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“Significance of ERP based Biometric Attendance System”

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ABSTRACT:-

The manual attendance record system is not efficient and requires more time to arrange record and to calculate the average attendance of each student. The traditional way for taking attendance has drawback. Government also circulates the notice to all institution for tracing of attendance through ERP attendance system. It will helpful to issue scholarship fund to eligible students. Now a days Various institutions have shifted themselves to a platform of online teaching environment. This is providing us with the privilege of studying at the comfort of our learning place like school, collages, institution, organization and home also. But at the same time, it poses many different challenges to the student as well as the teacher or instructor. Lot of problem were found in manual attendance system. Hence to overcome manual attendance system, now we follow the ERP based attendance system having various features like fingerprint scanner, biometric device making us of iris scanner, face recognition, hand geometry.

The purpose of developing attendance management system is to computerized the tradition way of taking attendance. In this paper we are focusing the development and implementation of ERP based biometric attendance system at Sardal Patel University, Balaghat. The main objectives of proposed system are Auto calculation of attendance, and reduce paper work to achieve the aim i.e. capture real time data & Reduce attendance error scope. We installed & implement the ERP based system at entrance of institution to facilitate the entry & exit tracking of all students as well as employees. Privileges were defined and Privileges of user, admin and operator provided to respective persons to run this system. After implementation of this system yet did not found any error related to student attendance as well as teacher attendance. Such type of tracking system is required in all field to control the mobility and irregularity. It will help to maintain the discipline at institute / organization. In financial aspect it will helpful to preparing the salary of employee and screening the eligible not eligible student for examination.

KEYWORDS:- ERP, Biometric attendance management system, discipline, student & teacher, real time data

INTRODUCTION:-

Maintaining the attendance is one of the most vital aspects of an institution during the analysis of the students' performance. Each teacher has their own way of marking the attendance. Some make use of the traditional method (pen and paper). Attendance Management System is software developed for daily student attendance in schools, colleges institutes, Organization.

Significance-

By using ERP attendance system particular student in a particular class easily traced.

This system will also help in evaluating attendance eligibility criteria of a student as well as employee also. Captured data were stored and can be view as and when required.

Now we have adapted to emerging technology of marking the attendance such as fingerprint scanner, biometric device making us of iris scanner, face recognition, hand geometry. The purpose of developing attendance management system is to computerized the tradition way of taking attendance. Another purpose for developing this software is to generate the report automatically at the end of the session or in the between of the session. Here, we overcome a difficulty regarding the manual attendance system which makes it tedious for the teacher.

Objective:-

To capture real time data.

To reduce time consumption.

To make it responsive and feasible to handle.

To accuracy of Data.

To maintaining of student information.

To Auto calculation of attendance.

To maximize security.

To reduce attendance error scope.

To make the attendance system computerized

These methods have a disadvantage such waiting in queue at their time of entry into respective classrooms. These devices at the risk as the devices are something that many people often touch and use and this could possibly spread the virus in case an infected person makes use of these devices. This problem were overcome by providing the facility by face detection & iris detection. These Biometric system were store the absent and present student's attendance details in electronic format so that management of attendance becomes easy.

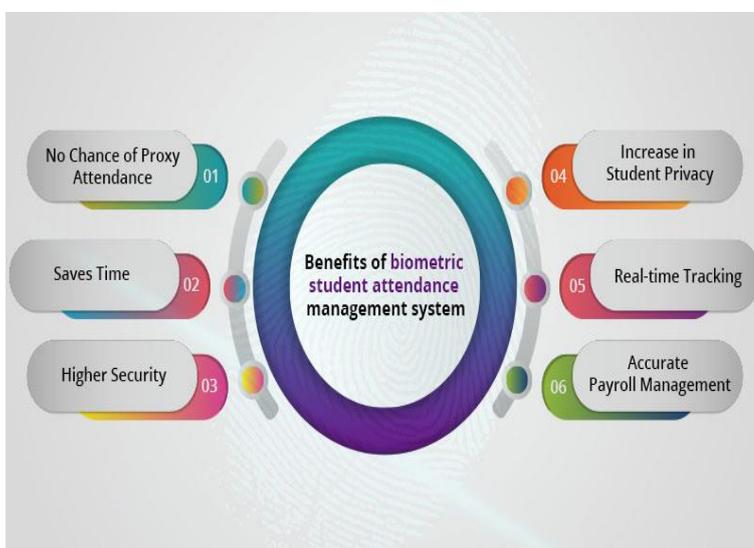


Figure 1.ERP system advantages



Figure 2: ERP Based Bio-metric System

REQUIREMENT:-

Hardware	Software
RAM 8GB	Operating system: windows 10 pro
HD500GB	Language: English
	Programming language: Java
	Android Studio
	Data base MS excel based

