PARENT FACULTY INTERACTION

ABSTRACT

Parent Faculty Interaction is a web-based application makes it easy for parents and faculty to communicate effectively. It offers features like Daily attendance, progress updates, event alerts, and secure user authentication. The goal is to strengthen the connection between parents and teachers, creating a supportive environment for the student's education. The system features a user-friendly interface. A secure portal facilitates confidential one-on-one communication between parents and faculty, encouraging discussions about individual student needs.

INTRODUCTION

Objective

The primary objectives of the Parent-Faculty Interaction are designed to establish and nurture a strong partnership between parents and faculty, fostering an environment conducive to the holistic development of students. The project aims to enhance communication channels, ensuring timely and transparent exchanges of information between parents and teachers. By promoting active parental involvement in college activities, parent-teacher conferences, and volunteer opportunities, the project seeks to create a sense of shared responsibility for each student's educational journey. Parent-Faculty Interaction project aspires to create a supportive educational ecosystem where the collective efforts of parents and faculty contribute to the overall success and well-being of every student.

SYSTEM ANALYSIS

Existing System

The current system for parents and faculty interaction involves traditional methods like occasional parent-teacher meetings or written communication. Parents usually get updates on their child's progress through report cards or occasional notes. However, this system may not be as immediate or convenient. There's often a lack of real-time communication, making it harder for parents to stay actively involved in their child's education. An improved system is needed to make communication more accessible, timely, and interactive for better collaboration between parents and teachers.

Disadvantages of existing system

Communication Gaps: Inefficient communication channels may lead to gaps in information exchange.

Lack of Transparency: An existing system may lack transparency in terms of grading criteria, assessment methods, and overall academic expectations.

Inadequate Technology Integration: If the system does not leverage modern technology, such as online platforms, mobile apps, or web portals, it may result in inefficiencies.

Proposed System

The proposed system involves a user-friendly online platform accessible through computers and phones. Parents receive instant notifications about college announcements, events, and their child's achievements. There's a secure space for private discussions between parents and teachers, making it easy to address individual concerns. parent-teacher conferences, and real-time messaging web apps serve as crucial channels for personalized discussions about student progress, strengths, and areas for improvement.

Advantages of the Proposed System

Increased Accessibility: The new system may offer more accessible channels for communication, including digital platforms, mobile apps, or online portals.

Real-time Updates: A modern system might provide real-time updates on a student's performance, attendance, and other relevant information.

Requirement Gathering

Functional Requirement

It supports incorporate a robust user authentication system, enabling parents and teachers to securely create accounts and log in. The platform should enable teachers to input and update student grades, while parents gain access to their child's academic progress. It must prioritize security and privacy, implementing secure data transmission and storage practices.

Non-Functional Requirement

Scalability: The system should be able to handle an increasing number of users without a drop in performance.

Reliability: The platform should consistently work without unexpected downtime or glitches.

Usability: The interface should be easy to navigate and understand for both parents and faculty members.

Security: Measures should be in place to protect user data and ensure secure communication.

Compatibility: The system should work well across various devices and web browsers.

Response Time: The platform should provide quick responses to user actions, ensuring a smooth experience.

Accessibility: The system should be designed to be usable by individuals with different abilities and needs.

Compliance: The platform should adhere to relevant regulations and standards for data protection and user privacy.

SYSTEM SPECIFICATION

Hardware Specification

Processor : Intel(R) Core (TM) i3

RAM : 4 GB

System type : 64-bit operating system, x64-based processor

Software Specification

Operating System : Windows 10

Front End : PHP

Web Server : XAMPP()

Development tool : Visual Studio Code()

Back End : MySQL

Designing : HTML, CSS

Validation : JavaScript

SOFTWARE DESCRIPTION

Programming Language

HTML

Hypertext Markup Language (HTML) is the standard mark-up language for creating web pages and web applications. Web browsers receive HTML documents from a webserver or from local storage and render them into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document. Web browsers receive HTML documents from a webserver or from local storage and render them into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

CSS

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a mark-up 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 web pages, 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.

