Intranet based Student Management System

Dr P Anbhazhagan[1], Saurav Chatterjee [2], Adarsh P M [3], Anurag Kumar Gupta [4]

Assistant Professor, Dept. of Computer Science And Engineering, Gnanamani College of Technology, Namakkal [1]

BE Computer science And Engineering, Gnanamani College of Technology [2]

BE Computer science And Engineering, Gnanamani College of Technology [3]

BE Computer science And Engineering, Gnanamani College of Technology[4]

Email Id: anbhazhaganmtech11@gmail.com[1]

saurav.chatterjee1996@gmail.com[2]

adarshpmadarsh@gmail.com[3]

anuragarya1996@gmail.com[4]

***Abstract*: This paper introduces an Intranet-based management system for students which is of importance to either an educational institution or a college. The project is aimed at reducing the workload of the students as well as the faculty members by providing the students to interact with their respective subject in charge and other faculty members, by posting queries and doubts related to academic as well as personal life and allowing the faculty members a platform to store and manage the student's personal as well as academic details, and to provide counseling to the students as a counselor. Besides, the system can be used by three tiers (students, faculty members, and admin) to access the counseling information, provide communication networking facility for a diversity user, and also managing the data stored in the database.**

Keywords: Web-based application; intranet; counseling; student management.

I. INTRODUCTION

With the continuous scale expansion of schools and colleges, the number of students has increased dramatically and various students-related information contents are also doubled. Under the background of rapid developments of colleges and universities, the trend of gradual scale expansion of students will still continue. The scale expansion has gradually increased the employment pressure on university graduates, while the rapid development of domestic economy has also made the employment environment become increasingly complicated. In this case, institutions of higher learning need a student management system to manage all kinds of information, in order to improve the management level. The accomplishment goals of student information management system shall comprise the following aspects:

Query of student achievement information

Statistics of student achievement information

The student management system can be obtained by integrating, blocking and designing the above functions according to the requirements for structured programming.

II. PROJECT BACKGROUND

This project is to establish the usage of the latest technology in maintaining the records as well as counseling the students with ease, on a single platform. Our aim of this system is to reduce the workload of faculty members and students and making the student management system technologically sound. The professors and faculty members are ready to give their best services in term of helping their students both in academics as well as in personal life. Meanwhile, the students can also give their opinion, feedback or suggestion based on their experience with the teaching staff.

III. SURVEY AND ANALYSIS

Survey and analysis also means the demand analysis.

The student management system based on intra network environment in this paper is a web based application system for student management internally operated within Wuhan Institute of Technology. Based on the students' comprehensive information database and touches on students' basic information, class information, rewards & punishment, scholarship, school register changes and integrated treatment of normal operation of student affairs office and other information, it can provide timely and thoughtful services for students and teachers and it also serves as one of the important auxiliary means of ensuring the normal operation of student management work. With the rapid development of the national colleges and universities, as well as the accelerated progress of informatization among sister schools, it has become an inevitable trend of development to enable the inter networking between students and teachers and colleges.

IV. GENERAL DESCRIPTION

The project comprises of mainly three modules:

- Admin
- Faculty
- Student

All these three modules are connected to each other and have their individual task to perform in the system. The admin is responsible for managing the credentials given to both the faculty members as well as the students, and at the same time also maintains the database. The faculty member can be a subject in charge for some students as well as a counselor for others. Their responsibility in the system is to enter all the academic as well as the personal data of students they are assigned to and also reply to the queries posted by the students as a counselor. The third module, student can only view their details such as the academic marks, attendance details etc. by login into the system using their credentials and can post queries to respective faculty members regarding any subject or personal life problems.

