

International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Visit: www.ijirset.com

Vol. 8, Issue 3, March 2019

Web Based Student Information Management System

Ms.Mynavathi.R⁽¹⁾, Thangamani.T⁽²⁾, Nishanthini.K.S⁽³⁾, V.Parthipan⁽⁴⁾.

Associate Professor (IT), Dept. of Information Technology, Velalar College of Engineering and Technology,
Tamil Nadu, India⁽¹⁾,

Final Year (B.Tech IT), Dept. of Information Technology, Velalar College of Engineering and Technology,
Tamil Nadu, India^(2,3,4),

ABSTRACT: Student Information Management System (SIMS) provides a simple interface for maintenance of student information. It can be used by educational institutes or colleges to maintain the records of students easily. The creation and management of accurate, up-to-date information regarding a students' academic career is critically important in the university as well as colleges. Student information system deals with all kind of student details, academic related reports, college details, course details, curriculum, batch details, placement details and other resource related details too. It tracks all the details of a student from the day one to the end of the course which can be used for all reporting purpose, tracking of attendance, exam details, project or any other assignment details, final exam result and all these will be available through a secure, online interface embedded in the college's website. It will also have faculty details, batch execution details, students' details in all aspects, the various academic notifications to the staff and students updated by the college administration. It also facilitate us explore all the activities happening in the college, Different reports and Queries can be generated based on vast options related to students, batch, course, faculty, exams, semesters, certification and even for the entire college.

KEYWORDS: Student Information System, Database, HTML, Nodejs

I. INTRODUCTION

The design and implementation of a comprehensive student information system and user interface is to replace the current paper records [1]. College Staff are able to directly access all aspects of a student's academic progress through a secure, online interface embedded in the college's website. The system utilizes user authentication, displaying only information necessary for an individual's duties. Additionally, each sub-system has authentication allowing authorized users to create or update information in that subsystem. All data is thoroughly reviewed and validated on the server before actual record alteration occurs. In addition to a staff user interface, the system plans for student user interface, allowing users to access information and submit requests online thus reducing processing time. All data is stored securely on SQL servers managed by the college administrator and ensures highest possible level of security. The system features a complex logging system to track all users access and ensure conformity to data access guidelines and is expected to increase the efficiency of the college's record management thereby decreasing the work hours needed to access and deliver student records to users. Previously, the college relied heavily on paper records for this initiative. While paper records are a traditional way of managing student data there are several drawbacks to this method. First, to convey information to the students it should be displayed on the notice board and the student has to visit the notice board to check that information. It takes a very long time to convey the information to the student. Paper records are difficult to manage and track. The physical exertion required to retrieve, alter, and re-file the paper records are all non-value added activities. This system provides a simple interface for the maintenance of student information. It can be used by educational institutes or colleges to maintain the records of students easily. Achieving this objective is difficult

International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Visit: www.ijirset.com

Vol. 8, Issue 3, March 2019

using a manual system as the information is scattered, can be redundant and collecting relevant information may be very time consuming. All these problems are solved using online student information management system. The paper focuses on presenting information in an easy and intelligible manner which provides facilities like online registration and profile creation of student's thus reducing paper work and automating the record generation process in an educational institution.

PURPOSE:

The purpose is to design a college website which contains up to date information of the college. That should improve efficiency of college record management.

OBJECTIVES:

- ✚ Providing the online interface for students, faculty etc.
- ✚ Increasing the efficiency of college record management.
- ✚ Decrease time required to access and deliver student records.
- ✚ To make the system more secure.
- ✚ Decrease time spent on non-value added tasks.

ORGANIZATION OF THE PAPER:

The paper is organized as follows: Section II explains system design. Section III provides technologies used. Section IV covers the details of the testing results and Section V the conclusion.

II. SYSTEM DESIGN

This deals with data flow diagram, detailed flow graph, requirement analysis, and the design process of the front and back end design of the student information management system.

A. DATA FLOW DIAGRAM:

A Data Flow Diagram (DFD) is a graphical representation of the "flow" of Student Information System. A data flow diagram can also be used for the visualization of Data Processing [2]. DFD shows the interaction between the system and outside entities. This context-level DFD is then "exploded" to show more detail of the system being modelled. A DFD represents flow of data through a system. Data flow diagrams are commonly used during problem analysis. It views a system as function that transforms the given input into required output. Movement of data through the different transformations or processes in the system are shown in Data Flow Diagram of Fig. 1.

