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# Automated facilitation of Paperless Administration for Technical Education Institutions

**V. Lavanya[1], C.B. Selvalakshmi[2], T.Grace Shalini[3], K. Santha Sheela[4]**

Assistant Professor, Department of Computer Science and Engineering, Velammal College of Engineering and

Technology, Madurai, Tamilnadu, India[1-4]

**ABSTRACT:** In attendance system, which is manual in nature, the faculty takes the attendance of the students of different departments of the institution. The information regarding attendance is then given to the mentor. The mentor then checks for the number of presents, absents and whether the student has taken the leave for the absent and finally attendance report is prepared. Every student has to be registered and activated with the system. While registering a student the following information's are required Personal Details Student Number, Course Details, Course Duration and Subjects Details.After registration of the student the student name will be added in the list and it will be appear on the student's list. For each subject there will be a student's list. Those who are taking the particular subject their names will be on the list. The key features of the proposed system are the following, Accurate Student Attendance, Automatic Attendance Collection, Daily attendance Register and Attendance Summary Report.

**KEYWORDS:** Database, PHP, SQL, Students attendance, Faculty, paperless, day wise, hour wise.

## I. INTRODUCTION

Attendance management of students in an institution can be rigorous using the conventional method of paper sheets and old file system method. Every academic institution poses some standards concerning how attendance is to be confirmed for student in classes, laboratory sessions and examination halls. That is why keeping the accurate record of attendance is very important. The approach of using paper sheets and the old file system to confirmed students has been in use for years. There are so many bottlenecks with the conventional method, one such problem is the difficulty for the management to compute the percentage of student attendance in classes and frequently modify their information.

In most educational institutions the attendance is taken manually. It is not only time consuming, but it is also unsecure and unreliable and it can be lost. Some institutions are using punch card for attendance while this will be difficult for faculty to keep track of the large number of students because by using punch card, a student can help the other students or his/her friend to punch their card even the other student may be absent or come late in class, so it is not reliable. To overcome these problems a better system which is Web based; it is fully responsive where a user can use in computer systems. In this system records are kept safe and secure and the attendance information of particular or all students of particular class can be accessed easily and without time consuming, the report is generated automatically.

**Objectives of this research are:**

- To maintain the attendance of the student on the hourly basis
- To reduce the paper work and saving time to generate accurate results
- To generate report on hourly, daily and weekly

## II. SYSTEM DESIGN

**Module Description:**

The system should be designed in such a way that only authorized people should be allowed to access some particular modules. The records should be modified by only administrators and no one also. The user should always be in control of the application and not the vice versa. The user interface should be consistent so that the user can handle the application with ease and speed. The application should be visually, conceptually clear.
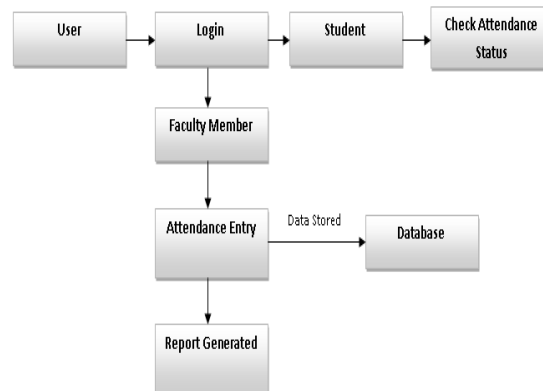
### a)Administrator module:

**Attendance Details:**
- Entered attendance to be storedin the database subject, period wise into the particular date.
- It helps to get the report in three ways such as hourly, daily and weekly attendance.

**Report details:**
Report can be generated hourly, daily and weekly basis

- Weekly report get all hour details of attendance starting date to ending date and display the status
- Consolidate report gets all student attendance details starting date to ending date status help for the eligibility criteria of the student to attend the examination.

### b)Faculty module
Attendance details:

- It assists the faculty to mark attendance to the students for their subject. This will authenticate the faculty before making the entry.

Report details:

- Weekly report gets particular hour details of attendance from starting date to ending date and display the status.
- Consolidate report gets all student attendance details from starting date to ending date status help for the eligibility criteria of the student to attend the examination

**Characteristics:**
**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. User can give the notice to the students so he/she
become regular.

**Very less paper work:**
The proposed system requires very less paper work. All the data is feted into the computer immediately and reports can be generated through computers.Moreover work becomes 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 donespeedily and in time.

