

# Implementation of Student Attendance Management System

**Ekta Chhatbar**

*BE Student*

*Department of Computer Science & Engineering  
S.B. Jain Institute of Technology, Management & Research,  
Nagpur*

**Heeral Chauhan**

*BE Student*

*Department of Computer Science & Engineering  
S.B. Jain Institute of Technology, Management & Research,  
Nagpur*

**Shubham Gokhale**

*BE Student*

*Department of Computer Science & Engineering  
S.B. Jain Institute of Technology, Management & Research,  
Nagpur*

**Sompurna Mukherjee**

*BE Student*

*Department of Computer Science & Engineering  
S.B. Jain Institute of Technology, Management & Research,  
Nagpur*

**Nikhil Jha**

*Assistant Professor*

*Department of Computer Science & Engineering  
S.B. Jain Institute of Technology, Management & Research, Nagpur*

## Abstract

The main objective of developing this system is to present an automated way to keep track of attendance which would reduce the present pen and paper based manual method of marking attendance. Replacing the tedious old method this system will save time, reduce the amount of work the teachers has to do and will replace the stationery material with a computer based system. This system deals with the maintenance of the student's attendance details. It generates the attendance of the student on basis of presence in class. It is maintained on the daily basis of their attendance. The staffs will be provided with the separate username & password to make the student's presence. The staffs handling the particular subjects will be responsible to mark the attendance for all students. Only if the student present on that particular period, the attendance will be marked.

**Keywords: Web Application, Attendance, Calculation, Analysis, Record**

## I. INTRODUCTION

In the existing system attendance is maintained using the attendance register for students. Teachers take attendance of students manually, due to which it increases paperwork, maintaining records and calculating attendance of each student become tedious. The intention of developing Attendance Management System is to computerize the traditional way of taking attendance. Attendance Management System is a platform for daily student attendance in schools, colleges and institutes. It facilitates to access the attendance information of a particular student in a particular class. It also avoids proxy attendance. Data accuracy is maintained, within a short span of time.

As the attendance is maintained in registers it is very cumbersome to manage, track and update the data. Having backup is also very difficult in this method. This system will also help in evaluating attendance eligibility criteria of a student. The proposed system requires very less paper work. All the data is feted into the computer immediately and reports can be generated through computers. Moreover work becomes very easy because there is no need to keep data on papers.

### A. Goals or Objectives

- To automate the attendance system
- To provide accuracy in calculation
- To provide reliable record maintenance
- To generate desired reports

## II. LITERATURE SURVEY

“www.creatrixcampus.com”- is an online platform that delivers a complete Education Management System that includes a fully integrated Student Information System to support intelligent data-driven decisions. From this we learnt that it will save both time and money if we use automated system for attendance management system.

We found that we can minimize the amount of time and effort needed to accurately track and manage student attendance, while providing convenient access to teachers and students as well.

Secure architecture and role-based access is the need of our system that enables schools to provide a set of rights to teachers to manage student attendance data. Easily scalable and flexible system that allows the teacher to access the student's attendance information and check the absences.

"www.myattendancetracker.com": It is again a web application that provides services for student attendance management. We studied this system to find out what features are compulsorily needed and what additional and useful features can be provided so as to make the life easier for both the teachers as well as for the students. Access student information and streamline the whole registration using automated processes. Students can see their attendance of all the subjects along with attendance percentage. Manage and capture time and attendance for classes and lectures with the ability to include attendance history on the report card of students. Timetable Management Automatically, create and maintain academic schedules of students. Manage timetable effectively and minimize students' course conflicts. Customize timetables based on classrooms, courses, lectures and teachers. Simple and easy-to-use student & staff attendance management software. Eliminates paperwork, manual processing and error-free attendance tracking.

www.youtube.com/watch?v=abxXINSz 5eU: This video of Online Attendance Management System Project in Java by Kasarla Shanthan was very effective in explaining the disadvantages of the traditional attendance management system and why we need an automated system. It described the various actors and their roles in the various processes. The features of the system and the operations performed by the actors were also explained very easily. We also got the step wise functioning of the traditional attendance management system and along with this an idea of how to automate this system was also briefed.

Discussion with the faculties of college: Since this web application is a customized application that will be use in our college it was necessary to include the rules, constraints and the policies made by the college. Interaction with the faculties gave us a chance to closely understand all the problems that are faced by the teachers while taking attendance and managing attendance. We also took inputs about what additional features they want.

### III. PROPOSED WORK

The purpose of developing attendance management system is to computerized the tradition way of taking attendance. Another purpose for developing this software is to generate the report automatically at the end of the session or in the between of the session. The proposed system is user friendly because the retrieval and storing of data is fast and data is maintained efficiently. The graphical user interface is provided in the proposed system, which provides user to deal with the system very easily.