DEVELOPMENT TOOLS AND TECHNOLOGIES

FRONT END-PHP

PHP is a language that has outgrown its name. It was originally conceived as a set of macros to help coders maintain personal home pages, and its name grew from its purpose. Since then, PHP's capabilities have been extended, taking it beyond a set of utilities to a full-featured programming language, capable of managing huge database-driven online environments.

As PHP's capabilities have grown, so too has its popularity. According to Net Craft (http://www.netcraft.com), PHP was running on more than 1 million hosts in November 1999. As of February 2000, that figure had already risen to 1.4 million hosts. According to E-Soft, PHP is the most popular Apache module available, beating even ModPerl.

PHP is now officially known as PHP: Hyper Text Preprocessor. It is a server-side scripting language usually written in an HTML context. Unlike an ordinary HTML page, a PHP script is not sent directly to a client by the server; instead, it is parsed by the PHP binary or module. HTML elements in the script are left alone, but PHP code is interpreted and executed. PHP code in a script can query databases, create images, read and write files, talks to remote servers - the possibilities are endless.

The output from PHP code is combined with the HTML in the script and the result sent to the user.The first version of PHP was created by Rasmus Lerdorf in 1994 as a set of Web publishing macros. These were released as the Personal Home Page Tools and later rewritten and extended to include a package called the Form Interpreter (PHP/FI). From a user's perspective, PHP/FI was already an attractive proposition, and its popularity grew steadily.

It also began to attract interest from the developer community. By 1997, a team of programmers was working on the project. The next release— PHP3— was born out of this collaborative effort. PHP3 was an effective rewrite of PHP, with an entirely new parser created by Zeev Suraski and Andi Gutmans, as well as differences in syntax and new features. This release established PHP as one of the most exciting server scripting languages available, and the growth in usage was enormous.

PHP's support for Apache and MySQL further secured its popularity. Apache is now the most-used Web server in the world, and PHP3 can be compiled as an Apache module. MySQL is a powerful free SQL database, and PHP provides a comprehensive set of functions for working with it.

BACK END-MySQL

Databases are a great way to store information they can store your personal contact list, your financial records, your household inventory, or even a listing of your favorite websites. Databases are able to store large amounts of useful information in a logical structure that allows for quick retrieval in any user defined format. Community libraries are renowned for their use of large database systems to store the mass amounts of usable information that they collect and share.

Databases also play a major role in today's web applications by storing complete inventories of products and services and making these accessible through a programmed web front-end. A database has the ability to provide dynamic content to a web shop by providing the content to web pages. Many Linux distributions implement PHP, MySQL, and Apache as a perfect combination for full featured dynamic.

Apache Web Server

Apache is the most widely used HTTP-server in the world today. It surpasses all free and commercial competitors on the market and provides a myriad of features; more than the nearest competitor could give you on a UNIX variant. It is also the most used web server for a Linux system. A web server like Apache, in its simplest function, is software that displays and serves HTML pages hosted on a server to a client browser that understands the HTML code. Mixed with third party modules and programs, it can become powerful software, which will provide strong and useful services to a client browser.

PROJECT DESCRIPTION

Problem Definition

In simple terms, the problem definition in parent-faculty interaction refers to clearly understanding and describing the issues or challenges that arise when parents and teachers communicate or work together. It involves identifying specific areas of concern, such as lack of communication, misunderstandings, or any obstacles that may hinder a positive and effective partnership between parents and faculty members in supporting a child's education and well-being.

Overview of the Project

The Parent-Faculty Interaction web application project aims to create an online platform that facilitates smooth communication and collaboration between parents and teachers. Parents can easily stay informed about their child's progress, upcoming events, and important announcements from the college. Faculty can share updates, grades, and individualized feedback with parents. The project focuses on user-friendly interfaces, real-time notifications, and secure data handling to ensure an effective and positive interaction between parents and faculty members. Regular feedback and testing will guide the continuous improvement of the application to meet the specific needs of both parents and faculty.

MODULE DESCRIPTION

Administrator (Faculty): Administrator are the one who can create, edit and delete any information about the student. Administrator has full privilege of the website.

Parents: Parents can view their students' grades, Daily Attendance, Announcement and they can also interact with faculty.