V. SOFTWARE REQUIREMENTS

The front end part for this project is developed using the following languages:

HTML5

CSSHTML5 is a markup language used for structuring and presenting content on the World Wide Web. It is the fifth and current major version of the HTML standard. It was published in October 2014 by the World Wide Web Consortium to improve the language with support for the latest multimedia, while keeping it both easily readable by humans and consistently understood by computers and devices such as web browsers, parsers, etc. HTML5 is intended to subsume not only HTML 4, but also XHTML 1 and DOM Level 2 HTML. HTML5 includes detailed processing models to encourage more interoperable implementations; it extends, improves and rationalizes the markup available for documents, and introduces markup and application programming interfaces (APIs) for complex web applications.[6] For the same reasons, HTML5 is also a candidate for cross-platform mobile applications, because it includes features designed with low-powered devices in mind.

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language. Although most often used to set the visual style of web pages and user interfaces written in HTML and XHTML, the language can be applied to any XML document, including plain XML, SVG and XUL, and is applicable to rendering in speech, or on other media. Along with HTML and JavaScript, CSS is a cornerstone technology used by most websites to create visually engaging webpages, user interfaces for web applications, and user interfaces for many mobile applications. CSS is designed primarily to enable the separation of presentation and content, including aspects such as the layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple HTML pages to share formatting by specifying the relevant CSS in a separate .css file, and reduce complexity and repetition in the structural content.

For the back end, scripting languages used are:

PHP

Java Script

PHP is a server-side scripting language designed for web development but also used as a general-purpose programming language. Originally created by Rasmus Lerdorf in 1994, the PHP reference implementation is now produced by The PHP Group. PHP originally stood for Personal Home Page, but it now stands for the recursive acronym PHP: Hypertext Preprocessor

PHP code may be embedded into HTML code, or it can be used in combination with various web template systems, web content management systems, and web frameworks. PHP code is usually processed by a PHP interpreter implemented as a module in the web server or as a Common Gateway Interface (CGI) executable. The web server combines the results of the interpreted and executed PHP code, which may be any

type of data, including images, with the generated web page. PHP code may also be executed with a command-line interface (CLI) and can be used to implement standalone graphical applications. The standard PHP interpreter, powered by the Zend Engine, is free software released under the PHP License. PHP has been widely ported and can be deployed on most web servers on almost every operating system and platform, free of charge. The PHP language evolved without a written formal specification or standard until 2014, leaving the canonical PHP interpreter as a de facto standard. Since 2014 work has gone on to create a formal PHP specification.

All the data are stored in a database, and the database used is My SQL. The software platform which is used to implement this project is WAMPP Server.

Wamp Server refers to a software stack for the Microsoft Windows operating system, created by Romain Bourdon and consisting of the Apache web server, Open SSL for SSL support, My SQL database and PHP programming language.

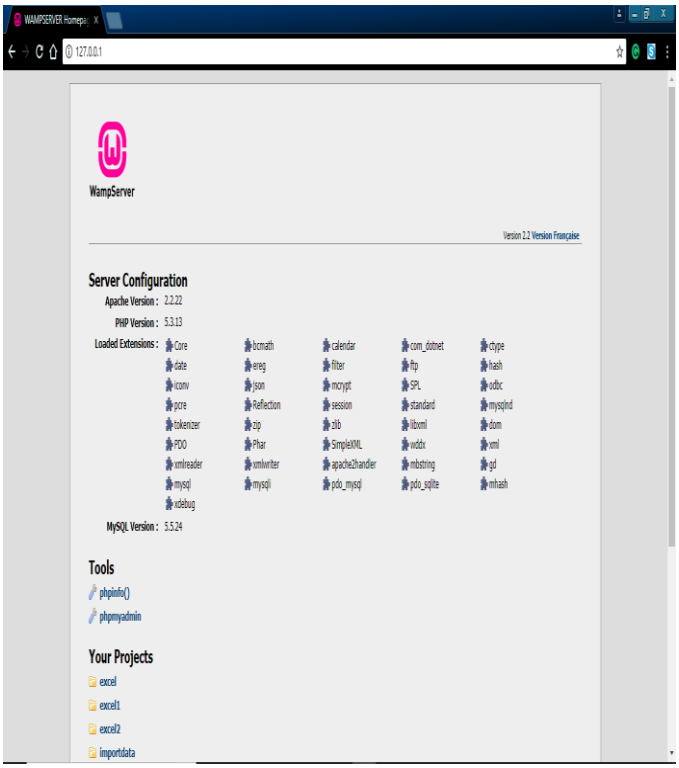

Fig 1. Wamp Server

VI. METHODOLOGY

Intranet based student management system is managed by an admin, who is responsible for giving unique user id and password to both the faculty members as well as the students. Managing the database also falls under the responsibility of the admin.

