

# College Attendance Reporting Tool

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## ABSTRACT

Presence of the employees at the work place in an organization is important to ensure the smooth functioning. To track the attendance of the employees many systems are in use which includes traditional ways like register entries, punch cards to the biometric impressions. Aiming at the disadvantages of traditional punch card attendance system, an Integrated Staff Attendance System (ISAS) is proposed. ISAS is a system used to record the present of staffs to work. It is based on fingerprint technology. This system allows the workers to take attendance, view their user profile and also attendance, while the manager can view workers' attendance, managing workers' information and generating attendance report.

**Keyword:** C-ART, Report Generation, ABAC and RBAC.

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## I. INTRODUCTION

Current system used in industry for attendance monitoring is software for a Multi-Utility System including Access Control and Attendance monitoring. In this system, a user will swipe a Java Card against the reader terminal in order to perform read transactions such as checking lab status (i.e. whether it is open for all or booked for a particular course) or write operations such as marking the attendance for a particular course. All this data that's being accessed will be stored in a central repository (database server) and will also be replicated onto a backup database server on a daily basis so that cases of data loss are minimized in case of events such as power failure or link failure.

Major drawback of these type of system is there are very less reporting functionalities are available for customized report generation.

## II. LITERATURE SURVEY

AJ]"ABAC and RBAC: Scalable, Flexible, and Auditable Access Management" -Ed Coyne, DRC Timothy R. Weil, Coalfire

RBAC has been widely adopted and provides administrative and security advantages. However, it's outdated, expensive to implement, and unable to accommodate real-time environmental states as access control parameters. ABAC is newer, simpler to implement, and accommodates real-time environmental states as access control parameters. RBAC and ABAC can both be used by viewing roles as user attributes

B.J]"Translating Relational Queries into Spreadsheets" Jacek Sroka, Adrian Panasiuk, Krzysztof Stencel, and Jerzy Tyszkiewicz.

Spreadsheets are among the most commonly used applications for data management and analysis. They combine data processing with very diverse supplementary features: statistics, visualization, reporting, linear programming solvers, Web queries periodically downloading data from external sources, etc. However, the spreadsheet paradigm of computation still lacks sufficient analysis. In this article, we demonstrate that a spreadsheet can implement all data transformations deniable in SQL, merely by utilizing spreadsheet formulas. We provide a query compiler, which translates any given SQL query into a worksheet of the same semantics, including NULL values.

### III. EXISTING SYSTEM

#### Case Study 1:

**Absentee Management System** Absentee Management System provides a comprehensive methodology for keeping track of the employees' absences and annual leave vacation. It uses MDI or Multiple Document Interface. This means a user can have access to more than one part of the system at any given time. The system runs on Microsoft Windows 95/98/NT/2000. A Client Server option is available for Novell and Windows 95/98/NT/2000 Servers. The system will run on any other PC compatible network without the Client Server option. The minimum system requirements are a PC with a Pentium Processor and 16 Megabytes of RAM. There are some main functions of the Absentee Management System, which are listed as below: - Add Amend Employee demographic details Record Absences (in hours or days) Record Planned Leave Request Absences Enter weekly timesheets Parameters Rules set-up and upkeep View and Print Reports New e-mail notification capabilities The system handles multiple users. Each user is assigned a unique user name and password. Any transactions and input updated data will have the user identification associated with it. This functionality is handled by the system itself, and the information is taken directly from the system login screen. The system's administrator will assign user names and passwords, as well as security profiles.

#### Case Study 2:

**Attendance Software System** Attendance Management System is an easy way to keep track of any organization's attendance records. It also works very well as a member database. The program was developed with three main goals in mind: versatility, ease of use, and security. Versatility-Not every organization has the same attendance policies, so this program easily allows you to specify your organization's policies. You can also store any information you'd like about each member. Ease of Use -This program is very intuitive. It was designed so that all of the instructions you need are right on the screen. In addition to using your mouse with the program, you can also use the keyboard for almost every function. If you do get stuck, extensive online help is included. Security -All information can be password protected to prevent unauthorized people from viewing sensitive data. You can turn the password protection on or off at your convenience. In addition to keeping track of attendance records, here is what else the program does: . Maintains a running list of members who are absent and present. Members may be excused so that absences don't count against them (great for members who are on extended leave, for example.) Customizable attendance reports show you exactly the information that you need. Automatically create a list of members who have not met your group's minimum attendance requirements. View an event schedule for your group with the click of a button. Store information about each member - phone number, address, and any other information. Print professional-looking membership rosters, mailing labels, attendance forms, and attendance reports. You may specify a password for each member to keep sensitive information private. The program is intuitive and easy to use - you can do everything just by pointing and

clicking the mouse. Detailed online help is included, and free technical support is always available to answer your questions.

