

Implementation of Web based Institute Information System with State of the Art Features

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Abstract :

The purpose of Institute Information System is to revamp the existing manual Information system involved in storage and manipulation of valuable information in institutes through automation provided by fully fledged computer software and with the help of computerized equipment. This is intended to make information storage and manipulation better, so that the valuable data can be stored for a longer period with easy accessing and manipulation of the same.

1. Introduction

The Institute Information System which is the proposed system here is a variant of conventional web based Information handling software involved in managing the information such as student attendance, student and faculty details, student marks, notices and in institutes. We tried to add some state of art features such as parent module, voice recognition and online assignment. The goal is to establish the fact that the introduction of these features will enhance the accessibility, efficiency and usability of the system.

2. Key Technology

2.1 HTML

HTML is abbreviation for Hyper Text Markup Language a very popular web technology involved in front end development of the websites. It is often used with CSS in order to design the basic layout of webpages. HTML is widely popular because of its compatibility and easy to use syntax. HTML is a standard markup language whose main purpose is to display the documents in web browser.

2.2 CSS

Cascading Style Sheets (CSS) is a popular style sheet language and it is generally used for describing the format of a document written in a some mark-up language like HTML. CSS is also referred as a cornerstone technology of the World Wide Web, alongside HTML and JavaScript. CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share

formatting by specifying the relevant CSS in a separate .css file, and reduce complexity and repetition in the structural content.

2.3 PHP

PHP is a popular general-purpose scripting language that is especially suited to web development. It was 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 initialism PHP: Hypertext Preprocessor. PHP code is usually processed on a web server by a PHP interpreter implemented as a module, a daemon or as a Common Gateway Interface (CGI) executable.

2.4 MySQL

MySQL is an open-source relational database management system. Its name is a combination of "My", the name of co-founders Michael Widenius's daughter, and "SQL", the abbreviation for Structured Query Language.

3. System Requirements

The Institute Information system introduced by this paper can run in the following environment.

Operating System: Windows 2000/XP/Vista or newer

Server: Xampp Server.

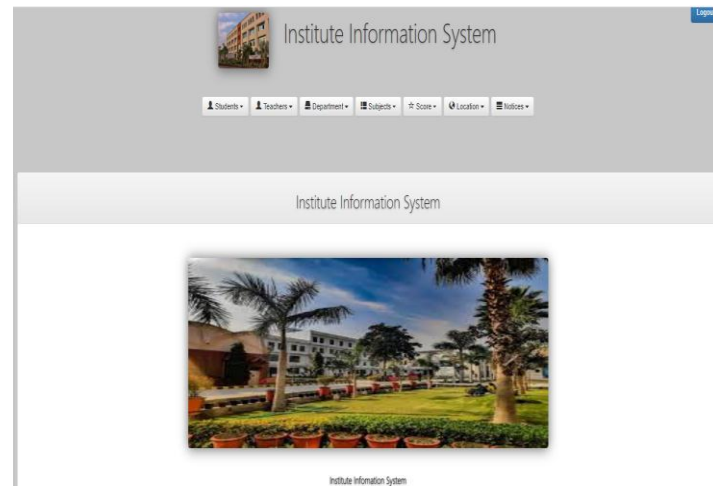
Browser: Any mainstream browser

4. System Design

4.1. System function analysis

The system consists of 4 modules admin, student, parent, teacher

Homepage



4.1.1 Login Page:

The login Page is useful for user authentication and this is done with the help of an interface and connected database.



ADMIN LOGIN

Username

Password

Role management

4.1.2 Actions Performed

Admin Module:

Students Details: add, view, update

Teachers Details: add, view, update

Faculties Details: add, view, update

Subjects Details: add, view, update

Score Details: add, view, update

Article Posting Module: add, view, update

Student Module:

Student Section: View Student Details

Marks Section: View Marks Details

Notice Section: View Notices

Teacher Module:

Student Section: Add, Update, View Student Details

Marks Section: Add, Update, View Marks Details

Notice Section: View Notices

Parent Module:

Student Section: View Student Details

Marks Section: View Marks Details

Notice Section: View Notices

Effects of Introducing Some State of the art features

Voice Recognition:

Speed Ups Data Entry:

- Time taken to fill 10 student records with voice recognition: 300 seconds.
- Time taken to fill 10 student records without voice recognition: 500 seconds.

