Student Attendance Management System

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ABSTRACT

The Attendance Student Management System has been successfully developed, tested, and implemented to meet user requirements efficiently. It offers a user-friendly interface, detailed documentation, and supports simultaneous access from multiple systems, ensuring smooth operation and ease of use. The application has undergone thorough debugging and performance evaluation, confirming its reliability and effectiveness in generating all required outputs. While the current version meets the intended objectives, there remains ample scope for future enhancements to adapt to evolving technologies and improve functionality. The system's flexible architecture allows for seamless updates and integration of advanced features, making it a scalable and dynamic solution for student attendance management.

Keywords: *Attendance Management, Student Records, Application Development, Educational Software, Future Scope.*

INTRODUCTION

A student attendance management system is designed to streamline and automate the manner of monitoring and coping with student attendance in academic establishments. The essential purpose of this kind of system is to improve accuracy, performance, and transparency in attendance records.

In academic institutions, keeping track of student attendance is a critical task. Traditional methods of recording attendance, such as paper-based registers or guide entry, may be time-eating, error-susceptible, and cumbersome. A students attendance control machine addresses those challenges by imparting a digital answer that automates the attendance-taking system.

EXISTING SYSTEM

MEANING:

The current operational framework relies entirely on manual paper-based processes. Attendance data for entire sessions is manually recorded in physical registers, with comprehensive reports compiled exclusively at the conclusion of each academic period. Mid-session reporting capabilities remain underutilized due to prohibitive time requirements for manual calculations.

DISADVANTAGES OF EXISTING SYSTEM

Suboptimal User Experience: The legacy infrastructure demonstrates limited accessibility, characterized by cumbersome data retrieval processes and ineffective information management protocols.

Operational bottlenecks in documentation: Complex manual computations delay report production until session completion. A significant limitation. Students face restricted opportunities to monitor or enhance their attendance performance during active academic periods.

PROPOSED SYSTEM

MEANING:

To overcome the drawbacks of the existing system, the proposed system has been evolved. This project aims to reduce the paper work and saving time to generate accurate results from the student's attendance. The system provides with the best user interface. The efficient reports can be generated by using this proposed system.

ADVANTAGES OF PROPOSED SYSTEM

User Friendly: The proposed system is user-friendly because the retrieval and storing of records is speedy, and records are maintained efficiently. Moreover, the graphical user interface is provided inside the proposed system, which allows a person to address the system very easily.

SYSTEM SPECIFICATION

SOFTWARE REQUIREMENT

Operating System: Window 10

Front -End: PHP

Back –End: MYSQL

Language - HTML

HARDWARE REQUIREMENT

Processor: Intel core i3

RAM: 4 GB

Hard Disk Drive: 500 GB

Video: 800*600, 1024*768 256 colors

SYSTEM DESIGN AND DEVELOPMENT

INPUT DESIGN

Input design is the process of transforming user-generated inputs into a computer-readable format for application forms. Input design is one of the most costly phases of operating a computerized system and is frequently the primary issue that arises during the system's operation.

Input design forms are:

Add class teacher

Add student

Create class

Take attendance

OUTPUT DESIGN

Output design typically refers to the outcomes and information produced by the system, which serves as the primary motivation for developing the system and forms the basis for evaluating its usefulness to end-users. The output is created to be visually appealing, user-friendly, and informative.

Output design forms are:

View student attendance

View class attendance

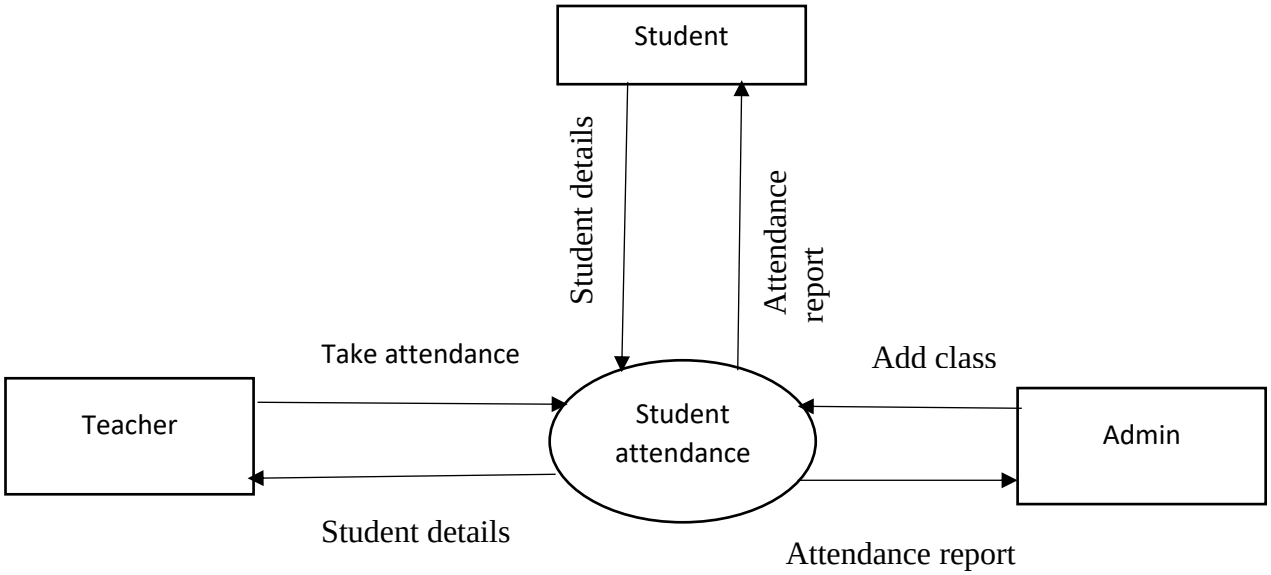
Download report

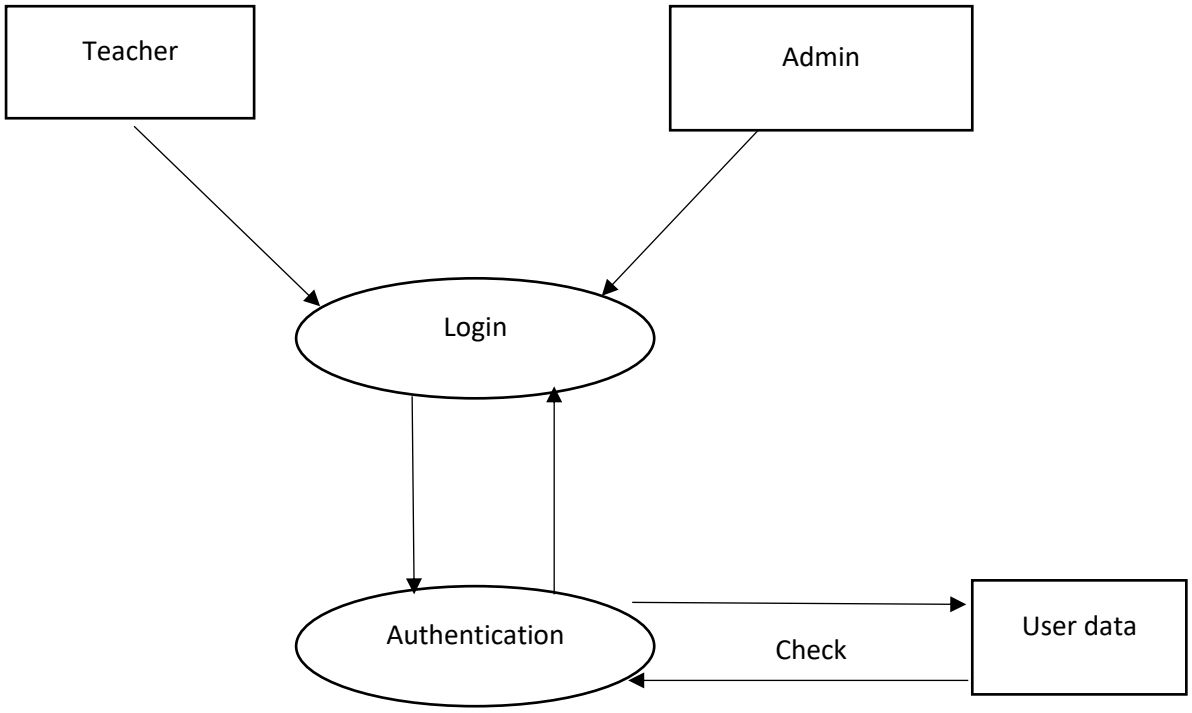
DATABASE DESIGN

The database design is a must for any application developed especially more for the data store projects. Since the chatting method involves storing the message in the table and produced to the sender and receiver, proper handling of the table is a must. In the project, login table is designed to be unique in accepting the username and the length of the username and password should be greater than zero. Both the company and seeker username are stored in the same table with different flag values.

DATA FLOW DIAGRAM:

A data flow diagram (DFD) is an organized tool that may be used to make flowcharts. It is a network illustrating data transformation and process, which modifies or alters data within a system. The network is drawn through a collection of symbols that do not suggest physical construction. It is meant to bring clarity to the system requirements and outline major changes.


Student
Student details
Attendance report
Take attendance
Add class
Teacher
Student attendance
Admin
Student details
Attendance report


Teacher
Admin
Login
Authentication
Check
User data

SYSTEM TESTING

After conducting thorough tests on each module, the modules are combined, and the final system is tested using specially designed test data to ensure its successful operation in all conditions. The procedure-level testing is conducted first. By providing incorrect inputs, the errors are identified and rectified. As a result, the system testing serves as a confirmation that everything is in order and provides an opportunity to demonstrate to the user that the system functions properly. The last stage entails validation testing, which verifies if the software functions as the user anticipated. The person who will be using the software, not the software developer, usually performs this test. This process is known as 'alpha and beta testing,' and it helps uncover any issues that only the end user can identify.

Unit Testing

Efforts to check module tests in modules, the smallest unit of software design. This is called a module test. The module is tested separately. This test is performed at the programming stage. In this test stage, it is established that each module works satisfactorily in connection with the outlet of the module