Announcement: This module has occurring of programmed events, PT meeting schedule, Test marks, Daily Attendance, Important Notice, Certificates.
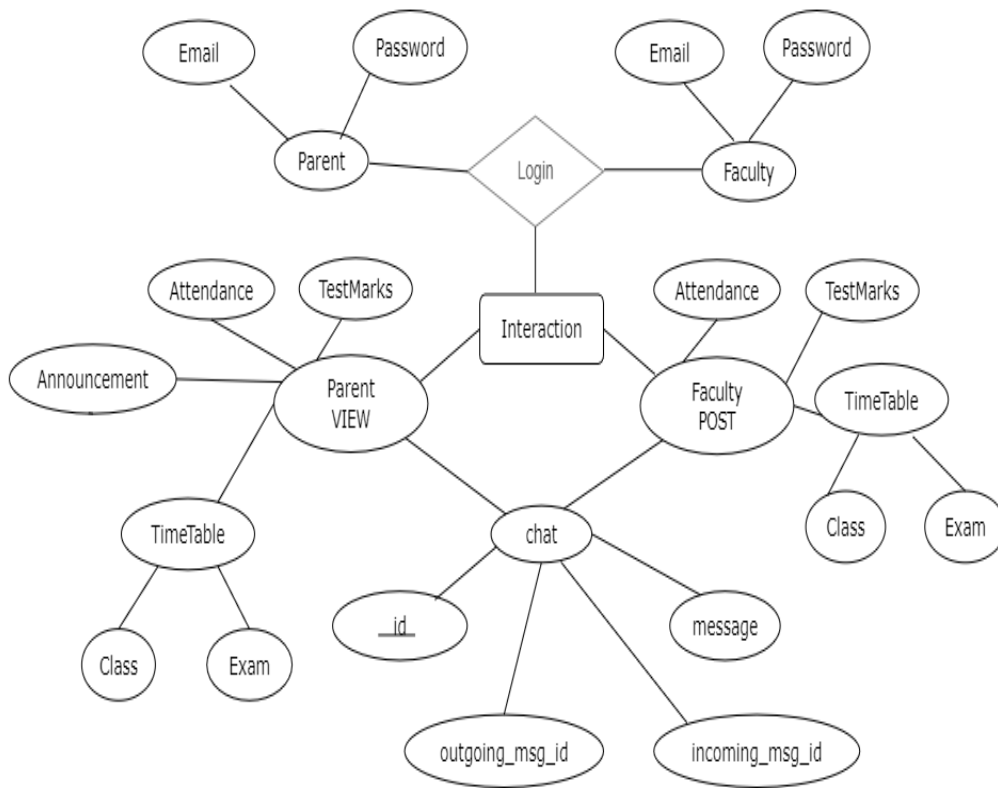
Communication: This module helps to interact with Parents like messaging.
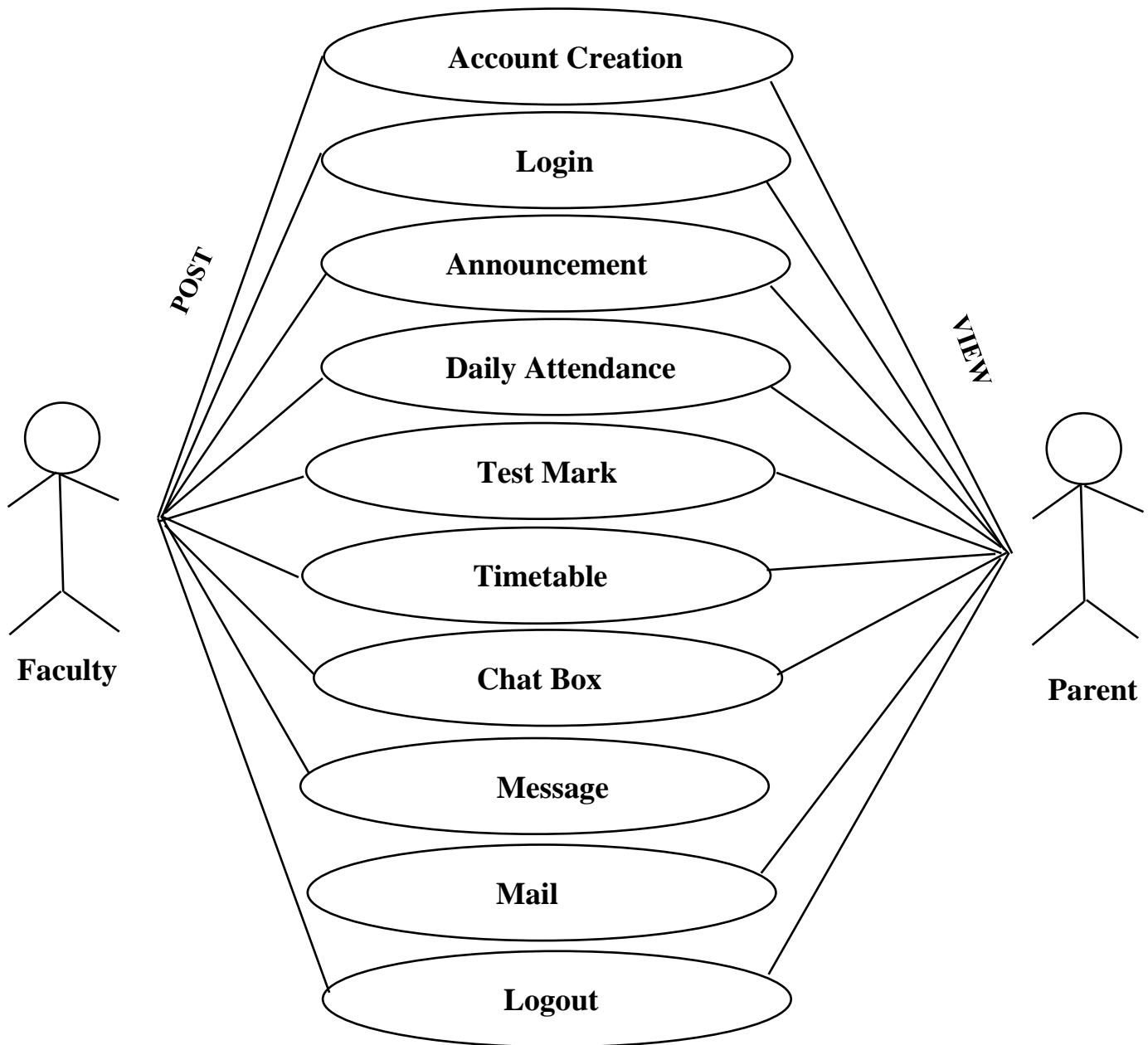
System Design