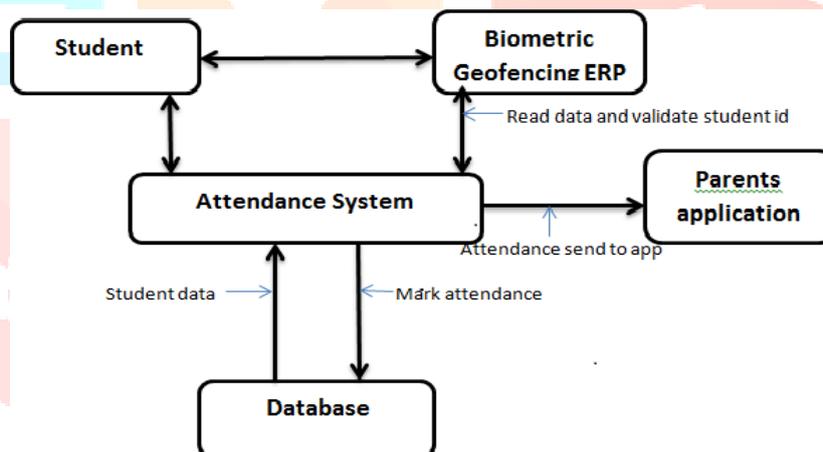
METHODOLOGY:-

The first step is that, the staff is provided with their own Username and Password to Login. Next step is the training image and their features are stored in the database. Then, testing image features are compared with the training images. Once the image is identified, the attendance will be registered. Finally, the attendance details of the student are send to staff and parent through E-Mail.

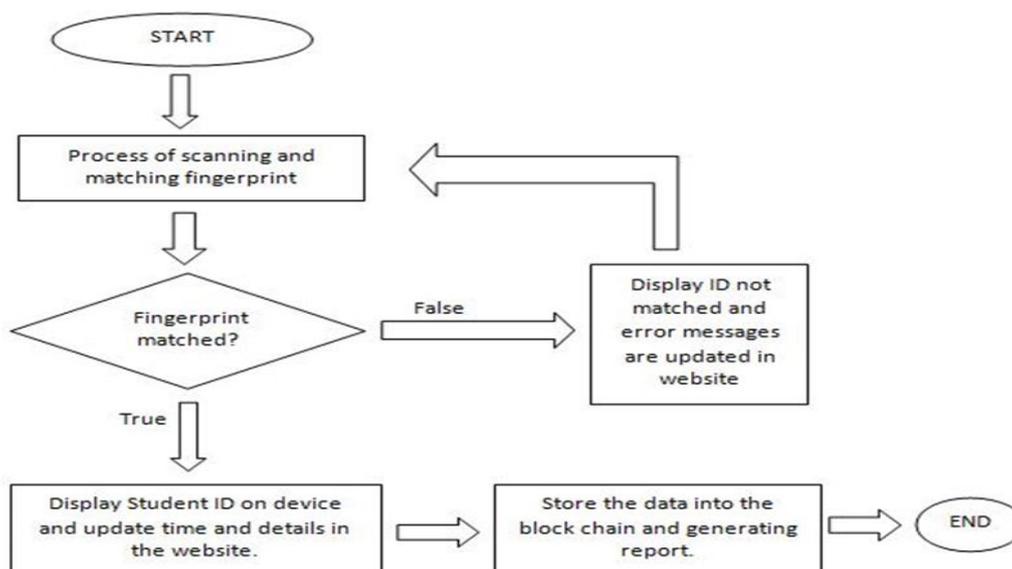
In order to simplify the process, we propose easy stem for marking attendance of the student in a simplified manner. Student login details entered automatically by the profile credentials during the registration and if in case this information is not available, then the student needs to manually enter the details before attending the session. The student can then check which is current scheduled session for the slot scheduled by the organizer.

Admin will manage the user & will display all the information of students.

SYSTEM DECISSION TREE:-



PROCESS FLOW:-



RESULT & CONCLUSION:-

After face detection & thumb impression of student/ employee, biometric system store the data as same as visualize in screen of dedicated computer to examine and evaluate the attendance.

The screenshot displays a web-based attendance management system. The main part of the screen is a large table with columns for 'Employee Name', 'Date', 'Present', 'Absent', 'Total Marks', and 'Report Month'. The table contains multiple rows of data. In the bottom right corner, there is a 'GPS Map Camera' overlay showing a map of Dongariya, Madhya Pradesh, India, with the following coordinates: R457+w5, Dongariya, Madhya Pradesh 481331, India, Lat 21.809083° Long 80.113417°, and a timestamp of 17/12/24 01:22 PM GMT +05:30.

Figure no. 3 Attendance record stored in data base

In our organization, more than 10000 student & employee were followed ERP based biometric system. Respective data were stored in attendance report format as shown in figure no.3. Same is stored in our data base system and evaluated timely. Yet no failure was observed related to attendance management system. These system provide the facility to evaluated the attendance data by individually or by batch wise, as per requirements of organization.

From this system it is concluded that typically students attendance is marked manually which spends a lot of time. Proposed system gives automated attendance of student & employee by Finger/Face Recognition. Single software is capable to manage organization related information from anywhere. Considering their wide scope in future, we recommended such type of automated system should be adopted by organization & institution, where discipline & regularization is required.

Nothing is perfect in this world. So, we are also no exception. Although, we have tried our best to present the information effectively, yet, there can be further enhancement in the Application.

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