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Lecture Audience Management System

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Abstract: *In this modern age of technological advancements, even simpler systems tend to get advanced and automated, and attendance management is no different. There exists systems that use RFID and Biometrics to record entries but small scale institutions cannot afford those and still rely on paperback ledgers. This project aims to make it easier by maintaining a data repository of all student details that can be overwritten, appended to and retrieved from, at will. It doubles up as a attendance taking function that stores & displays the previous lecture attendance while marking for the day.*

Keywords: C++, GCC, Attendance, Lecture, Audience

I. INTRODUCTION

The current system existing for the aim of managing attendance is through handwritten paperback ledgers. This not only uses lots of paper, but is inefficient because it requires rewriting every detail for each new ledger book. Small scale institutions or personal lecturers needn't maintain attendance information indefinitely but these ledgers keep piling up taking physical space and expend plenty of natural resources. This Lecture audience management system is developed to beat the generic paperback ledger system used for managing attendance. It is mainly built to facilitate small scale institutions as they won't be ready to afford complex systems that use RFID or biometric systems. Therefore, they're in need of simpler technology to take care of the records of the audience. This project digitalizes the ledger system into an intuitive application. User can enter an inventory of scholars or add students to the present list together with details of the scholars like their register number and sophistication. This act as an information repository for all the student details that's stored within the classification system. Added thereto, it's the functionality to mark and consider the current and former day's attendance of all students respectively.

II. RELATED WORKS

Muhammad Ayat Hidayat & Holong Marisi Simalango proposed a Students Attendance System and Notification of college Subject Schedule based on Classroom Using IBeacon[1]. This student attendance system is completed by conducting data collection, system analysis, system design, and system implementation. this system is made using the PHP and Java Android programming languages. The System is additionally using Ibeacon as classroom identifier. the aim of this study is to create attendance system applications of scholars and sophistication schedule notifications supported IBEACON, it's expected that the attendance process are going to be more efficient and might be easily monitored by lecturers and by the central administration.

In the year 2015, Shailendra, Manjot Singh & et. al., presented a design and framework for taking attendance[2] in schools and colleges, for creating troublesome process of taking and compiling of attendance simple and efficient. As its targeted users are educational institutes where there's a requirement of affordable, user friendly, portable, energy efficient and secure automated system. Hence this prototype provides an amalgamated solution for replacing existing conventional attendance system with embedded attendance system. Main advantages are its very low cost, small size, efficient with low energy consumption.

In 2017, Md. Milon Islam, Md. Kamrul Hasan & et. al., developed a smartphone-based student attendance system[4]. Using Smartphone like as Android Technology the course teacher are able to take attendance easily by our designed mobile application and save the attendance within the phone and also in server and might check percentage and can also print as textual matter. Using the stored information, this technique is ready to mark attendance, marking intruders' entry, attendance percentage calculations, send emails, and send SMS to the guardian to stay them updated about their child's attendance at

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the Institute. The designed system has a web access from anyplace and any moment which can extraordinarily assist the course teacher with keeping track of their student's attendance.

III. EXISTING SYSTEM

The current system existing for the purpose of managing attendance is through handwritten paperback ledgers. This not only uses a lot of paper, but is inefficient as it requires rewriting every detail for every new ledger book. Small scale institutions or personal lecturers need not maintain attendance information indefinitely but these ledgers keep piling up taking physical space and use up a lot of natural resources.

IV. PROPOSED SYSTEM

This project digitalizes the ledger system into an intuitive application. User can enter a list of students or add students to the existing list along with details of the students like their register number and class. This act as a data repository for all the student details that is stored in the file system. Added to that, it has the functionality to mark and view the current and previous day's attendance of all students respectively.

V. IMPLEMENTATION

List of Modules

1. System Menu
2. Student Entry
3. Attendance
4. Details

5.1 System Menu

System menu is the primary user interface. It is the first interface that users will be greeted to. It contains everything the system has to offer as a functionality. User has to select their choice of operation from this menu. It acts as a virtual directory for the entire system.

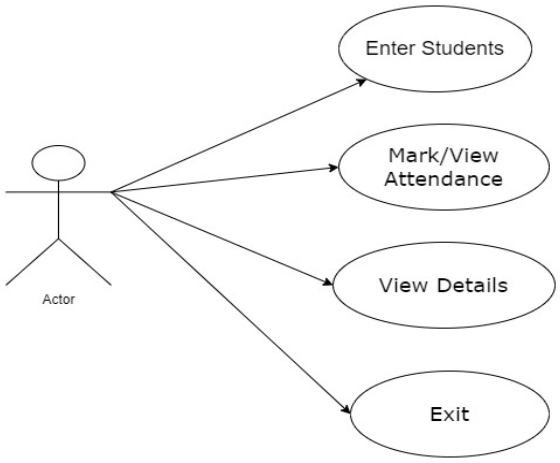

Fig 5.1 USE CASE DIAGRAM FOR SYSTEM MENU

5.2 Student Entry

This module is the first functionality found in the system menu and it has two options :-

1. Create a New list
2. Add students to existing list

This list is saved to a binary file through class objects.