System Flow Diagram
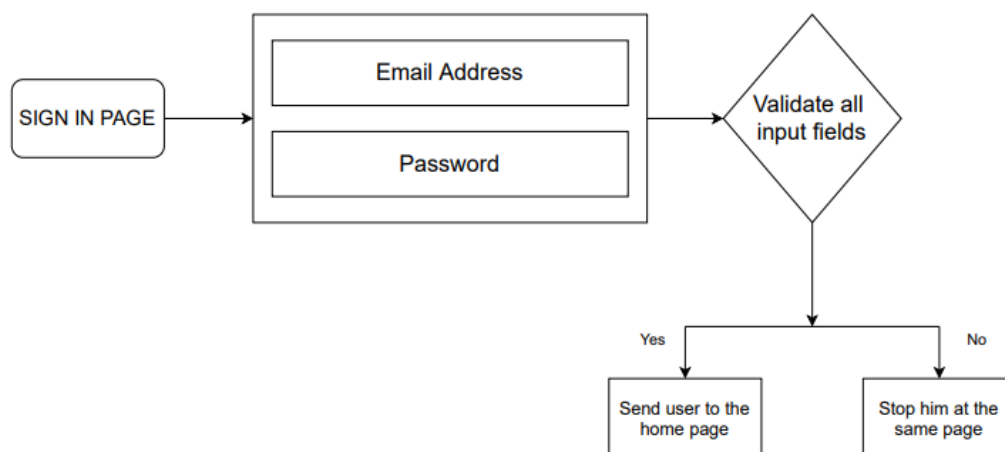
ENTITY RELATIONSHIP DIAGRAM