This system also provides facilities such as making request by student for their missed attendance for any lecture but attendance of requested lecture must be already taken by teacher. Another feature is that any teacher could be able to handover his/her lecture to another teacher in case of unavailability, class in-charge of any particular class has the authority to promote students of that class from one semester to upcoming semester and teacher can also halt discontinued students from entering into further semesters.

For security purpose, registration of students is only possible if their roll numbers are already fed in the database by admin and when teacher registers into the system, their registration request will be first sent to admin for verification.

If registration request is approved by admin only then teacher would be able to login into the system.

There are three actors in the system as shown in figure 1.

There is separate login section for each admin, teachers and students. To use the system first of all registration of teachers and students has to be done. After login, admin can do verification of teacher and updation of timetables.

The tasks of teachers is to take and view attendance, handover lectures and promote students.

The tasks of students are view attendance and make request to teacher.

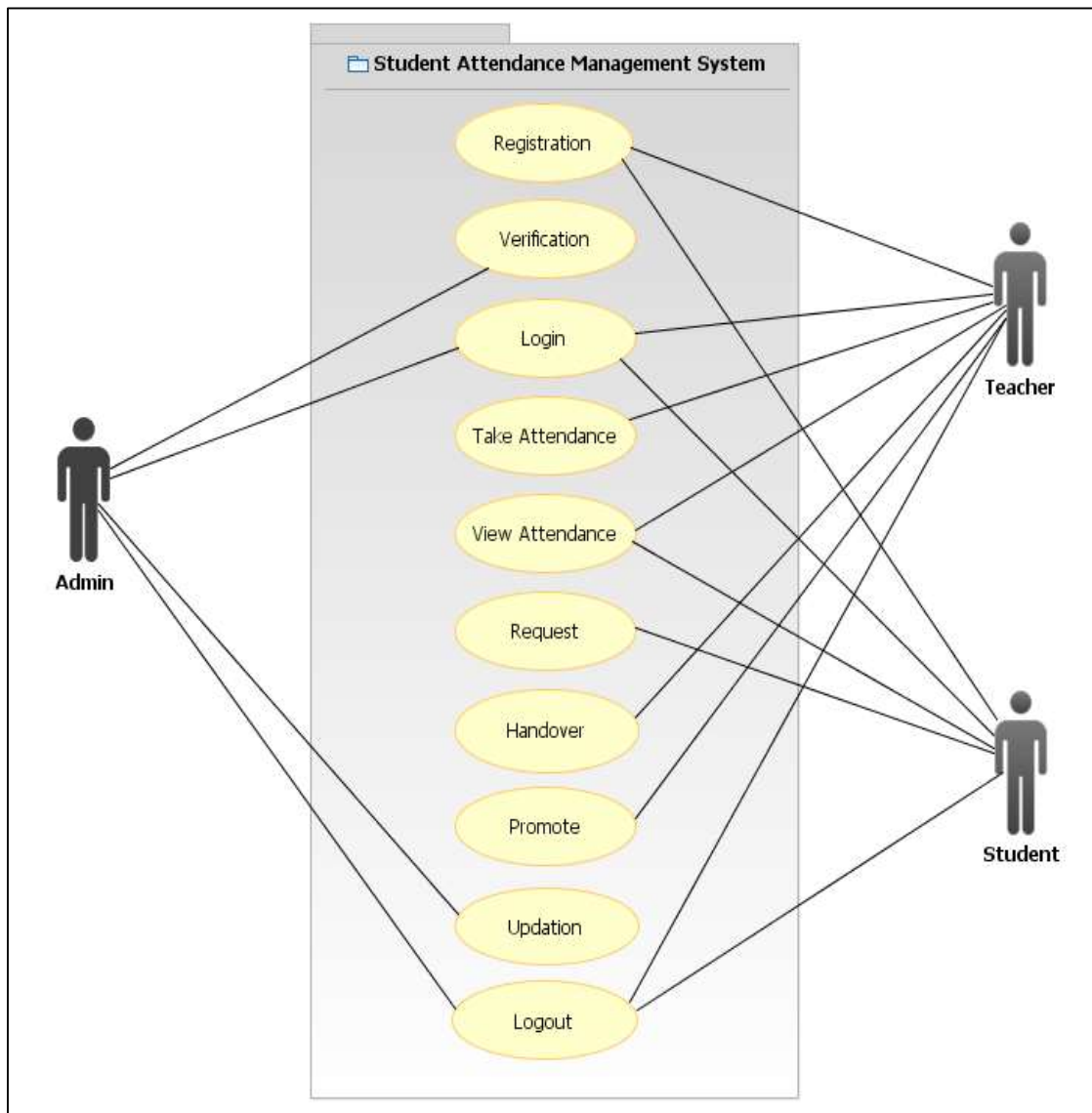


Fig. 1: UML Diagram for Student Attendance Management System

#### IV. IMPLEMENTATION

The complete system is very interactive and user friendly. It is divided into three modules and there are total eight tables in the database.