Integration Testing

Integrated tests are a systematic method that constitutes a test that indicates errors related to the interface. In this project, all modules are combined, then the entire programmer is usually checked. The entire error detected in the integrated test step is modified for the test stage of the following steps.

Validation Testing

To uncover functional errors, that is, to check whether functional characteristics confirm to specification or not specified.

Output Testing

The output of the software should be acceptable to the system user. The output requirements are defined during the system analysis. Testing of the software system is done against the output requirements, and the output testing was completed with success.

SCOPE FOR FUTURE ENHANCEMENT

There is scope for future development of this project. The world of computer fields is not static; it is always subject to being dynamic. The technology that is famous today becomes outdated the very next day. To keep track of technical improvements, the system may be further refined. So, it is not concluded. Yet it will improve with further enhancements.

Enhancements can be done in an efficient manner. We can even update the same with further modification establishment and can be integrated with minimal modification. Thus, the project is flexible and can be enhanced at any time with more advanced features.

CONCLUSION

It is concluded that the application works well and satisfy the end users. The application is tested very well and errors are properly debugged. The application is simultaneously accessed from more than one system. Simultaneous login from more than one place is tested.

This system is user friendly so everyone can use easily. Proper documentation is provided. The end user can easily understand how the whole system is implemented by going through the documentation. The system is tested, implemented and the performance is found to be satisfactory. All necessary output is generated. Thus, the project is completed successfully.

Further enhancements can be made to the application, so that the application functions very attractive and useful manner than the present one. The speed of the transactions become more enough now.