USE CASE DIAGRAM

DATABASE DESIGN

The data pertaining to proposed system is voluminous that a careful design of the database must Precede design of the database must proceed before storing the data in the database. A database management system provides flexibility in the storage and retrieval of data held production of information. The DBMS is a bridge between the application programs. This determines what data are needed and how they are processed and the operating system of the computer, which is responsible for placing data on the magnetic storage devices. A schema defines the database and a sub scheme defines the portion of the database that a specific program will use

Table Name : Signup

Primary key : id

Field	Type	Size	Constraints
id	int	10	Primary key
Unique id	int	20	Not null
full name	varchar	20	Not null
email	varchar	50	Not null
password	varchar	15	Not null
role	varchar	10	Not null
otp	int	7	Not null
status	varchar	10	Not null

Table Name : notice

Primary key : id

Field	Type	Size	Constraints
nid	int	10	Primary key
Unique id	int	20	Not null
title	varchar	20	Not null
message	varchar	100	Not null
date	varchar	30	Not null
pdfFile	varchar	30	Not null
pageName	varchar	20	Not null
forPage	varchar	15	Not null

Table Name : email_send

Primary key : id

Field	Type	Size	Constraints
id	int	10	Primary key
Unique id	int	20	Not null
title	varchar	20	Not null
message	varchar	50	Not null
users	varchar	15	Not null

Table Name   : chat

Primary key   : id

Field	Type	Size	Constraints
id	int	10	Primary key
outgoing_msg_id	int	50	Not null
i**ncoming_msg_id**	varchar	50	Not null
message	varchar	50	Not null

CONCLUSION & FUTURE ENHANCEMENTS

Conclusion

Thus, the project entitled "Parent Faculty Interaction" was successfully completed and implemented. When parents and teachers communicate well, it's like having a support squad for the college journey. Parents get to know how things are going, and teachers can share insights about classes and progress. This teamwork helps students tackle challenges and make the most out of their college experience. It's not just about grades – it's about creating a network that cares about success.

Future Enhancement

The Future enhancements there's a promising scope for advancing parent-faculty interaction through the use of modern technology. Platforms like video calls, zoom meetings, and other virtual communication tools can play a pivotal role in bridging the gap between parents and faculty. These technologies allow for real-time discussions about a child's progress, enabling parents to actively participate in their education from the convenience of their homes. Future development could focus on user-friendly interfaces and accessible technology, ensuring that even those less familiar with digital tools can easily engage.

APPENDICES

Source Code

Sign in module

```php
<?php
  session_start();
  if(isset($_SESSION['email'])) {
    header('location: ./main.php?page=announcements');
  }
?>
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <link rel="icon" type="image/png" href="images/favicon.png" sizes="80x80">
        <link    rel="stylesheet"    href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/5.15.3/css/all.min.css"/>
  <link rel="stylesheet" href="./common/forms.css">
  <title>LOGIN</title>
</head>
<body>
  <section>
    <div class="container">
      <div class="user signInBox">
        <div class="imgBx">
          <img src="./images/login-min.jpg" id="image" alt="">
        </div>
```

```html
        <div class="formBx">
            <form action="#" method="POST">
                <div id="loading"></div>
                <h2>LOGIN</h2>
                    <input required type="email" placeholder="Enter email address" name="email"
id="email">
                <div class="wrap-icons">
                  <input required type="password" placeholder="Enter password" name="password">
                  <small class="show-hide">@</small>
                </div>
                <input type="submit" value="Login" class="login">
                <p class="signup">Don't have an account ? <a href="./index.php">SIGN UP</a></p>
                                <p class="signup">Forgot password ? <a href="./forgot-
password.php">CLICK</a></p>
            </form>
          </div>
        </div>  </div>
    <div class="bg-balls"></div>
  </section>
  <script src="./javascript/eye-dropdown.js"></script>
  <script type="module" src="./javascript/signin.js"></script>
  <script>
    let compressImage = document.querySelector('#image');
    let qualityImage = document.createElement('img');
    qualityImage.src = './images/login.jpg';
    qualityImage.onload = function() {
      compressImage.src = this.src;
    }
  </script>
</body>
</html>
```