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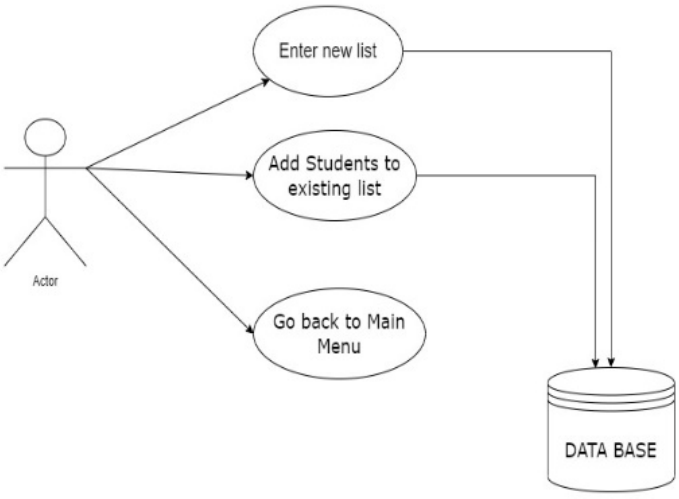

Fig 5.2 USE CASE DIAGRAM FOR STUDENT ENTRY

5.3 Attendance

This module is the second functionality found in the system menu. User can either mark or view the current attendance of the attendee. Also, it displays the previous attendance value while marking for the current day.

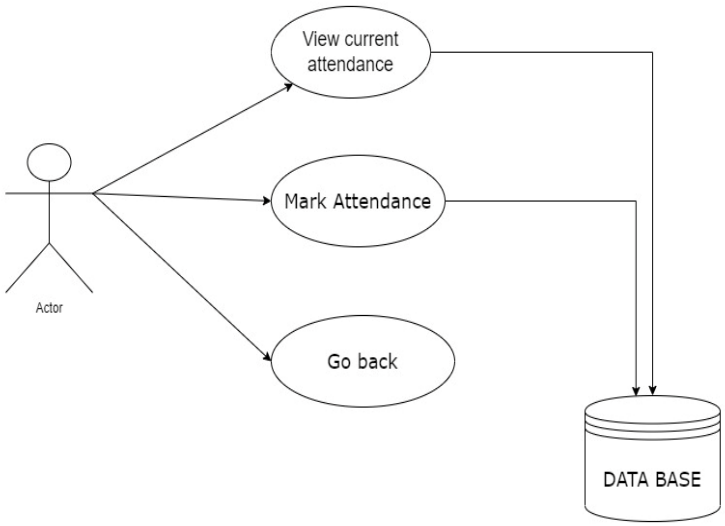

Fig 5.3 USE CASE DIAGRAM FOR ATTENDANCE

5.4 DETAILS

This module is the third functionality found in the system menu. This displays all details of the students currently enrolled in the system.

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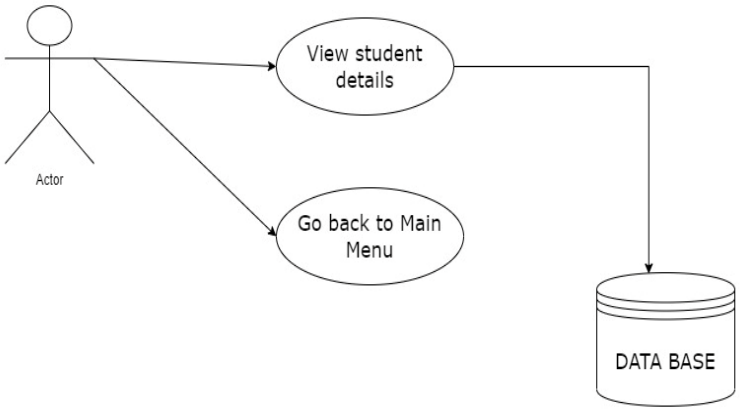

Fig 5.4 USE CASE DIAGRAM FOR DETAILS

VI. CONCLUSION

This project focuses on making attendance management very easy and convenient for the lecturers. It is developed to overcome the generic paperback ledger system that is currently being used for managing attendance. It facilitates small scale institutions that aren't able to afford complex RFID or biometric systems and are in need of simpler technology to maintain these records. This project is made in C++ and uses binary files to save and retrieve audience records. It requires only the minimal system specifications as it is built through GCC that can run on any windows machine.

VII. FUTURE WORK

This project has lots of scope for further development. It is currently a locally run windows only application that requires emulators to run on other platforms such as linux or android. It also uses only binary files to store the data. It can be switched out for a full database system such as FireBase or MongoDB. This makes it accessible anywhere through internet and can then be also used as a permanent data store for all student information. Additionally, evolving it into a Progressive Web App (PWA) would further improves its accessibility as it can then be run on even mobiles through just browser pages.

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