International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Visit: www.ijirset.com

Vol. 8, Issue 3, March 2019

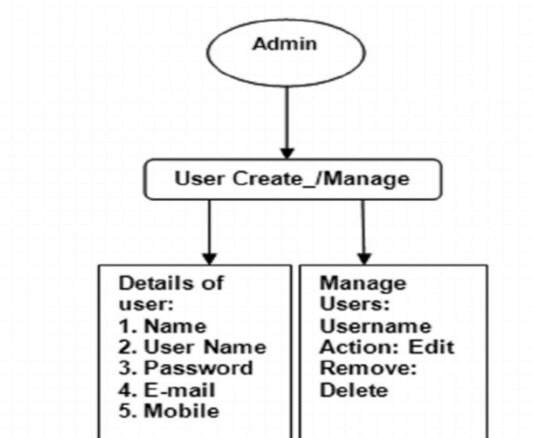
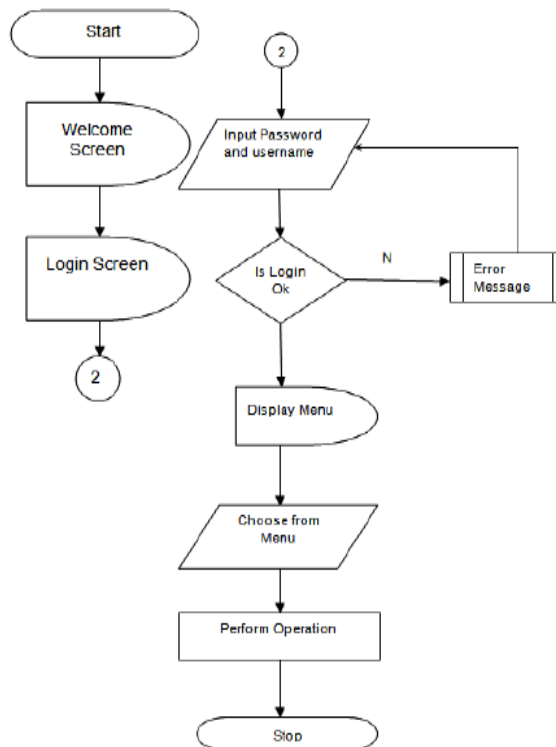


FIGURE 1.DATA FLOW DIAGRAM

This paper mainly focuses on the managing the information of the students, faculty, placement cell information, exam section, related information of the college which is maintained by the college administration through various levels of controlling. The function of the individual entities will be explained in detail in the flow graph.

B.DETAILED FLOW GRAPH:



International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Visit: www.ijirset.com

Vol. 8, Issue 3, March 2019

ADMINISTRATOR:

The administrator is responsible for entering the new student, promoting the student from one class to another, from one semester to another and from one year to another. Managing the student accounts like any changes regarding to the name, address etc. The administrator also manages the faculty accounts like entering a new faculty, assigning the faculty to the subjects. The administrator also updates the college related information like calendar of events, information regarding any other events that occur in the college. The administrator will check the all the updates i.e. student updates, faculty updates, exam updates etc. The administrator has the highest level of power in the student information system.

C. REQUIREMENT ANALYSIS:

The basic requirements for the design of the SIMS are:

- ✚ Every user should have their own identity
- ✚ Login facility.
- ✚ User can update his/her personal information and can view the notice, results ,placement and exam section updates etc.
- ✚ Faculty, placement and exam sections can update any of the information.

D.FUNCTIONALREQUIREMENTS:

Student information management system aims to improve the efficiency of college information management, and the main function is managing and maintaining information [3]. The administrator and students are two major functional requirements in the system. The Administrator will be given more powers (enable/disable/ update) than other users. It will be ensured that the information entered is of the correct format.For example name cannot contain numbers. In case if incorrect form of information is added, the user will be asked to fill the information again. Students use the system to query and enter their information only.

E.NON-FUNCTIONAL REQUIREMENTS:

- ✚ **Performance Requirements:** The proposed system that we are going to develop will be used as the chief performance system for helping the organization in managing the whole database of the student studying in the organization. Therefore, it is expected that the database would perform functionally all the requirements that are specified.
- ✚ **Safety Requirements:** The database may get crashed at any certain time due to virus or operating system failure. Therefore, it is required to take the database backup [4].
- ✚ **Security Requirements:** We are going to develop a secured database. There are various categories of people namely Administrator, Student who will be viewing either all or some specific information from the database. Depending upon the category of user the access rights are decided. It means if the user is an administrator then he can be able to modify the data, append etc. All other users only have the rights to retrieve the information about database.

