Web-Based Attendance and Reporting System

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Abstract - : *Education is the process of facilitating learning, or the acquisition of knowledge, skills, values, beliefs, and habits. Our education system makes sure to provide everything mentioned above equally to the students. To make this happen, attendance systems are put in place. This system only provides us with minimal data about the students. Whereas it's important to analyze the data gathered by the attendance system and use is to better facilitate the students as well as the professors. Our proposed system analyzes this data and gives out reports to the professors about their students or a class as a whole. These reports help professors know which students are lacking behind, so as to help them catch up and learn more things. Our analysis also helps the institution and their professors keep a record of the attendance and view it as a consolidated report to help them improve in the future*

Key Words: *Automation, Business Intelligence, Reporting, Information Systems, ERP*

1.INTRODUCTION

Successful schools start by engaging students and making sure they attend school regularly. That may seem obvious but the less obvious fact is that the consequences of low attendance can have serious implications for children and for the community, as a whole part. The attendance rate is important because students with a greater attendance rate are more likely to succeed in academics when they attend school consistently. It's difficult for the teacher and the class to build their skills and progress if a larger number of students are frequently absent. In addition to falling behind in academics, students who are not in school consistently are more likely to get into bad company and habits and effectuate problems in their communities.

The proposed system generates all the reports itself, eliminating the human resources used to analyze the data. The dedicated human resources can then be used in other sections of the institute. All the reports generated by the system are quick and easy to understand, helping the faculty members get insights in the attendance patterns of the entire class or a particular student as well. They can then use these insights to improve the experience of students in the institute and help them gather more knowledge and aid the students in the process of learning.

2. LITERATURE SURVEY

Usage of Business Intelligence, Data Mining and Automation has started to get wide acceptance in the field of education. Various Educational Institutions have started to use this. Jain.et al(2006) discussed and presented a biometric overview, which included the urge to use biometric technology as a tool for the security of information. The main contribution of this included the instances where the biometric scan can resolve issues pertaining to secure information. Despite certain challenges, biometric technology is emerging as a secured alternative to traditional authentication schemes like passwords, smart cards, etc. [1]

Murizah Kazi.et al used a system via which the attendance of students would be taken via RFID technology. The system proposed by them consists of an RFID tag and reader, data reporter, web server, data collector, database and GUI. The RFID reader reads data from the Student ID card and saves the data. The Data Reporter then fetches data from the reader and sends it over to the Data Collector which records the data in the database. This data can be viewed on the web-based GUI [2]. Mohiuddin Ali Khan.et al proposed the use of Data Mining techniques for monitoring the progress of the students. This paper suggests the use of the Apriori Algorithm for analyzing and monitoring academic results data of students [3].

William Vegas-Ch.et al proposed a methodology of integration of business intelligence tools in education systems. It aims at detecting and grouping students with similar traits. This will permit the analysis of the causes and effects of the academic performance of students in several subjects which can be used to make data-driven decisions about the quality of education [4]. Norlida Buniyamin.et al did Educational Data Mining in order to classify and predict using CGPA (Cumulative Grade Point Average) in order to intervene and provide help and assistance to the students. Neuro-Fuzzy classification is a technique used in this paper for classification. [5]

3. Proposed System

The system we intend to create consists of a web-based attendance module that enables the teaching faculty to mark the attendance on the web page and then this data goes directly to the database which can be used later for retrieval and reports. This makes the job of the faculty easy as the attendance marking is easy and the attendance data is maintained. The system also consists of a reporting module with the help of which, teachers can extract reports about the attendance of the class from a specific duration of time. These reports play a key role while reviewing the attendance of the institution. The data is stored in the database to make it easy for retrieval for reports. This process does not take a lot of time and gives an accurate report of the attendance.

**Fig -1**: Login Page

Fig -2: Faculty Class Selection
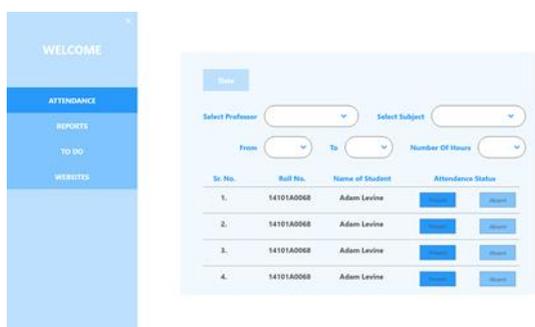

Fig -3: Attendance marking
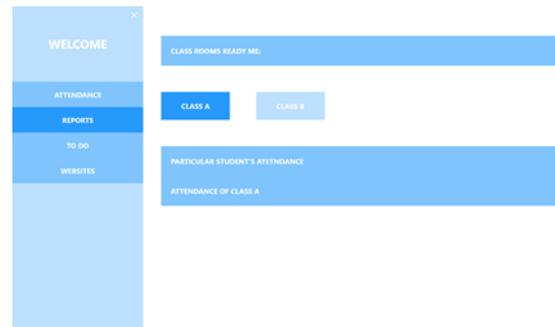
Fig -4: Attendance report generator
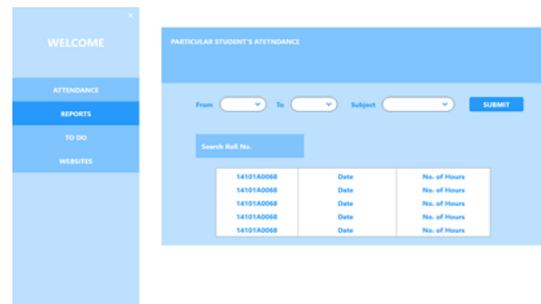
**Fig -5**: Attendance report generator displaying defaulters
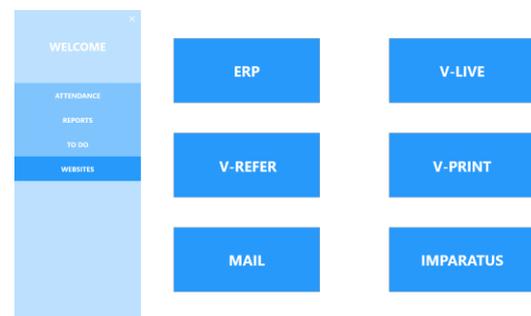
Fig -6: Websites

As shown in Fig-2, the page requires details from the faculty like Class, Year, Branch etc, post which it redirects the faculty to the Attendance page where the faculty can mark students present or absent and store the attendance by submitting it as shown in Figure-3. Reports of the stored attendance data can be obtained from the reports page as shown in Fig-4 and Fig-5.

4. RESULTS AND ANALYSIS

The result of our proposed system is delivered as a report generated by the data given to it in the form of attendance. All the data is gathered and analyzed, returning the user with a consolidated insight towards their attendance record of their students. These insights are then expected to help them in improving the experience of their students and help them gain more knowledge. Also this system can help educational

institutions reduce their cost on paper. This well also aid the institution to analyze data using computational algorithms to derive insights from data.

5. CONCLUSION

Thus our paper proposes a system which can record attendance and enables ease of taking attendance via a web-based platform and storage of attendance data on database. The system proposed in the paper also enables the user to derive out reports from the stored attendance data which can help the faculties in taking data-driven decisions and help in attendance data gathering, storage, retrieval and analysis. We intend to deploy this system on the infrastructure of our college in order to make the attendance process easier for our faculties.

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