Accuracy of voice recognition:

Sentences spoken: 500

Sentences recognized accurately: 420

Accuracy in percentage(Observed) 84%

Additional Benefits of Voice Recognition

Helps Differently Abled People to interact with the system.

Makes it easier and faster to access the system for the users.

Has High Accuracy (84%)

It enhances the efficiency, accessibility, of the system.

Messaging Between Parents and Teachers

This feature enables the teachers communicate directly with the parents. This will help in improving the performance of the students. This gives the faculty and parent a platform to communicate and know the details of the concerned student.

It has been observed that the communication gap between the parents and teacher often is the cause of poor performance of students. This module can help in solving this problem.

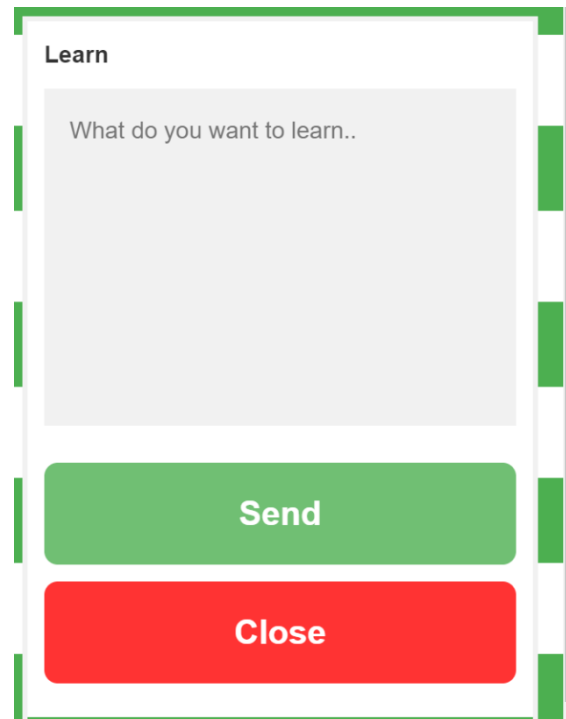
Online Assignment Module

The online assignment module will help the institutes in situation where physical submissions of assignment are not possible in that case

As we have observed that in situations such as pandemics and other inevitable situations physical submission of assignment becomes really difficult.

In these situations marking can be done on the basis of online assignments provided the students have adequate reach to internet.

This can serve as an alternative of internal assessments(Sessionals).



Digital Learning Module

This is a module of the proposed system that will make students learn digitally. This again is a very important aspect of learning nowadays specially in higher level education.

4.1.3 Database Design

List of tables :

* Users Table

| No. | User_name | password |
|-----|-----------|----------|
| 1 | admin | admin |
| 2 | test | test |
| 3 | admin2 | tiger |
| 4 | admin3 | admin3 |
| 5 | admin4 | user |

* Student Table

| No. | Student Name | Gender | Date of Birth | Place of Birth | Address | Phone | E-mail | Note |
|-----|---------------|--------|---------------|----------------|------------|---------------|-----------------------|---------|
| 1 | Mom Vannak | Male | 1991-03-01 | Takeo Province | Phnom Penh | 088 9 666 120 | vannakmum@gmail.com | Student |
| 2 | Chon Phearak | Male | 1990-05-04 | Takeo Province | Phnom Penh | 015 66 77 33 | phearakchon@yahoo.com | Student |
| 3 | Soa Mury | Male | 1988-05-05 | Takeo Province | Phnom Penh | 097 89 90 123 | murysoa@gmail.com | Student |
| 4 | Sok Cheatha | Female | 1988-06-06 | Kompot | Phnom Penh | 099 77 66 55 | cheathasok@gmail.com | Student |
| 5 | Gajen pradhan | Male | 1996-11-10 | Raigadh | Bhilai | 7000830947 | gajen@gmail.com | best |

