a school management system typically comprises several modules or components, each serving a specific function. Some common modules include:

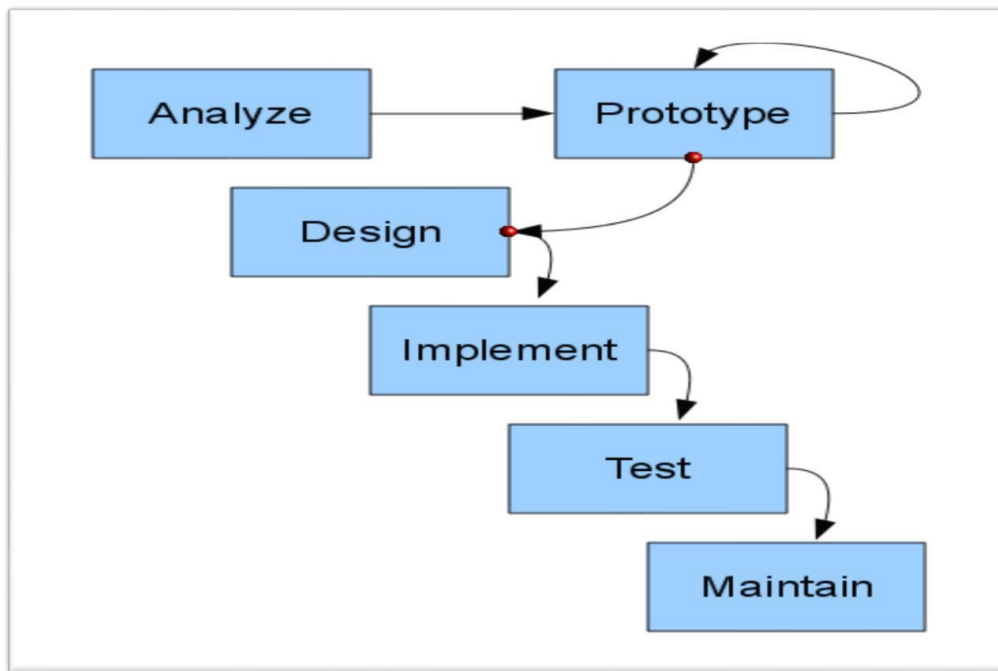
1. **Student Information System:** This module manages student data, including personal information, enrollment details, attendance, grades, and academic progress.
2. **Teacher and Staff Management:** This module handles teacher and staff information, including personal details, qualifications, schedules, and payroll.
3. **Attendance Management:** This module tracks student and staff attendance, using methods such as biometric systems, card readers, or manual entry.
4. **Examination and Grading:** This module manages the examination process, including scheduling, question paper generation, grading, and report generation.
5. **Timetable Management:** This module creates and manages class schedules, ensuring optimal utilization of resources and avoiding conflicts.

The technical implementation of a school management system involves database design and development, user interface design, backend programming, security implementation, and integration with other systems (if required). Technologies commonly used for such systems include web development frameworks, databases (e.g., MySQL, PostgreSQL), programming languages (e.g., Java, Python), and cloud services.

It's important to note that the specific technical details and feasibility of a school management system may vary depending on the requirements, scale, and complexity of the educational institution. A thorough analysis of the existing infrastructure and technical capabilities is necessary to determine the feasibility and choose appropriate technologies for implementation.

Project Design Description

Prototyping Model has been used to develop this application. The Prototyping model is a technique for quickly building a function but incomplete model of the information system. There are several kinds of prototypes, but they all intend to reduce risk by building a quick and dirty replica or mockup of the intended system. It can be used to demonstrate technical feasibility when the technical risk is high. It can also be used to better understand and elicit user requirements. In either case, the goal is to reduce risk and limit costs by increasing understanding of proposed solutions before committing more resources.



- **Identify basic requirement:** Determine basic requirements including the input and output information desired. Details, such as security, can typically be ignored.

-**Develop initial prototype:** The initial prototype is developed that includes only user interfaces.