### III. SYSTEM DESIGN

**Modules:**

The system structure of the project involves use case diagram and ER diagram,

**a)Use case Diagram:**

A use case diagram in the Unified Modeling Language (UML) is a type of behavioral diagram defined by and created from a Use-case analysis. The main purpose of a use case diagram is to show what system functions are performed. Roles in the system can be depicted. Use Case diagrams are formally included in two modeling languages defined by the OMG: the Unified Modeling Language (UML) and the Systems Modeling Language (SysML).
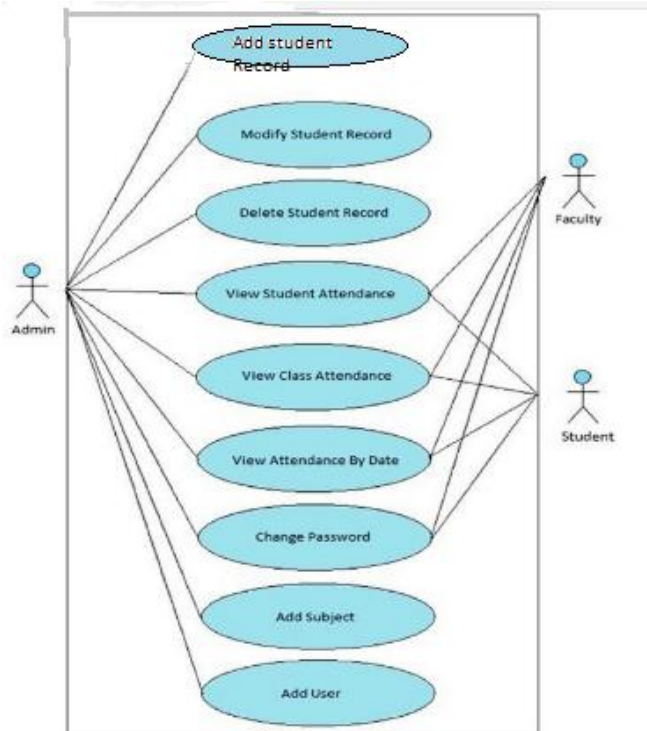


### IV. METHODOLOGY

**WAMP:**

Stands for "Windows, Apache, MySQL, and PHP." WAMP is a variation of LAMP for Windows systems and is often installed as a software bundle (Apache, MySQL, and PHP). It is often used for web development and internal testing, but may also be used to serve live websites.The most important part of the WAMP package is Apache (or "Apache HTTP Server") which is used run the web server within Windows. By running a local Apache web server on a Windows machine, a web developer can test webpages in a web browser without publishing them live on the Internet.

**WAMP has three primary components.**

1. **Apache**: Apache is the actual web server application that processes and delivers web content to a computer. Apache is the most popular web server online, powering nearly 54% of all websites.

2. **MySQL**: Every web application, howsoever simple or complicated, requires a database for storing collected data. MySQL, which is open source, is the world's most popular database management system. It powers everything from hobbyist websites to professional platforms like WordPress.

3**. PHP:** PHP stands for Hypertext Preprocessor. It is a server-side scripting language that powers some of the most popular websites in the world, including WordPress and Facebook. It is open source, relatively easy to learn, and works perfectly with MySQL, making it a popular choice for webdevelopers.

**PHP:**

 PHP (Hypertext Preprocessor) Open-source, server-side scripting language used to generate dynamic web-pages PHP scripts reside between reserved PHP tags. This allows the programmer to embed PHP scripts within HTML pages. Various built-in functions allow for fast development Compatible with many popular databases. PHP scripts are executed on the server. PHP files have a file extension of ".php", ".php3", or ".phtml"

**Features of PHP:-**

•Open source and free to download and use. • Easy for newcomer and advance features
• Used to create dynamic web pages.
• Freedom to choose any operating system and a web server.
•Not constrained to output only HTML. PHP's abilities include outputting images, PDF files etc.
• Support for a wide range of databases. Eg: dBase, MySQL, Oracle etc.
• Support for talking to other services using protocols such as IMAP, POP3, HTTP.
• PHP includes free and open source libraries with the core build.

**Creating a Database and Table, and Inserting Data:-**
Firstly open the control panel of the WAMP server and start MYSQL and Apache module. After that start the browser and open the local host the page will appear as given below in the figure. It requires the username and password of the PHP admin. The username is default 'root' and the password will be given by admin when he starts the software first time. Both Apache server and MYSQL server should run. Data types are also present there. User can also apply the various keys to the tables. Data will be fetched from the tables by using SQL. Insertion in the tables will also done by using SQL.
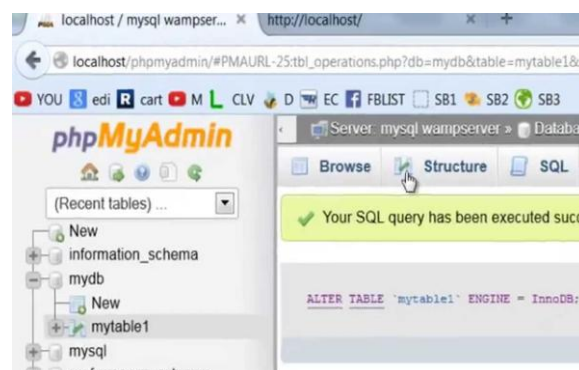


Fig :- home page for creating tables in database.