##### A. Database Structure

There are total eight tables. The relationships between every table are shown in the following class diagram.

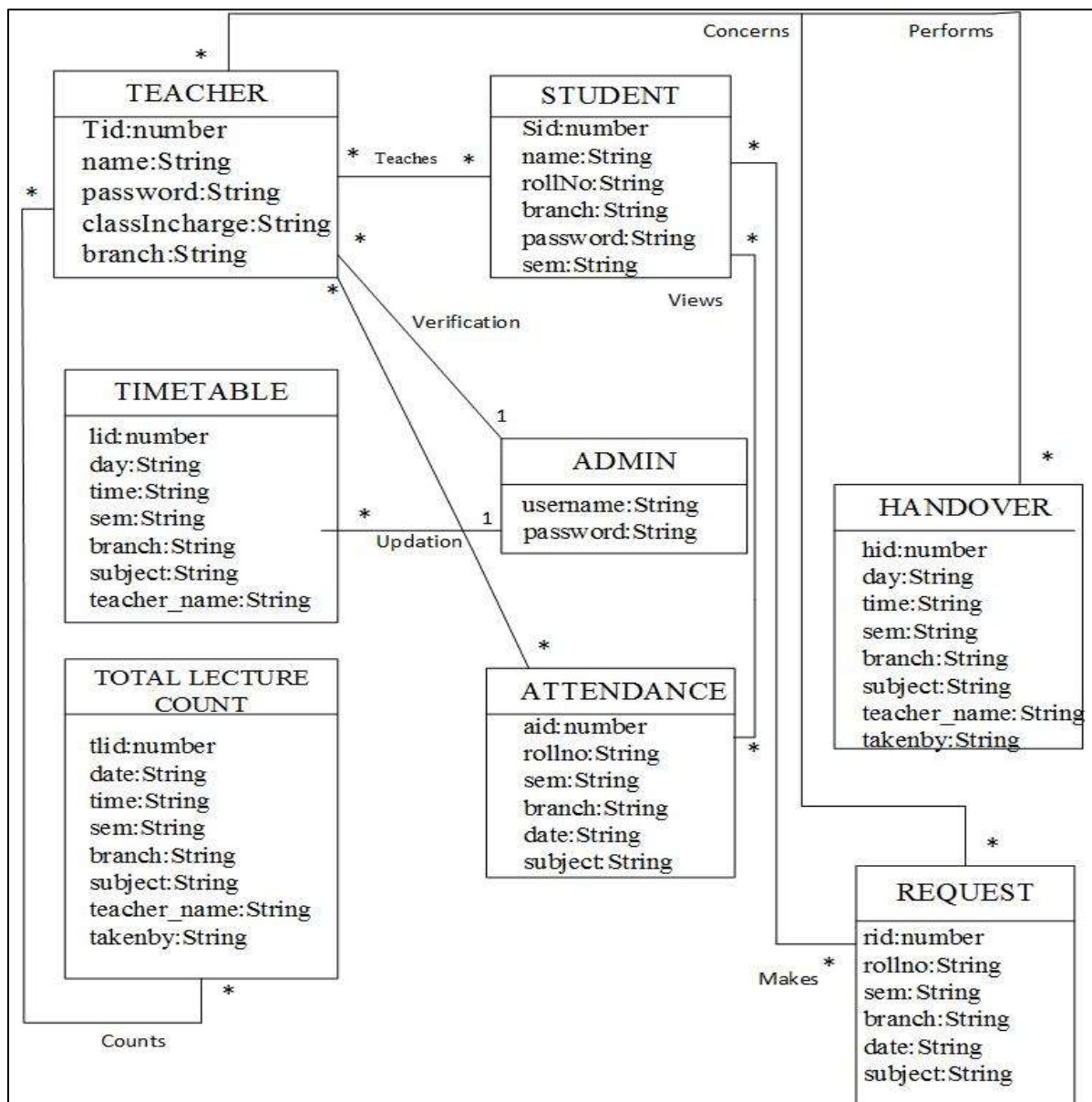


Fig. 2: Schema Diagram for Student Attendance Management System

- There is one-to-many relationship between Admin and Teacher & Admin and Timetable
- There is many-to-many relationship between Teacher and Student, Teacher and Attendance, Teacher and Totallectrecount, Teacher and Handover, Student and Attendance & Student and Request

### B. Functional Modules

The whole system is divided into the three modules. They are Admin Module, Student Module and Teacher Module.

#### 1) Admin Module

In this module the admin will first of all login and then he will be able to perform tasks that are verification of the teachers who want to register themselves also he can do regular updation of timetable.