-**Review:** The customers, end-users, examine the prototype and provide feedback on additions or changes.

-**Revise and enhancing the prototype:** Using the feedback, both the specifications and the prototype can be improved.

This method involves a series of iterations and refinement until the prototype product is a fully working system, and the user is satisfied.

Purpose

- Users are actively involved in the development.
- Since in this methodology a working model of the system is provided, the users get a better understanding of the system being developed.
- Errors can be detected much earlier.
- Quicker user feedback is available leading to better solutions.
- Missing functionality can be identified easily.
- Confusing or difficult functions can be identified requirements validation, quick implementation of incomplete, but functional application.

Software Requirements Specifications

Hardware Requirements

The hardware requirements for a school management system can vary depending on factors such as the scale of the institution, the number of users, and the desired performance of the system. Here are some general hardware considerations:

1. Server:

- A dedicated server or cloud-based server infrastructure is required to host the school management system.
- The server should have sufficient processing power, memory (RAM), and storage capacity to handle the expected workload and data storage requirements.
- Consider redundancy and backup solutions to ensure data integrity and minimize downtime.

2. Network Infrastructure:

- A reliable network infrastructure is essential for smooth communication and data transfer between different components of the school management system.
- The network should provide adequate bandwidth to support concurrent user access and data transfer requirements.
- Consider implementing secure networking protocols to protect data transmission.

3. Client Devices:

- The school management system can be accessed by various client devices, including desktop computers, laptops, tablets, and smartphones.
- Ensure compatibility with different operating systems (such as Windows, macOS, iOS, Android) and web browsers (such as Chrome, Firefox, Safari) commonly used by the users.
- Consider the screen size and resolution of the devices to ensure optimal user experience and interface responsiveness.

4. Peripherals:

- Depending on specific requirements, additional peripherals may be needed. For example:
 - Biometric systems or card readers for attendance tracking.
 - Printers for generating reports, invoices, and other printed documents.
 - Scanners for digitizing paper-based documents.

5. Security Measures:

- Implement appropriate security measures to protect the hardware components and the data stored within the school management system.
- This may include physical security measures (such as locked server rooms) and logical security measures (such as firewalls, encryption, and access controls).

It's important to consult with IT professionals or system administrators who can assess the specific needs of the school management system and recommend hardware configurations that align with the anticipated workload, user requirements, and budget constraints.

Software Requirements

2 Functional Requirements:

2.1 Student Management:

- Maintain student records including personal details, enrollment information, and academic progress.
- Allow for admission and registration processes.
- Generate student IDs and manage student transfers.

2.2 Staff Management:

- Maintain staff records including personal details, qualifications, and employment history.
- Handle staff scheduling, leave management, and payroll calculations.

2.3 Attendance Management:

- Record and track student and staff attendance using biometric systems, card readers, or manual entry.
- Generate attendance reports and alerts for absentees.

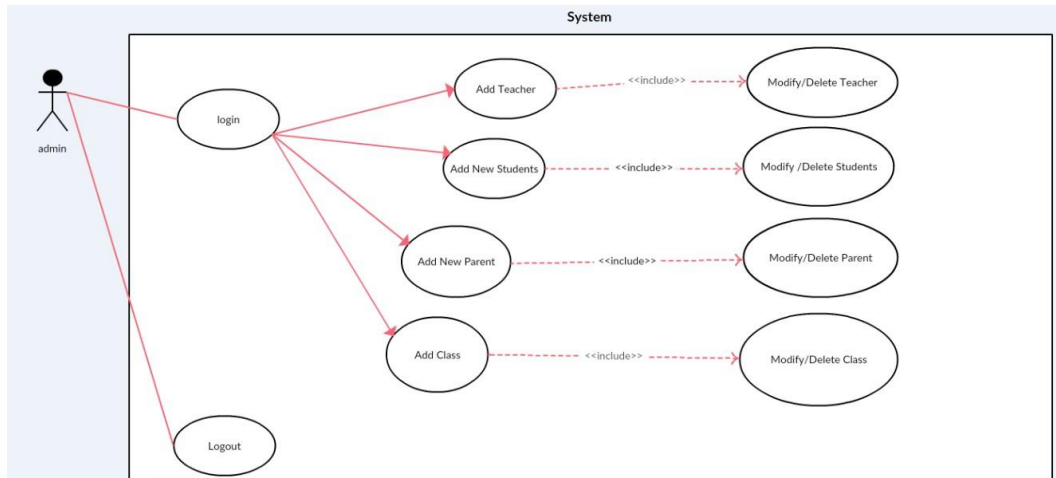
2.4 Examination and Grading:

