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Abstract

This project uses a web application to facilitate the attendance system in educational institutes. It uses the most reliable way of uniquely identifying students through website. Such type of web application is very useful in school as well as in college for daily attendance. Through this system, we can keep a systematic track of student's attendance. This project enables the easy way of maintaining class attendance with fewer efforts.

* Class teacher easily marks student attendance
* The system also generates a brief report of attendance from the database according to subject-wise or date-wise as required.
* A defaulter list can be generated through system
* Admin has the option to generate the reports and defaulter list

Introduction

Attendance is very important in every student’s life, a single absent is big difference in performance in the academics. Attendance is the basic and the most important criteria needed in all the education system. Attendance is used as a record to assess student consistency in the class. Therefore, student is required to attend all teaching activities held by the institutions. Currently, schools and colleges are still practicing old method to take the student attendance which is by giving out attendance sheet to be sign by student. This impractical method leads to fraud on number of absentees by students. Besides, this method also easily allows for impersonation as some student may purposely sign on another student’s name. Besides, lecturer needs to analyse manually every attendance sheet to identify the number of absentees for both lecture and lab classes correspond to subject. Then, lecturer needs to count and calculate percentage of present of all the students manually to identify when warning letter need to be given to the student depend on his or her number of absents without providing any medical certificate or notice. As a result, it is time consuming, increases work of the lecturer and prone to human error as it is difficult to know whether the calculation made was correct. Therefore, it is very important to develop an assistance system that is equipped with an online database, especially to prevent data loss, as well as to promote ecological and paperless and ecological technology campaigns. In addition, this application will help reduce time wasted, which will lead to greater learning productivity in the classroom. The admin of the system can add new employee by registering the new employee and filling up their registration details. The admin is authorized to view the records of all the employees. This system allows keeping up to date record of the employee. As, the project files and a database file will be stored into the Azure cloud, the project will be accessed in the web browser Following components make this project useful

* User can’t add proxy attendance
* The database is secured as it is stored in an Azure cloud server

Overall Description

The system comprises of 3 major modules with their sub-modules as follows:

* Admin –
* Login: Need to enter login credentials into web interface by the admin
* Add / View Class: Can add a new class detail as well as the batch details into the system. Admin can view class details
* Add Teacher: Can add a new teacher
* Add / Manage Student: Can register new student details into the system and can view and manage their details.
* View Report: System allows admin to view student’s attendance report
* Teacher –
* Add / Manage Students: Can register new student into the system and can view and manage their details.
* Mark Attendance: The teacher can mark attendance of the students
* View Report: System allows teacher to view student’s attendance report
* Student –
* View Report: System allows the student to view his attendance report

Proposed System

Proposed system is the advanced feature of the existing system, that will perform in an efficient manner. In the existing system attendance is carried out in a handwritten register. It is a tedious job to maintain the record for the user. To overcome the drawbacks of the existing system the proposed system has been evolved. The system provides with the best user interface and efficient reports can be generated. The proposed system covers the problem of using the manual system such as an unsecured record of attendance, lots of paper works, and inaccuracy of the data inputs. This proposed system will benefit the school for its development and improvement by using a new technology and improved system for the day-to-day process of attendance. The system is developed to provide automation for the daily attendance of the students and teachers. The purpose of this system is to improve the attendance monitoring system for students and teachers. With the system created with a user-friendly environment, the school staff would find their work easy and efficient. The system will also help the school administrators to evaluate the attendance performance of the students and teachers with ease. This will help the school a lot for its development and performance in terms of attendance monitoring. The system will automatically determine and reflected if a student did not attend his classes. By using databases, the data is more organized.

Use of Cloud Computing in the Proposed System

**Cloud computing** is the on-demand availability of computer system, especially data storage (cloud storage) and computing power, without direct active management by the user. Large clouds often have functions distributed over multiple locations, each location being a data centre. Cloud computing relies on sharing of resources to achieve coherence and typically uses a "pay-as-you-go" model, which can help in reducing capital expenses but may also lead to unexpected operating expenses for users. An automatic attendance system is an educational ERP system that records the students Attendance in an institution. Unlike the conventional attendance system, the automatic attendance system enables the faculty to record, store and monitor students’ attendance history and manage the classroom efficiently. The database will be stored in the cloud which will form a dedicated connection between application and cloud server via internet with the in-time and out-time data stored in cloud, the admin can calculate the working hours of the employees. The student can view his / her personal details when logged in to the system. This data is retrieved from the cloud database and can be accessed any time by the student, teacher, and the admin. This system allows to keep up to date record of the students. Other features include- No Software installation required, no proprietary hardware or infrastructure required, Security, Ubiquitous and On-demand access.

Results

The proposed solution of student attendance system has been developed and tested. Few photos are also attached below to show the working of our system. All the information for every student and classroom including staff or lecturer conducted the lecture in classroom are sent to the integrated database management system. Our Attendance Management System is deployed on Microsoft Azure cloud Platform and here are the results -

* The admin of the system manages the Users (Teachers / Students) and Add Users, They Manage the attendance as well as check their attendance report.
* Teachers are only allowed to add Students, mark their attendance and check the attendance report of students.
* The student is only allowed to check his/her attendance
* The System has following features - Increased accuracy, Remote working, Improved security, Scalability , Cost and time savings etc

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Conclusion

Student attendance system will be a benefit for an academic institution, instead of using a manual system that raises many issues and uncontrolled for student cheating. Attendance management and information system for attendance gathering and processing is a necessity for schools and organizations because it helps save funds and eliminates time theft by employees, and buddy punching which are the order of the day with manual methods of attendance gathering. he system also generated reports about student/staff attendance performance for a given month/year, student course attendance performance report for a given course and staff overtime performance report for a given month. The cloud-based Attendance Management and Information System would save funds, improve productivity and aid better administration by providing an efficient tool that receives data, processes it, and generates accurate attendance reports in a fast and timely manner. Our proposed system covers the problem of using the manual system such as an unsecured record of attendance, lots of paper works, and inaccuracy of the data inputs. This proposed system will benefit the institution for its development and improvement by using a new technology and improved system for the day-to-day process of attendance. The system is developed to provide automation for the daily attendance of the students and teachers. The purpose of this system is to improve the attendance monitoring system for students and teachers. With the system created with a user-friendly environment, the school staff would find their work easy and efficient.

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* Some References were also taken from I.B.M Skills Build Platform as well

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The Team Behind the Project

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