* Student Marks Table

| No | Students ID | Faculties ID | Subject ID | Mid term | Final | Note |
|----|-------------|--------------|------------|----------|-------|-----------|
| 1 | 1 | 2 | 1 | 39 | 39 | good |
| 2 | 1 | 2 | 2 | 40 | 40 | top score |
| 3 | 1 | 2 | 3 | 30 | 34 | good |
| 4 | 1 | 2 | 4 | 40 | 39 | top |
| 5 | 1 | 2 | 5 | 57 | 40 | good |
| 6 | 1 | 2 | 6 | 54 | 39 | good |

* Teachers Table

| No. | Teacher Name | Gender | Date of Birth | Place of Birth | Address | Degree | Salary | Married | Phone | E-mail | Note |
|-----|-----------------|--------|---------------|-----------------------|------------|----------|--------|---------|---------------|--------------------------|-------------------|
| 1 | Hary Sovann | Male | 1985-01-05 | Kandal Province | Phnom Penh | Master | 1500 | No | 015 871 787 | sovannhary@gmail.com | Teacher and Staff |
| 2 | Pheng Tola | Male | 1986-03-08 | Kompong Cham Province | Phnom Penh | Bachelor | 1500 | Yes | 016 572 393 | tolapheng@gmail.com | Teacher and Staff |
| 3 | Sann Vannthouea | Male | 1990-07-03 | Kandal Province | kankal | Bachelor | 1000 | Yes | 087 666 55 | vannthoueamann@gmail.com | English |
| 4 | Tang Hay | Male | 0000-00-00 | Krooches | Phnom Penh | Bachelor | 1000 | Yes | 099 77 86 33 | haytang@gmail.com | network |
| 5 | Chi Kim Y | Male | 0000-00-00 | Phnom Penh | Phnom Penh | Bachelor | 1500 | Yes | 097 66 55 423 | kimychi@gmail.com | VB |
| 6 | Sann Sotherath | Male | 1985-02-01 | Kandal Province | Phnom Penh | Bachelor | 1300 | Yes | 012 33 44 55 | sotherathsann@gmail.com | Database |

* Subjects Table

| No | Faculties Name | Teachers Name | Semester | Subject Name | Note |
|----|----------------|---------------|----------|-----------------------|--------------------|
| 1 | 2 | 1 | 1 | Web Programming | HTML and CSS |
| 2 | 2 | 2 | 1 | OOP and C++ | Part of C Language |
| 3 | 2 | 3 | 2 | English for Computing | part 2 |
| 4 | 2 | 4 | 2 | Network | part2 |
| 5 | 2 | 5 | 2 | VB .Net | part 2 |

* Department Table

| No | Faculties Name | Note |
|----|------------------------|-----------------|
| 1 | Science and Technology | Part of science |
| 2 | networking | |

* Notice Table

| No | Location ID | Title | Content | Status |
|----|-------------|------------|---|--------|
| 1 | 1 | passout | This is for the information of pass out students of B.T-CHMICA (old batch) that their degrees which were pending with Gaujam Sudth Technical University (formerly U.P.Technical University) (Luchknow, have been received by the college. The list of degrees received is attached with this notice. Students concerned are advised to contact registrar office with their proof of identity and collect the degrees. | Public |
| 2 | 2 | urgent işp | placement training in ramran sabhagar | Public |

5. Conclusion

The conclusion we draw is that the introduction of these state of art features like voice recognition, online assignment and digital learning platform along with all the features of a conventional online institution information system (Such as online attendance, online record keeping etc.) system are going to enhance the accessibility, efficiency and also make the system capable for facing the real world problems like pandemics, etc.

6. References

- 1) PHP: <https://en.wikipedia.org/wiki/PHP> (Wikipedia).
- 2) HTML: <https://en.wikipedia.org/wiki/HTML> (Wikipedia).
- 3) CSS: https://en.wikipedia.org/wiki/Cascading_Style_Sheets (Wikipedia).
- 4) MySQL: <https://en.wikipedia.org/wiki/MySQL> (Wikipedia).
- 5) Design and Implementation of College Student Information Management System Based on Web Services (Tang 2009).