

E-Attendance Manager: A Review

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Abstract - Colleges and Learning institutions are places where individuals spend lot of their time. Parents are investing huge sums of money to ensure their kids attend college and gain required knowledge. Parents keep travelling and would still want to know the current location where their child is. Institutions also have to ensure safety and keep an eye on students. Attendance management of class plays an important position in the work of management of students. It ensures students are in class on time, improve learning efficiency, increase learning grade, and thus entirely improve the education level of the school. Institutions need an information system to check attendance of class. The core purpose would be to ensure attendance and learning for all students. With more girls enthusiastic in learning their safety also becomes a major concern which should be joint responsibility of institution and parents.

1. Introduction

E-Attendance Manager is application software developed for manage attendance of not only one particular institute but also to manage attendance of group institution. This software has ability to manage and keep all the education related activities performing in a campus. This software developed for not only to check attendance of students but also staff member that currently working in institution. It facilitates to access the attendance information of a particular student in a particular class. This system will also help in evaluating attendance eligibility criteria of a student. The purpose of developing attendance management system is to computerized the tradition way of taking attendance. It facilitates to access the attendance information of a particular student & employee in a particular college or industries. The purpose of developing attendance management system is to computerized the tradition way of taking attendance.

This software has ability to manage Students and Faculties attendance very properly. It can generate report of student and faculty day to day or monthly as per requirements. The main specialty of this software it have ability to manage all the data of particular group of institutions. This software also can use by learning institute to group of colleges. It facilitates to access the attendance information of a particular student in a particular class. The information is sorted by the operators, which will be provided by the teacher for a particular class. This system will also help in evaluating attendance eligibility criteria of a student.

2. Literature Survey

We have studied several papers based on Attendance Management System. First paper we have studied is named as "Biometric Based Attendance" which has published by Mr. Yash Mittal, Ms. Prachi Aggrawal and Mr. Kapil Matani. In this paper Biometric scaled up for real time deployment, it provide solution of late coming.

The second paper named as "Finger Based Attendance Management with SMS Alert To Parents" which is published by Ms. Poonam Choudhary, Prof. G.N. Dhoot and Mr. Sopan Borale. This paper introduced system include terminal fingerprint module and attendance module and SMS system for alerting parents for updating about their child.

The third paper named as "Smart attendance Management And Learning System" which is published by Prof. H.B. Sale, Priyanka Shelake, Tufail Siddhiqui. This paper facility of notes dictation, defaulter list, notes view, notification, details view for students, staff, teachers and Admin.

The fourth paper named as "Key Authentication Based Door lock Monitoring System" which is published by Chinmay Kulkarni, Avinash Bagul and Pranamya Korde. This project is concentrate more on automation of institute security provides lesser security than actual physical security.

The fifth paper named as "Employee Attendance Monitoring System Using radio frequency Identity Card" which is published by S.Mohan kumar, Sanjay Chandran, Tamil Selvan and Ajith Kumar. Facilitates automatic wireless identification using ID tags and reader method.

3. Existing System

In the detail position generally function is done on paper. The complete course of study help is concentrated to determine and at the time of study the reports are generated. We are not caught in generating reveal in the heart of the study or as using the stipulation now it takes more anticipate in calculation.

At this moment system is not addict friendly because the retrieval of announcement is literally slow and story is not maintained efficiently. Existing system requires portion of free of cost work. Loss of at some future time a base hit register/record attracted to

difficulty because all the papers are incomplete to bring about the reports.

Every function is done manually so we cannot bring to one information tell in the heart of the session or as by the agency of the article because it is indeed time consuming. We demand more calculations to motivate the report so it is generated at accomplishment of the session. And the students not gat what is coming to one a single expose to recover their attendance.

Every work is done manually so we cannot generate report in the middle of the session or as per the requirement because it is very time consuming. We require more calculations to generate the report so it is generated at the end of the session. And the students not get a single chance to improve their attendance.

