Bangladesh University of Business and Technology

(BUBT)

Project Proposal

Project Name : Student Attendance System

Course Title : Distributed Database Management Systems Lab

Course Code : CSE 418

Submitted To:

Adnan Sakib

Lecturer

Department of CSE

Bangladesh University of Business and Technology (BUBT)

Submitted By

Name	ID	Intake	Section
Md. Mehedi Hasan	21225103334	49	08
Mushfiqur Rahman Pulok	21225103525	49	08
Abdullah Al Hill Baki	21225103341	49	08
Mehedi Hasan Pranto	21225103357	49	08
Mahmuda Adeeba Tul Husna	21225103333	49	08

Introduction

Background

Efficiently managing student attendance is crucial for educational institutions, but traditional methods often consume significant time and resources. The manual attendance system is prone to errors, and tracking attendance records can be inconvenient. To address these challenges, we propose an automated *Student Attendance System* that will streamline the process of recording, managing, and retrieving attendance data.

Objectives

The primary objective of the *Student Attendance System* is to automate the attendance process, reduce human error, and provide an easy-to-use platform for administrators and teachers. Specific objectives include:

- Developing a web-based platform for managing class, teacher, and student information.
- Enabling teachers to efficiently record and track student attendance.
- Generating accurate attendance records that can be downloaded in Excel format.
- Providing a dashboard for easy monitoring of student and class attendance summaries.

Scope

The *Student Attendance System* will cover the following functionalities:

- **Admin Panel**: Manage class, teacher, and student information.
- **Teacher Panel**: Access student and class summaries, take attendance, view and download attendance records.
- **Database Integration**: Use MySQL to manage and store information for scalability and reliability.
- **Frontend and Backend Technologies**: Employ PHP, HTML, CSS, and JavaScript to develop a user-friendly and efficient system.

Special Feature

The system's standout feature is its ability to export attendance records in Excel format, simplifying the process of generating and sharing reports. This feature ensures that data remains organized and easily accessible for further analysis or record-keeping.

Problem Statement

Managing student attendance manually is inefficient and prone to errors. Teachers often have to spend a significant amount of time taking roll call, recording it on paper, and later updating these records in a system or filing them. This process not only wastes valuable teaching time but also increases the risk of data being misplaced or incorrectly recorded. Administrators face additional challenges in managing, organizing, and retrieving large volumes of attendance records, making it difficult to generate timely and accurate reports. The current manual methods make it hard to track attendance trends or identify students with frequent absences. To address these issues, there is a clear need for a digital solution that automates attendance tracking, reduces the chances of human error, and provides easy access to attendance data for both teachers and administrators.

Literature Review

Over the years, many educational institutions have adopted automated attendance systems to improve the efficiency and reliability of attendance management. Research indicates that these systems not only minimize human errors but also free up time for teachers to focus on instructional activities rather than administrative tasks. Studies have shown that digital attendance systems enhance data accuracy and simplify the process of tracking student attendance patterns over time. Furthermore, automated systems make it easier to generate reports, identify students with frequent absences, and maintain long-term records.

Most of the schools and colleges in our country take attendance manually. In some institutes teachers use software or apps like *Schoology*. *Schoology* is a popular learning management system (LMS) used by many educational institutions. It offers a variety of features, including attendance tracking, course management, and communication tools for teachers, students, and parents.

Schoology integrates attendance tracking with other classroom management tools, but despite its comprehensive features, Schoology can be overwhelming for teachers who only need a simple attendance tracking tool. Additionally, it requires a subscription, which may not be feasible for smaller schools or institutions with limited budgets.

Our *Student Attendance System* is designed to be a simpler yet effective solution for managing student attendance. Unlike Schoology, which integrates numerous features beyond attendance tracking, our system focuses specifically on automating attendance and providing a user-friendly interface for teachers and administrators. This targeted approach ensures ease of use, especially for institutions that do not require a full-fledged learning management system.

Technology Stack

The technologies used for this project are:

- **Frontend Technologies**: HTML, CSS, JavaScript
- **Backend Technologies**: PHP for server-side scripting
- **Database**: MySQL for data management and storage
- **Frameworks/Libraries**: Bootstrap for responsive design
- **Export Feature**: PHP libraries for Excel file generation (e.g., PHPSpreadsheet)

Conclusion

The proposed *Student Attendance System* will significantly streamline attendance management, reduce the likelihood of errors, and enhance the efficiency of both teachers and administrators. By leveraging modern web technologies, this system will provide a reliable and user-friendly platform for educational institutions, simplifying everyday tasks and making data management more effective.