F.DATABASEDESIGNPROCESS:

It is fair to say that database play a critical role in almost all areas where computers are used, including business, electronic commerce, engineering, medicine, law, education, and library science. A database is collection of a related data. A database has the following implicit properties:

- ✚ A database represents some aspect of the real world, sometimes called the mini-world or the Universe OfDiscourse (UOD) changes to the mini world are reflected in the database.
- ✚ A database is a logically coherent collection of data with some inherent meaning. A random assortment of data cannot correctly be referred to as a database.
- ✚ A database is designed, built, and populated with data for a specific purpose. It is an intended group of users and some preconceived application which these users are interested.

Database Management System(DBMS) is a collection of programs that enables users to create and maintain a database. DBMS is a general –purpose software system that facilitates the process of defining, constructing,

International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Visit: www.ijirset.com






Vol. 8, Issue 3, March 2019

manipulating, and sharing database among various users and applications. Defining a database involves the specifying the data types, structures, and constraints of the data to be stored in the database. The database definition or descriptive information is also stored in the database in the form of dictionary; it is called Meta data constructing the database is the process of storing the data on the storage medium that is controlled by the DBMS.

Manipulating a database includes functions such as querying the database to retrieve specific data, updating the database to reflect in the mini-world, and generating reports from the data. Sharing a database allows a multiple users and programs to access the database simultaneously.

Application program accesses the database by sending queries or request for data to the DBMS. A query typically causes some data to be retrieved; a transaction may cause some data to be read and some data to be written into the database.

III. TECHNOLOGIES USED

-  HTML
-  CSS with BOOTSTRAP
-  JAVA SCRIPT
-  SQL
-  PHP

IV. RESULTS

LOGIN FORM:

The system starts with login page where the registered user can enter user name and password to be able to access the system.



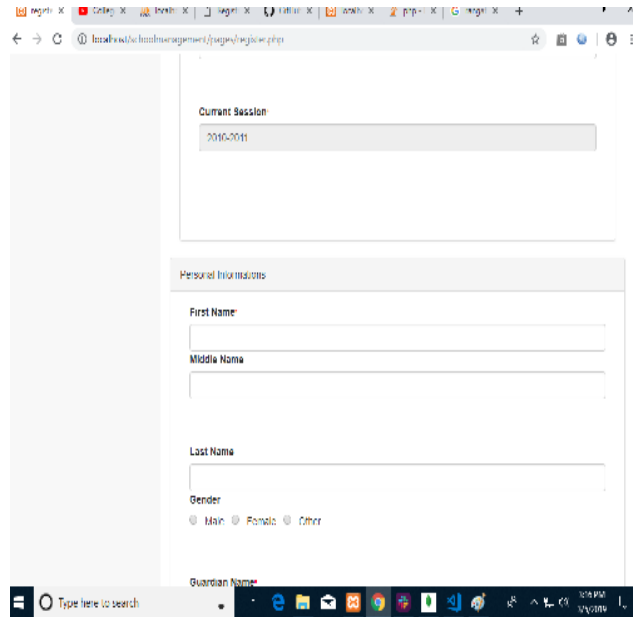
The image shows a 'Sign In' form with a blue header. It contains two input fields: the first is for the username, with 'admin' entered; the second is for the password, with six dots representing masked characters. Below the input fields is a green button labeled 'login'.

International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Visit: www.ijirset.com

Vol. 8, Issue 3, March 2019



Current Session
2018-2019

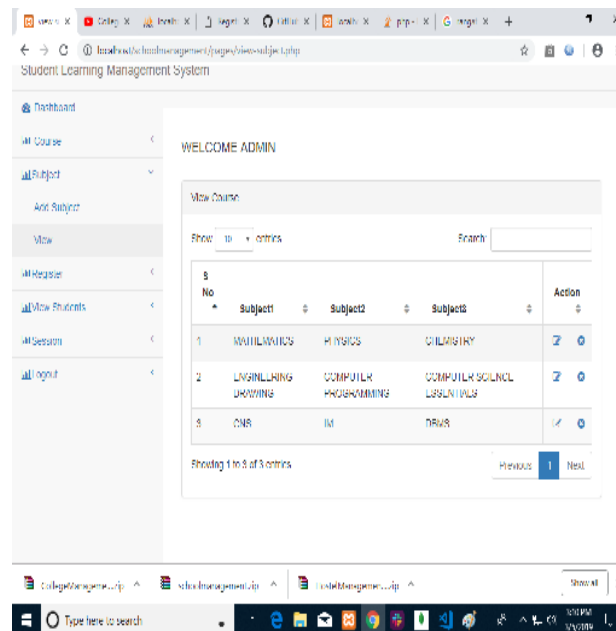
Personal Information

First Name
Middle Name
Last Name

Gender
 Male Female Other

Guardian Name

Registration form



Student Learning Management System

WELCOME ADMIN

View Course

Show: 10 entries Search:

