

Astute Students Governance System

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Abstract: *The Astute Students Governance System is a tool for maintaining the attendance details of students. It generates attendance reports grounded on their presence in class, which is streamlined daily. Staff members are handed with separate login credentials to modernize the attendance status of each student. The responsibility of streamlining the attendance of students is assigned to the staff member handling the separate subject. Attendance is calculated only if the students is present during that particular period. The system generates daily and consolidated reports of students attendance. This system is designed to efficiently manage students attendance records and make it easier for staff members to keep track of attendance.*

Keywords: ASG-Astute Students Governance; Student attendance; Student Management; Staff Management; Lab Control

I. INTRODUCTION

Astute Students Governance System is software which manages attendance of students in practical sessions. The software is been especially developed for lab sessions of students of Computer Department. ASG does have colorful features for sorting purpose, for managing students records, for managing computer details, to add and cancel computers in system, for transferring practice questions from admin side and scholars aren't demanded to manually enter their attendance in a register in this way there's lower destruction of runners and moving forward towards robotization. ASG is veritably accessible and more dependable way to record the attendance of a Students. There are veritably lower chances that an illegal exertion that could be that's, for illustration, if a students tries to enroll other students attendance if the other students is absent, he she will be caught because after submission of the form at students side a unique number will be generated at customer side and a dupe of it'll be saved at admin side too so after the practical scholars need to confirm this number from schoolteacher and only also the record will be permanently saved or differently will be discarded, In this way it's a veritably easy and safe way of enrolling attendance of students for their practical sessions.

II. LITERATURE REVIEW

The traditional attendance system used in an educational system, in which the teacher calls out each and every pupil's name and marks attendance, wastes time during lecture time. This becomes even more severe in the current script, where the number of scholars in a class is enormous. Managing attendance data for such a large group is also extremely difficult. Another disadvantage of the current system is the possibility of students marking fake attendance. computer to store and corroborate fingerprints. It can be ported to academic terrain with variations. The attendance tracking system is a time-consuming procedure. The system is used to automatically track the attendance of the scholars in a methodical manner. The operation's growth reduces the inefficiency of the attendance system. So, before developing the tool, it is necessary to determine the system's time factor, integrity, and security.. Once these effects are satisfied, also coming step is to determine the operating system and language can be used for developing the tool. numerous systems and operations have been developed in this regard to break the automating the process of attendance, but nearly none of them fulfil the whole conditions. numerous problems can be seen on those being operations, some warrant GUI, some warrant automating the process of informing the care taker or guardians. There are software's available for automating similar problem of attendance but being the fact that desktop consumes further energy or power than themobile. Nowadays, attendance is generally taken on the piece of paper in register. Using a system for taking attendance, consumes not only lower energy but also helps in reducing the destruction of paper and can serve as green way for

taking the attendance. Use of paper, currently can be excluded by the automating the process of attendance. Today's pre-sto paced world is overfilled with new and ever changing technologies, to manage up with these technologies and constant rise in the stoner demands one need to maintain a veritably high quality of each and every product being launched. The software assiduity is no different and is constantly seeking hard to develop and maintain high quality software. numerous similar software are available in request but they're tedious and complicated with complicated stoner interface. But ASG is desktop operation so we can give veritably stoner friendly UI which is easy to understand and manage. The approach/model used to develop software is determined by the type of system we wish to create. We anatomized the conditions completely first and also spent lots of time in System Designing. But when we went for enforcing the asked system, we realized some failings in the design and had to revise the design again.

We aimed at following cascade model but finished up using Modified cascade Model. While making design of the system emphasis was put on having an effective modular design. It has been enforced during perpetration phase by taking care of introductory effects which insure effective modular design. Software testing is veritably critical element of software quality assurance and represents the ultimate reviews of specification, design and coding. Testing represents an intriguing anomaly for the software. The success of the system depends on testing. crimes can be fitted at any stage during development. System testing makes a logical supposition that all the corridor of system are correct; the thing will be successfully achieved. During testing, the program to be tested is executed with set of test data and the affair of program for the test data is estimated to determine if the program is performing as anticipated.

The author presents fingerprint-based attendance system using IoT (Internet of Things) is a biometric system that uses fingerprint recognition technology to record and track attendance of employees or students. The system is connected to the internet and utilizes IoT devices such as sensors, cameras, and cloud-based servers to collect, store and analyze attendance data in real-time. The system eliminates the need for manual attendance recording and reduces the risk of errors and fraud. It provides accurate, reliable and secure attendance tracking and management, which can help organizations improve their efficiency and productivity[1]. This paper presents to solve the issue at hand, this system was created. This system's server and client are linked together via a local area network (LAN), making it possible for professors to keep an eye on the computer activities of specific students while also giving students a decent interface for doing laboratory activities. The professor can grade each practical and evaluate how well each student performed on it based on their performance[4].