The faculty members are responsible for uploading all the details of the students that can be the student's personal bio data as well as the academic details such as mark details and attendance details, and upload study materials for the students. The faculty member can post reply to the queries posted by the students regarding the problems faced by the students in their personal as well as academic life, as a counselor for the students.

The students can view all the details uploaded by the faculty members by login to the system using their unique login credentials. The students might come across various problems in their academic as well as personal life, which they can post as query in the system which can be solved by the counselor, as well as they can download the study materials posted by the faculty members. The figure below shows the data flow diagram for the system.

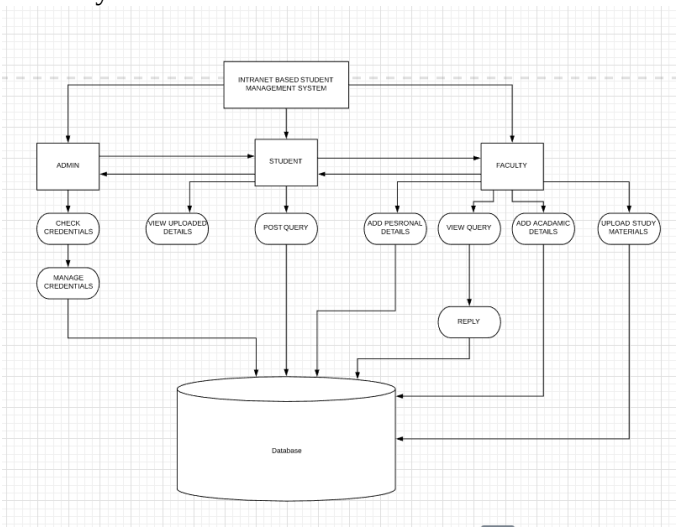

Fig 2. Data Flow Diagram

VII. DATABASE CONNECTION

The data ranging from the academic data, personal data, the uploaded study materials are all stored in the database. We have used My SQL database for the project. The queries used in this project are given below:

Database Coding :

```
CREATE TABLE IF NOT EXISTS `password` (
  `regno` varchar(20) NOT NULL,
  `pass` varchar(20) NOT NULL,
  PRIMARY KEY (`regno`)
) ENGINE=MyISAM DEFAULT CHARSET=latin1;

INSERT INTO `password` (`regno`, `pass`) VALUES
('620814104001', 'password'),
('620814104002', 'password');
```

```
CREATE TABLE IF NOT EXISTS `query` (
  `query` varchar(500) NOT NULL
) ENGINE=MyISAM DEFAULT CHARSET=latin1;


CREATE TABLE IF NOT EXISTS `sem1` (
  `sub1` varchar(10) NOT NULL,
  `unit11` varchar(10) NOT NULL,
  `unit21` varchar(10) NOT NULL,
  `unit31` varchar(10) NOT NULL,
  `model1` varchar(10) NOT NULL,
  `internal1` varchar(10) NOT NULL,
  `sub2` varchar(10) NOT NULL,
  `unit12` varchar(10) NOT NULL,
  `unit22` varchar(10) NOT NULL,
  `unit32` varchar(10) NOT NULL,
  `model2` varchar(10) NOT NULL,
  `internal2` varchar(10) NOT NULL,
  `sub3` varchar(10) NOT NULL,
  `unit13` varchar(10) NOT NULL,
  `unit23` varchar(10) NOT NULL,
  `unit33` varchar(10) NOT NULL,
  `model3` varchar(10) NOT NULL,
  `internal3` varchar(10) NOT NULL,
  `sub4` varchar(10) NOT NULL,
  `unit14` varchar(10) NOT NULL,
  `unit24` varchar(10) NOT NULL,
  `unit34` varchar(10) NOT NULL,
  `model4` varchar(10) NOT NULL,
  `internal4` varchar(10) NOT NULL,
  `sub5` varchar(10) NOT NULL,
  `unit15` varchar(10) NOT NULL,
  `unit25` varchar(10) NOT NULL,
  `unit35` varchar(10) NOT NULL,
  `model5` varchar(10) NOT NULL,
  `internal5` varchar(10) NOT NULL,
  `sub6` varchar(10) NOT NULL,
  `unit16` varchar(10) NOT NULL,
  `unit26` varchar(10) NOT NULL,
  `unit36` varchar(10) NOT NULL,
  `model6` varchar(10) NOT NULL,
  `internal6` varchar(10) NOT NULL
)
```