S No	Subject1	Subject2	Subject3	Action
1	MATHS	PHYSICS	CHEMISTRY	Edit Delete
2	ENGLISH	COMPUTER PROGRAMMING	COMPUTER SCIENCE	Edit Delete
3	CBSE	IT	DRUGS	Edit Delete

Showing 1 to 3 of 3 entries

Previous 1 Next

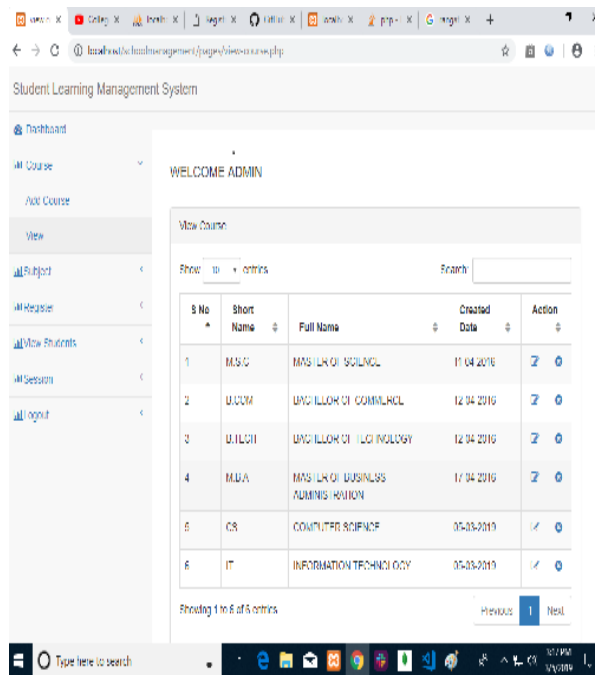
View Subject

International Journal of Innovative Research in Science, Engineering and Technology

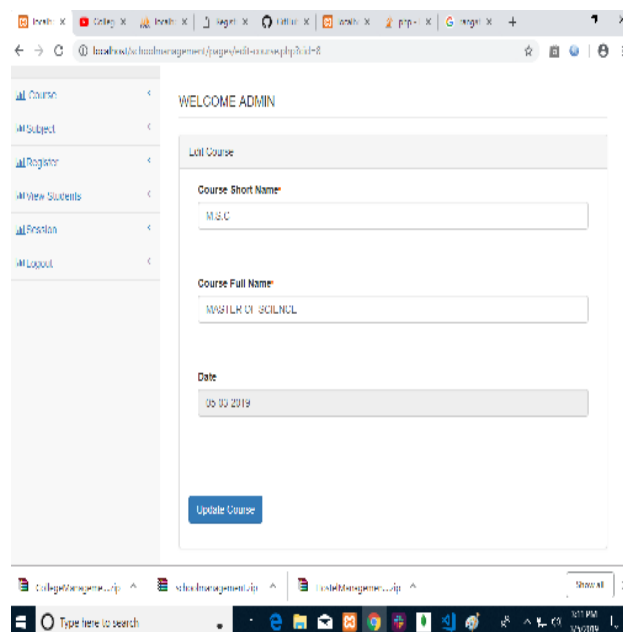
(A High Impact Factor, Monthly, Peer Reviewed Journal)

Visit: www.ijirset.com

Vol. 8, Issue 3, March 2019



View Course



Update Course

International Journal of Innovative Research in Science, Engineering and Technology

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Visit: www.ijirset.com

Vol. 8, Issue 3, March 2019

V.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.

REFERENCES

1. Zhibing Liu, Huixia Wang, Hui Zan "Design and implementation of student information management system." 2010 International symposium on intelligence Zhi-gang YUE, You-wei JIN, "The development and design of the student management system based on the network environment", 2010 International Conference on Multimedia Communications. information processing and trusted computing.
2. M.A. Norasiah and A. Norhayati. "Intelligent student information system". 4th International conference on telecommunication technology proceedings, Shah Alam, Malaysia.