In this paper Every authorized pupil is handed with a unique RFID label/ card with his/ her details fed in it. The label consists of a erected in intertwined circuit that stores this data through modulating and demodulating transmitted radio frequency signals. The data therefore stored in this card is the unique identification of that person. As soon as the card is placed in front of the RFID anthology, the data in it's read and attendance for that pupil is registered. This is done with the help of an 8051 microcontroller connived with the anthology[7].

This paper describes smart wireless attendance system with facial recognition is a technology that uses artificial intelligence (AI) to identify and verify the identity of individuals in a workplace or educational institution using their facial features. It involves the use of cameras, sensors, and software to capture, store, and analyze data related to attendance. The system works by capturing the image of an individual's face and matching it with the pre-stored data in the database to identify the person. The system can record attendance automatically, eliminating the need for manual attendance taking, and saving time and resources[10].

2.1 Requirement Analysis :

- Software Requirement :-Operating system :Windows 10, Front Design: Netbeans8.2, Communication : TCP/IP, Back-End : MySQL (PhpMyAdmin), Back-End Connectivity: MySQL Driver, Connection to PhpMyAdmin: Xampp Server (Control Panel)
- Hardware Requirement :- RAM:-1GB< , Hard Disk:-128 GB<, Processor:- Intel Pentium 4(1.50 GHZ) or above, Android 5+.

III. PROPOSED SYSTEM

The first step in implementing a system involves planning and the involvement of various departments and system analysts. They address practical issues related to managing activities outside of their own data processing departments.



The implementation coordinating committee oversees line managers and considers user department ideas, problems, and complaints. Astute Laboratory Governance System is being implemented to manage student details, staff handling of student attendance, report generation, and computer details. This application allows subject-wise attendance tracking and generates elaborate reports on a monthly basis, providing consolidated reports to end-users. The application calculates attendance on a date-wise basis and allows for report generation between selected start and end dates.

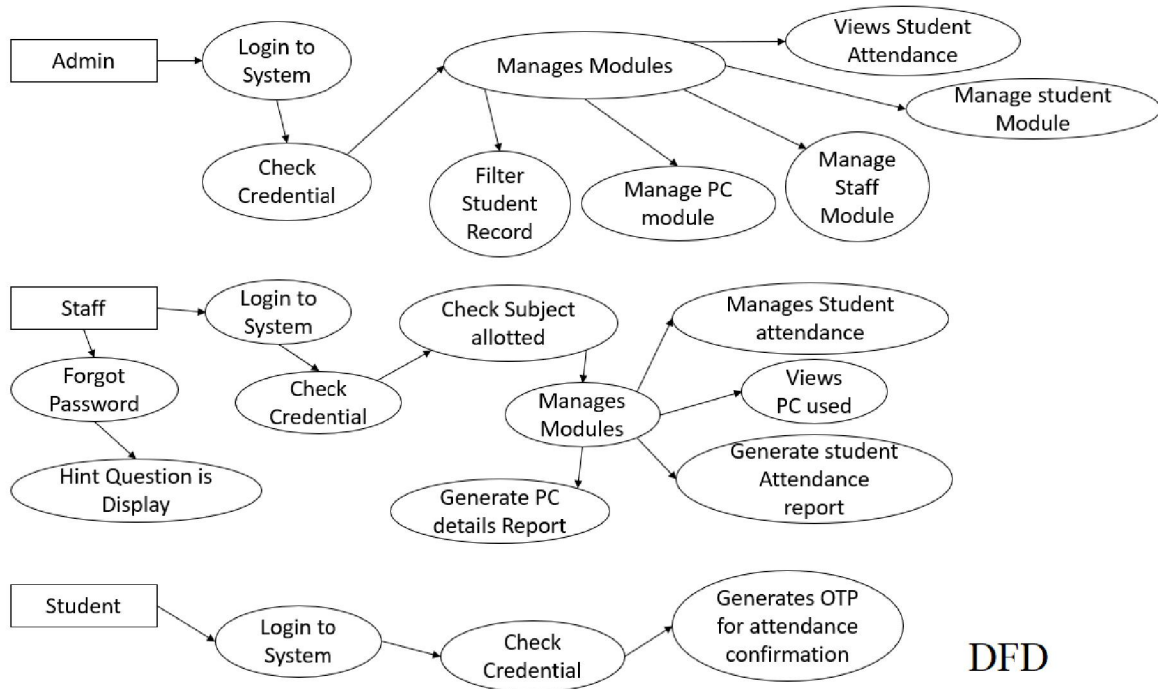


Figure: Data Flow Diagram

3.1 Student Module

1. Logs in details
2. On submit click, unique number generated.
3. Number vindicated by lab adjunct as the number is saved in database also.
4. May admit assignment

3.2 Staff Module

1. Staff will enter subject associated with them.
2. Staff will log in with username and word.
3. Staff can view current attendance and all records of that subject.
4. Staff can add/ cancel records from pupil table.
5. Staff can corroborate unique number.
6. Staff can filter by date and registration.
7. Staff can upload assignments and shoot them.

