

ATENDANCE MANAGEMENT SYSTEM

Software Engineering Project

1 VISION

Introduction

Attendance Management System is a software developed for daily student attendance in schools, colleges and institutes. It facilitates to access the attendance information of a particular student in a particular course. 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 any point of time.

Scope

The scope of the project is the system on which the software is installed, i.e. the project is developed as a desktop application, and it will work for a particular institute. But later on the project can be modified to operate it online.

Working of Present System

In the present system all work is done on paper. The whole session attendance is stored in register and at the end of the session the reports are generated. We are not interested in generating report in the middle of the session or as per the requirement because it takes more time in calculation.

Disadvantages of Present System

- **Not user-friendly:** The existing system is not user friendly because the retrieval of data is very slow and data is not maintained efficiently.
- **Difficulty in report generating:** We require more calculations to generate the report so it is generated at the end of the session. And the student not get a single chance to improve their attendance.
- **Manual Control:** All calculations to generate report is done manually so there is greater chance of errors.
- **Lots of paperwork:** Existing system requires lot of paper work. Loss of even a single register/record led to difficult situation because all the papers are needed to generate the reports.
- **Time Consuming:** 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.

Characteristics of Proposed System

- **User Friendly:** The proposed system is user friendly because the retrieval and storing of data is fast and data is maintained efficiently. Moreover the graphical user interface is provided in the proposed system, which provides user to deal with the system very easily.
- **Reports are easily generated:** Reports can be easily generated in the proposed system so user can generate the report as per the requirement (monthly) or in the middle of the session.
- **Very less paper work:** The proposed system requires very less paper work. All the data is fed into the computer immediately and reports can be generated through computers. Moreover work become very easy because there is no need to keep data on papers.
- **Computer operator control :** Computer operator control will be there so no chance of errors. Moreover storing and retrieving of information is easy. So work can be done speedily and in time.

Other Alternatives

Biometric Attendance System has become one of the most preferable devices for the business and office owners. This particular device helps them to track the attendance of their employees systematically. This machine uses the biometrics of each person in order to keep record of their time in and out during the working hours of the day. Further, it offers a scalable solution for such owners who generally want to avoid issues like undocumented access, ID swapping and so on.

The main strengths of such system include:

- **Accurate identification:** You can achieve high level of accuracy in terms of identification with the help of this system. For instance: if you set the device correctly, you can use biological characteristics such as fingerprints and iris scans in order to update the attendance system.
- **Time saving:** Biometric identification is extremely quick. A person can be immediately identified or rejected within a second.

On the other hand Weaknesses may include:

- **Expensive:** If its an education institution, you may have hundreds or thousands of students who need to register a finger or two and that gets more complicated and requires more equipment.

2 SOFTWARE ARCHITECTURE

Required Modules for System

- **Admin** : The main task for administrator is to add the faculty members, new students, and provide username and password to the faculty members and students.
- **Faculty** : faculty members can login to their account and add students who have registered for their course. Also they can generate the attendance reports of students.
- **Student** : Students can login and view the attendance report of the courses for which they have registered.

Technologies/toolkits required

- **HTML**: Page layout will be designed in HTML
- **CSS** : CSS will be used for all the designing part
- **JavaScript** : All the validation tasks and animations will be developed by JavaScript
- **MySQL**: MySQL will be used as the database for the project.
- **Django**: Project will be developed over django framework

3 CHALLENGES AND RISKS

- We need to provide strong link between administrator and both faculty and student.
- Providing high security to Admin.
- We have to improve information monitoring related to absence and report generations.