- Manage examination scheduling, including subject assignments, room allocations, and invigilator details.
- Generate question papers, manage grading, and calculate final results.
- Generate reports and transcripts for students.

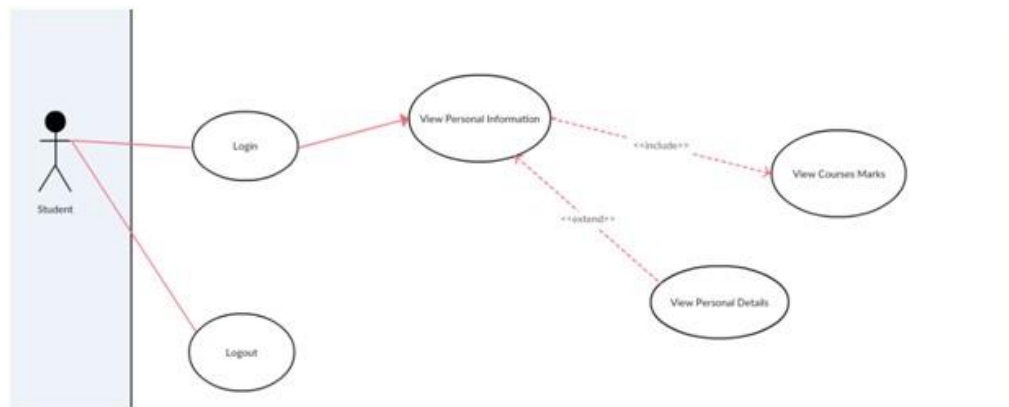
2.5 Timetable Management:

- Generate class schedules based on course offerings, teacher availability, and resource constraints.
- Handle changes, clashes, and adjustments in the timetable.
- Provide access to teachers, students.

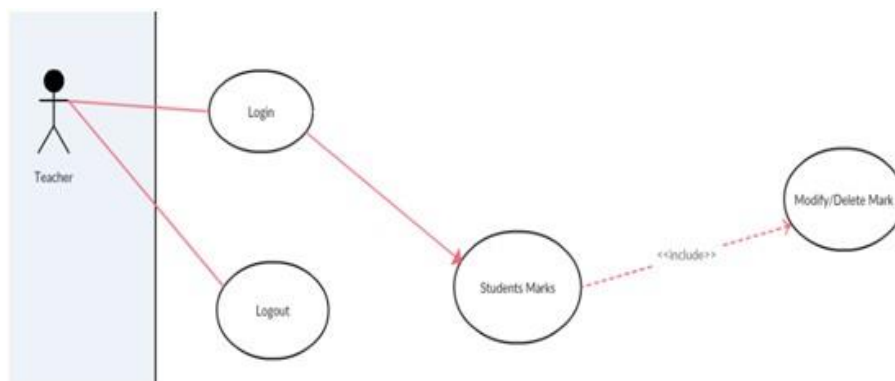
Data Flow Diagrams



Admin use case Diagram



Student use case Diagram



Teacher use case Diagram

Conclusion

The system is developed using web development techniques (HTML5, CSS3, JavaScript, MySQL) that let us design the system layout and colors, then implement UI/UX element's such as:

- Make the system ease to use.
- Make the system ease to learn.
- Choose the website color's carefully to enhance user interfaces.

In recent years, with the pace of technological development, people have become more and more demanding in terms of quality of life, and the schools' managers in recent years look to improve a performance in their schools to get the highest rate of knowledge and experience in their student.