Database Coding :

```
CREATE TABLE IF NOT EXISTS `student` (
  `registernumber` varchar(20) NOT NULL,
  `nameofstudent` varchar(20) NOT NULL,
  `degree` varchar(20) NOT NULL,
  `branch` varchar(20) NOT NULL,
  `dateofbirth` varchar(10) NOT NULL,
  `dateofjoining` varchar(10) NOT NULL,
  `dateofleaving` varchar(10) NOT NULL,
  `quota` varchar(20) NOT NULL,
  `fathersname` varchar(20) NOT NULL,
  `fathersoccupation` varchar(20) NOT NULL,
  `mothersname` varchar(20) NOT NULL,
  `mothersoccupation` varchar(50) NOT NULL,
  `mediumofeducation` varchar(50) NOT NULL,
  `scholarship` varchar(50) NOT NULL,
  `sex` varchar(20) NOT NULL,
  `bloodgroup` varchar(20) NOT NULL,
  `emailid` varchar(50) NOT NULL,
  `studentcontactnumber` int(10) NOT NULL,
  `parentcontactnumber` int(10) NOT NULL,
  `percentageintenth` int(11) NOT NULL,
  `percentageintwelth` int(11) NOT NULL,
  `caste` varchar(20) NOT NULL,
  `mothertongue` varchar(20) NOT NULL,
  `empty` int(11) NOT NULL
)
```

The figure below shows the database created:

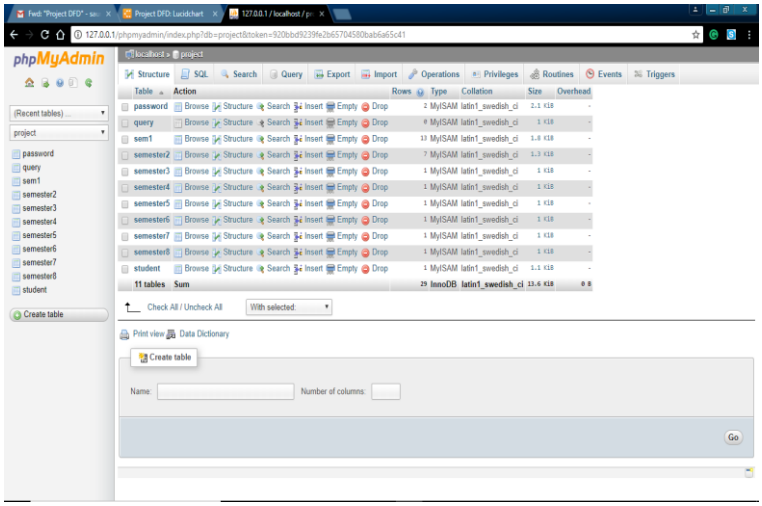

Fig 3. Database

Database is included with the entire data of the student as well as the staff.