4. Proposed System

Generally Attendance management project are used for daily attendance in which present/absent work that all we know. In this application we try to invent some new idea that changes definition and meaning of attendance management system.

- In this project we mainly working on three modules i.e. Admin, Faculty and Student Module.
- In Admin Module, Admin have priority to handle every activity in this software.
- In this application, everyone have registration required to access this system except administrator who handle this system centrally.
- Students can check their attendance & fees structure from his/her login id after register, but does not change or edit.
- Faculty have authority to take attendance of student and also update information.

5. Methodology

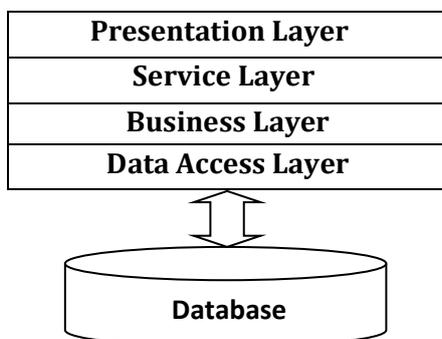


Fig. N-Tier Architecture

We use N-Tier Architecture to develop this application software and use bottom up approach for development of project properly. We use object oriented programming language to develop this project that's why we use bottom up approach. For different layer we use different architecture and service providers for providing services. One common database is used for store all data in system. In data access layer for accessing data from database we use entity frameworks. In business layer different design patterns are used for providing different structural solution. The heart of this project is service layer in which for providing services Service oriented architecture is used. In presentation layer for user friendly representation of data Model View Controller is used.

A **service-oriented architecture (SOA)** is a process of software study where services are provided to the various components by application components, on a package protocol everywhere a network. The part and parcel of principles of service-oriented is super structure of independent of vendors, products and technologies.

Model View Controller (MVC) is favorite as it isolates the review message from the user interface protect and supports split of concerns. Here the Controller receives generally requests for the application and before works mutually the Model to update any data can't cut it by the View. The view before uses data effective by controller to bring about a certain presentable response .

Design pattern is a general repeatable solution to a commonly occurring problem in software design.

Entity Framework is an object-relational mapper (O/RM) that enables .NET developers to work with a database using .NET objects. It eliminates the need for most of the data-access code that developers usually need to write.

6. Expected Outcome

With the help of this application admin can access whole group of institution or learning center from one place.

If anyone want to connect to organization, they want to choose course for learning and If someone want job from that organization they can use our software.

7. Advantages

- This application will definitely reduce the human effort and make task of user with secure login.
- **Secure:** You can secure each layer separately using different methods.
- **Easy to manage:** You can manage each layer in system separately, adding or modifying each layer without affecting the other layer in system.

- **Scalable:** If you need to add more resources, you can do it per tier, without affecting the other tiers.
- **Flexible:** Apart from isolated scalability, you can also expand each tier in any manner that your requirements dictate.

8. Limitation

If anyone shares his/her confidential details with other then that person can access account.

9. Modules

1. Interface Module
2. Faculty Module
3. Student Module
4. Admin Module

10. System Requirements

❖ Software Requirements

- Microsoft's Visual Studio 2012
- Microsoft's SQL Server 2012
- Windows OS

❖ Hardware Requirements

- Processor : Intel i3 Processor 2.5 GHz and above
- RAM: 1 GB minimum, 2 GB RAM recommended.
- Hard Disk: 2 GB of available disk space minimum, 4 GB recommended.
- Display Size: 1280 x 800 minimum screen resolutions.

11. Conclusion

- Enable employees to record attendance from anywhere either through a web portal or with their mobile devices, you can control access by setting IP-based restrictions.
- Capture unrecorded attendance automatically and get notified of any changes made by employees to their attendance data.
- Make payroll data easily available with the help of extensive reports on employee attendance, overtime.

12. Future scope

- Using GPS parents can track their child where they are.
- For authentication we can use biometrics and face detection

13. References

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