#### Case Study 3 :

**Attend View** provides easy to use and reliable employee attendance tracking and reporting. It allows employees to clock in and out using the PC keyboard with the AV Clock program. Optionally, a bar code or magnetic card reader can be used for clocking in and out. The AV Tools may be run on any computer with network access to the timeclock data to monitor employee attendance and create reports. AV Clock can be also be used to monitor the status of employees from any computer on the network. AV Tools Features: m Various reports can be generated, including detailed time reports, daily totals reports, weekly totals time reports, and department totals time reports. Track Vacation, Sick time as well as time spent on different jobs by each employee. Time data and AV Tools are password protected. Each administrator has configurable permission settings. 8 Allows editing of the time data (by administrators with time data edit permission). 8 Icons can be selected or imported for each department and or employee. Export function can be used to export data to a CSV file. AV Clock Features: Tracks attendance of an unlimited number of employees (Attends view Unlimited version). PC-based solution; eliminates need for expensive timeclock hardware. Can be used with magnetic stripe or bar code readers. Employees can leave messages. An asterisk appears next to the employee's name after leaving a message. Messages can be viewed by clicking on the name of an employee. Outside Work button allows employees to clock in with an Outside Work status. This indicates that he/she is working outside the facility. Clock in and out sounds and animations can be configured and imported. Report button allows employees to create a Daily or Detailed report of their time data. Can be used to view monitor employee status with the clock in/out function disabled. Case study above shows the attendance system that is available from the Internet. Through the case studies, some similarities of features are noticed such as store employees' information, view and prints reports, record absences, record planned leave, request absences, leave message and setup utilities. The identified similarities can help to determine the necessary features that should be included in the program system. The differences among the case studies are analyzed such as new e-mail notification capabilities can be used with magnetic stripe or bar code readers and, can configure and import sounds and animations. The identified differences can help to produce advance system software that has additional features which may vary from others system. As the summarization of case studies, it is important to conduct the case studies because the trends of current system that used by any company or organization will be noticed. The common requirements based on the needs and demands of most company or organization are identified. Besides, the current system can be referred and the features of similarities and differences can be analyzed. Moreover, some ideas and opinions for the developed system will be obtained. Thus the case studies can help me to produce a more quality and advanced product.

#### IV. PROPOSED SYSTEM

In this System we provide report Generation from Access file database. The System Provide Role base mechanism for maintaining privilege levels. System allows user to view their own report. System provides

Architecture of Proposed System

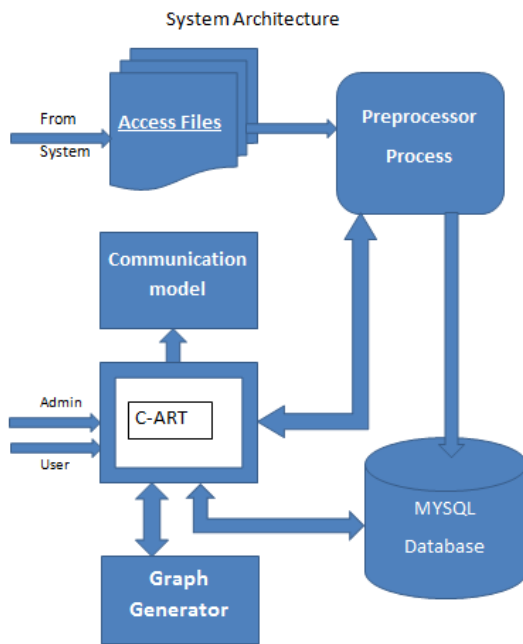


Fig. 1 Architecture diagram of Proposed System

The overall architecture diagram is given above. The Architecture diagram consists of Pre-processor, Input Access file, c-art block, database, Report generation module, Communication module.

The file is send to pre-processor and data mining is done on input file. In C-ART block actual report generation take place according to user requirement. Communication module block is used to send notification to the user through email or offline message. Report generation module generates the report according to type of the report required. Admin is the only user who can make updates in the system. User have only read only access right. Role of the user is provided by the c-art block.

The Admin as well as user login with the help of cart block. All the authentication process is performed by the CART block. When user request the report then cart block retrieves the data from the database, perform the operations and send it to the graph generator block. Then graph generator block represent this data in graphical format to the user. Communication block is service to send notification to user if user misses the impression.

##### A. Features

1. Short Messaging system(SMS) alert.
2. Email Alert Notification.

3. Monthly Report Generation.
4. Easy to Access.
5. Simplified and Sorted data representation.
6. Graphical Representation of Report.

#### V. MATHEMATICAL MODEL

Let consider Set (S):

$S = \{I, \partial, B, M, U, AF, D, PP\}$

Where

I= Set of activities

$\partial$ = Activities

B= Solvability

M= Morphisim

Set of activities

$U = \{U_1, U_2, \dots, U_n\}$

$A = \{Admin\}$

$AF = \{AF_1, AF_2, \dots, AF_n\}$

$D = \{Du, Dc\}$

$PP = \{Preprocessor\}$

$R = \{Reports\}$

#### VI. CONCLUSION

Report for all user will be generated in graphical format as per requirement. All the data about attendance is maintained in database .Alert to the employee will be provided by the System whenever necessary.

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