3.3 Admin Module

1. Admin enters log in username and word
2. Admin can view pupil records
3. Admin can view staff records and add/ cancel records.
4. Admin can view computer details and add/ cancel records

IV. PROBLEM DESCRIPTION

The system created will cut down on manual labour and eliminate wasteful data. Effective reports cannot be produced when the attendance is manually maintained. The system is capable of producing an efficient weekly, consolidated report based on attendance. Because that attendance is recorded in registers, keeping up with it has long been a challenge for administration and workers. Instead, the software has a long-term memory and can recover the information when needed.

4.1 Feasibility Study

Feasibility analysis begins once the pretensions are defined. It starts by generating broad possible results, which are possible to give an suggestion of what the new system should look like. This is where creativity and imagination are used. Judges must suppose up new ways of doing effects- induce new ideas. There's no need to go into the detailed system operation yet. The result should give enough information to make reasonable estimates about design cost and give druggies an suggestion of how the new system will fit into the association. It's important not to ply considerable trouble at this stage only to find out that the design isn't worthwhile or that there's a need significantly change the original thing. Feasibility of a new system means icing that the new system, which we're going to apply, is effective and affordable. There are colorful types of feasibility to be determined.

A. Technical Feasibility

- Both the student, staff and Admin of the system will be made in java swing and android studio.

B. Economically Feasibility

- Project has been done with the open source technologies, so it is reliable & cost effective for college and Admin both of them as well.

C. Operational Feasibility

- To complete this project 3 months are required.

V. FUTURE SCOPE

The project has a very vast scope in future. The project can be implemented on internet in future and it is very flexible in terms of expansion. The following are the future scope for the project.

- Classroom Attendance System.
- Biometric based attendance system.
- Individual Attendance system With photo using Student login.
- We can send a SMS/mail to the student parents who have less attendance.

VI. CONCLUSION

Astute Students Governance System is significant to all associations similar as educational institutions. It can manage and control the success of any association by keeping track of people within the association similar as students to maximize their performance. The proposed system offers the process of monitoring attend students, it aims to help the college staff in the laboratories to manage and record students presence electronically and directly without the need to list on paper so it'll save time and trouble. The system can dissect the data and displays statistics about the students absences, publishing report about absence probabilities and students warnings for the specified period. The advanced system easy to use and friendly that has an seductive and simple GUI is design so that insertions, elisions, and changes of data can do fluently without interacting with the tables.

REFERENCES

- [1]. Fingerprint Based Attendance System Using IOT-2019
- [2]. Herbert Schildt, "Introducing Swing" Java The complete Reference, xith ed. New York, pp. 1559-1882
- [3]. Mr. Vipul Shaha, Mr. Amit Arabhavi, Mr. Chetan Barage, Mr. Suraj Chavan, "Remote Lab Monitoring",

- International Research Journal of Engineering and Technology (IRJET), Volume: 03 Issue: 03, March 2016.
- [4]. Ms. Bhagyashree Gaurkhede, Ms. Gayatri Puri and Ms. Neelam Bahekar, "Computer Lab Monitoring System", IJRITCC ISSN: 2321-8169 Volume: 3 Issue: 3 , March 2015
 - [5]. Wang ping, wany Zheng, "IEEE, Wi-Fi enabled personal computer network monitoring system". Computer and modernization, IEEE. 11. pp. 125-128, November 2007
 - [6]. Shaleeza Sohail, Esraa Felemban, Bashair Al Thobaiti and Arwa Al Hetairshi, "Smart-Lab LAN Based Application for Effective Lab Supervision", Second International Conference on Networking and Distributed Computing, November 2011
 - [7]. Srinidhi M, Roy R. A web enabled secured system for attendance monitoring and real time location tracking using biometric and RFID technology. In IEEE: 2015. p. 125.
 - [8]. Shivan and C Kohalli, Ramchandra Kulkarni, Mahantesh Salimath, Mahesh Hegde , and Rohini Hongal "Smart Wireless Attendance System"-2016
 - [9]. L. Stanca, "The Effects of Attendance on Academic Performance: Panel Data Evidence for Introductory Microeconomics", The Journal of Economic Education, vol. 37, no. 3, pp. 251-266, 2006.
 - [10]. Sudhir C. tembhare, Ketan B. Suley "Study of Face Detection for Wireless Secure Data Transmission"-2013