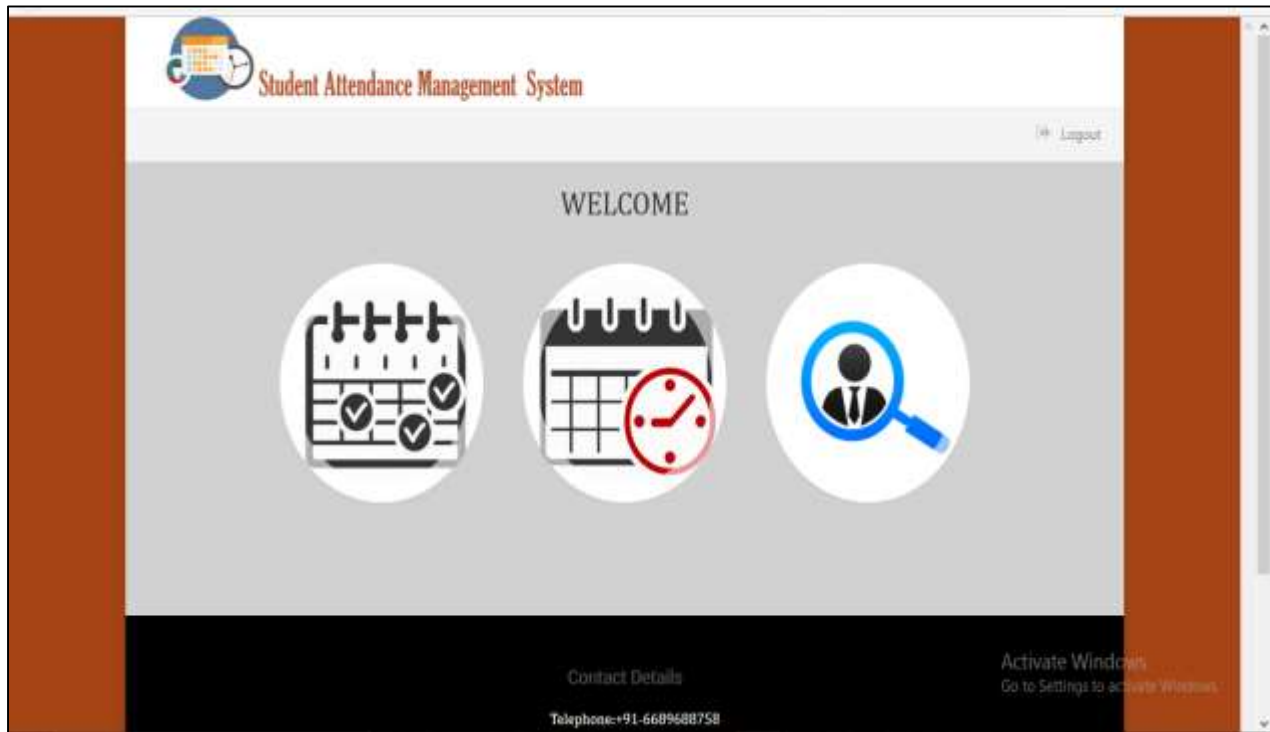


Fig. 3: Profile page of Admin

### 2) Teacher Module

This module includes registration of teachers. After registration and verification by the admin, teacher will be able to login and perform operations like taking and viewing attendance, handover the lectures to another teacher and promote students from one semester to another.



Fig. 4: Profile page of class In-charge



Fig. 5: Teacher Take Attendance

### 3) Student Module

This module includes registration of students which is verified by their roll numbers initially fed in database so that no fake person can register. After this login can be done and then students can view their profile, make changes to it, view their attendance. Also student can make a request to teacher for attendance in case his attendance is not marked even though he was present.



Fig. 6: Profile page of Student



The screenshot displays the 'Student Attendance Management System' interface. At the top, there is a logo and the system name. Below the logo, there are 'Back' and 'Logout' buttons. The main content area is titled 'Elective-3 Attendance'. It features a table with the following data:

Sr. No.	Date	Day	Time	Present (P)/Absent (A)
1	2017-03-09	Thursday	02:30-03:30	A
2	2017-03-09	Thursday	04:30-05:30	P
Total Attendance				50.0%

Fig. 7: Student View Attendance

## V. CONCLUSION

The survey helps in building the system for automating the attendance system. It also focuses on generating monthly attendance of every student so that it is easy for teachers to analyze it and take action accordingly. With this study, we have proposed an efficient Student Attendance System to take and maintain attendance of students for all educational institutes. This proposed system along taking and viewing attendance will provide additional features i.e. making requests to teachers so that unmarked attendance can be marked. Also, there will be a provision for handovering lectures to other teachers. Thus this system will be beneficial for institute.

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