VIII. RESULT

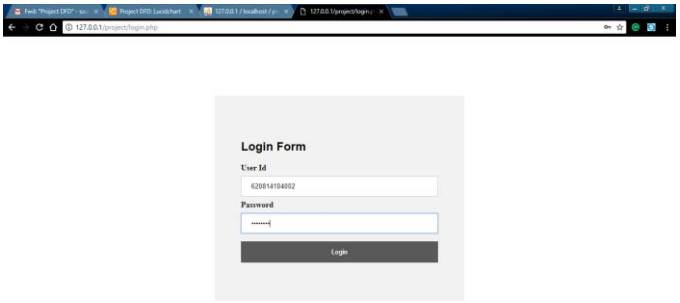

Fig 4.login Page

Login page is the entry point to the intranet based student management system .For each student and staff there are unique user id and the password are given by the administrator .These are the credentials that to login to the intranet based student managing system. The system starts with login page where the registered user can enter user name and password to be able to access the system

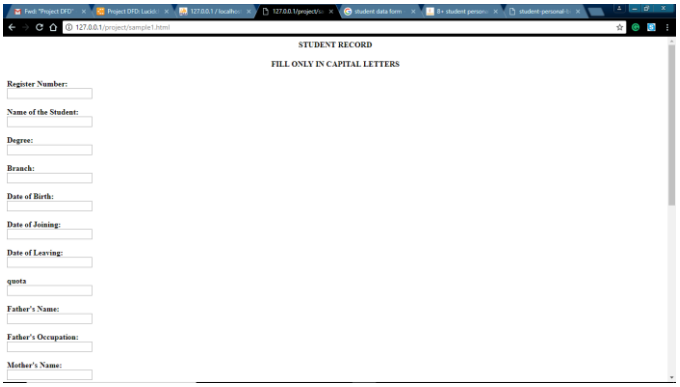

Fig 5. Student data entering form

Fig. 5 shows registration form which contains details of student information during admission. Here the staff can type the entire detail of the student including the personal data and the data regarding academic.

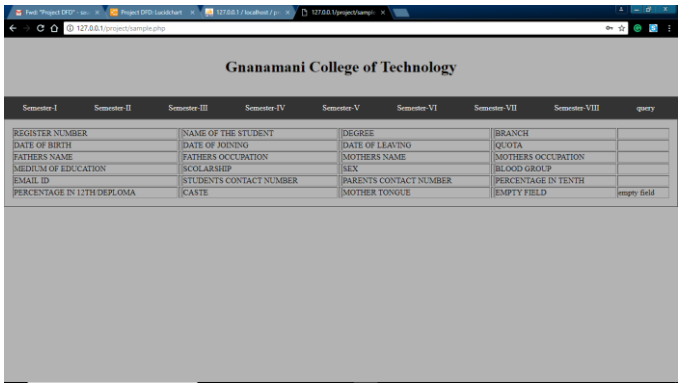

Fig 6.Studebt data view page

When the student has logged in the system using the credentials, Then the system redirect the page to the students data viewing page. The page contains the data about the student personal records and the academic records. The page contains all the eight semesters unit test mark and the internal mark given to the student

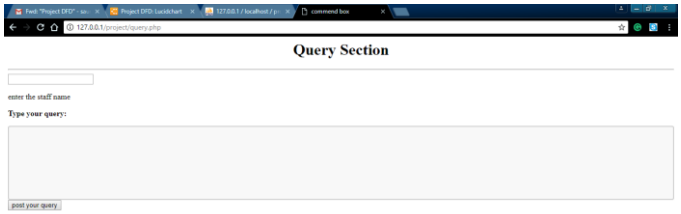

Fig. 7. Query section

Query section allows the student to communicate with the respective staff. The section allows to send the query to the staff whoever he wants to be communicate. For the queries the respective staff will give the reply in this page

IX. CONCLUSION

This paper assists in automating the existing manual system. This is a paperless work. It can be monitored and controlled remotely. It reduces the man power required. It provides accurate information always. Malpractice can be reduced. All years together gathered information can be saved and can be accessed at any time. The data which is stored in the repository helps in taking intelligent decisions by the management. So it is better to have a Web Based Information Management system. All the stakeholders, faculty and management

can get the required information without delay. This system is essential in the colleges/hostels and universities.

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