When we enter the username and password the PHP admin page will be opened as given in the figure. To create the database click on the database and it will ask for the database name then by giving the database name the database will be created. To create the tables in the database click on the database whichis database.Data types are also mentioned there and PHPadmin can select data types according to the need. We are now ready to write created and it will ask for the table name, number of columns and rows. Similarly the other tables will be created in the PHP program that will connect to the database and display our data in an internet browser. The procedure that we will write this program is to first establish a connection with the database using PHP, then start our XHTML deceleration and meta data, and finally in the body of our page, write a loop that will iterate through each record in the table and display that data in thebrowser.

**MYSQL:-**
MySQL is the most popular open source database server. With MySQL, we can query a database for specific information and have a recordset returned. A database defines a structure for storing information. MySQL is ideal for both small and large applications. It supports standard SQL. MySQL compiles on a number of platforms. It is free to download and use. PHP combined with MySQL are cross-platform (means that you can develop in Windows and serve on a Unix platform). MySQL is a relational database system. It can store bits of information in separate tables and link those tables together. Each table consists of separate fields, which represent each bit of information.
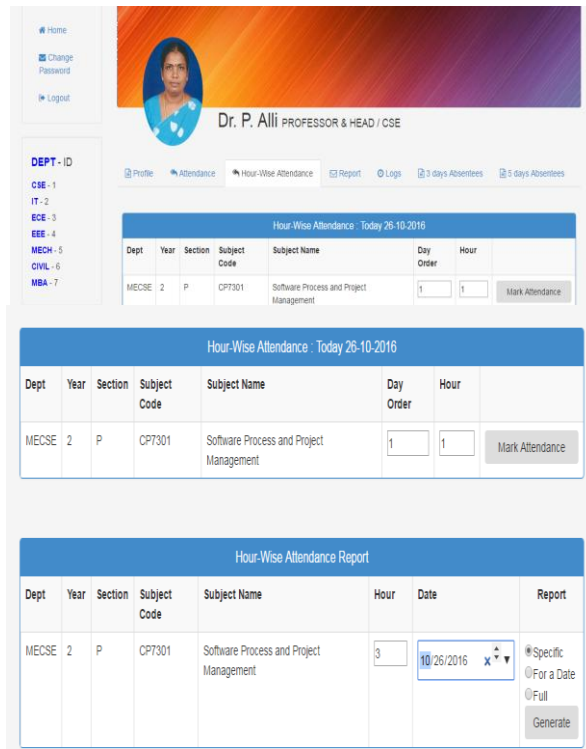
**SQL:-**
SQL (Structured Query Language):-Structured Query Language (SQL) is a standard computer language for relational database management and data manipulation. SQL is used to query, insert, update and modify data. Most relational databases support SQL, which is an added benefit for database administrators (DBAs), as they are often required to support databases across several different platforms.

 **SQL code is divided into four main categories**:
• Queries are performed using the ubiquitous yet familiar SELECT statement, which is further divided into clauses, including SELECT, FROM, WHERE and ORDER BY.
• Data Manipulation Language (DML) is used to add, update or delete data and is actually a SELECT statement subset and is comprised of the INSERT, DELETE and UPDATE statements, as well as control statements, e.g., BEGIN TRANSACTION, SAVEPOINT, COMMIT and ROLLBACK.
• Data Definition Language (DDL) is used for managing tables and index structures. Examples of DDL statements include CREATE, ALTER, TRUNCATE and DROP.
• Data Control Language (DCL) is used to assign and revoke database rights and permissions. Its main statements are GRANT and REVOKE.

## V. EXPERIMENTAL RESULTS

## VI. CONCLUSION

Hour wise attendance monitoring system eliminates the usage of papers. The report can be generated efficiently in three forms such as hourly, daily and weekly. this application is easy to use and user friendly environment and keeps track of student details in efficient way.

**Future Scope:**

The project has a very vast scope in future. The project can be implemented on intranet in future. Project can be updated in near future as and when requirement for the same arises, as it is very flexible in terms of expansion. With the proposed software of database Space Manager ready and fully functional the client is now able to manage and hence run the entire work in a much better, accurate and error free manner. The following are the future scope for the project.

- ✓ Bar code Reader based attendance system.
- ✓ Individual Attendance system With photo using Student login

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