Main Module

```php
<?php
    session_start();
    include_once 'php/get-current-url.php';
    $pageValue = array('announcement','Daily Attendance', 'test_marks', 'notices', 'time_table',
'mails');
    $forPage = array('class', 'exam');
    if(!isset($_SESSION['email'])) {
        ?>
            <script>
                location.replace('./sign-in.php');
            </script>
        <?php }
    if(!in_array(getName(), $pageValue)) {
        header('location: ./main.php?page=announcement');
    }
    if(getName() == 'time_table' && !(in_array(getForPageName(), $forPage))) {
        header('location: ./main.php?page=time_table&forPage=class');
    }
?>
<!DOCTYPE html>
<html lang="en"><head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <link rel="icon" type="image/png" href="images/favicon.png" sizes="80x80">
            <link     rel="stylesheet"     href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/5.15.3/css/all.min.css" />
    <link rel="stylesheet" href="./common/style.css">
    <title>HOME</title>
```

```html
    </head>
    <body>
  <header class="header">
    <div class="header__container">
      <a href="./main.php?page=announcement" class="header__logo logo">Refresh</a>
      <h3 class="page__name text__color">
      <?php echo removeSpecialCharacters(); ?> Page</h3>
      <div class="header__search">
                              <input    type="search"    onfocus="clearPageRefreshInterval()"
onchange="setPageRefreshIntervalIfSearchBarIsEmpty(event)"              placeholder="Search"
class="header__input">
          <i class="fas fa-search header__icon"></i>
      </div>


      <div class="header__toggle">
        <i class="fas fa-bars nav__icon" id="header-toggle"></i>
      </div>
    </div>
  </header>
  <div class="nav" id="navbar">
    <nav class="nav__container">
      <div class="">
        <a href="./main.php?page=announcement" class="nav__link nav__logo">
          <i class="fas fa-university fa-2x text__color"></i>
          <span class="nav__logo-name text__color">  I-MCA</span>
        </a>
        <div class="nav__list">
          <div class="nav__items">
            <a href="./main.php?page=announcement" class="nav__link">
              <i class="fas fa-bullhorn nav__icon"></i>
              <span class="nav__name">Announcement</span>  </a>
            <a href="./main.php?page=Daily Attendance" class="nav__link">
            <i class="fas fa-calendar-check" style="color: white;"></i>
            <span class="nav__name">  Daily Attendance</span></a>
```

```html
<a href="./main.php?page=test_marks" class="nav__link">
          <i class="fas fa-file-alt nav__icon"></i>
          <span class="nav__name">Test Marks</span>
      </a>

      <a id="time-table" class="nav__link">
        <i class="fas fa-book nav__icon"></i>
          <span class="nav__name">Time Table <i class="fas fa-chevron-down sub-icon"
style="margin-left: 10px;"></i></span>
          <div class="sub-menu">
          <a href="./main.php?page=time_table&forPage=class" class="sub__menu__item"
style="margin-bottom: 15px;">
              <i class="far fa-address-book nav__icon"></i>
              <span class="nav__name">Class</span>
          </a>
        <a href="./main.php?page=time_table&forPage=exam" class="sub__menu__item">
            <i class="far fa-clipboard nav__icon"></i>
            <span class="nav__name"> Exam</span>
          </a>
          </div>
      </a>

        <a class="nav__link" href="./display-users.php" id="chat" target="_blank">
        <i class="fas fa-comments nav__icon"></i>
        <span class="nav__name">Chat</span>
      </a>

      <?php
      if(isset($_SESSION['role']) && $_SESSION['role'] == 'teacher') {
          ?>

            <a class="nav__link" id="messageLink">
              <i class="far fa-paper-plane nav__icon"></i>
```

```php
                <span class="nav__name">Message</span>
            </a>
        <?php
    }
?>
<?php
    if(isset($_SESSION['role']) && $_SESSION['role'] == 'parent') {
        ?>
            <a href="./main.php?page=mails" class="nav__link">
                <i class="fas fa-envelope-open-text nav__icon"></i>
                <span class="nav__name">Mails</span>
            </a>
        <?php
    }
?>
    <a href="./php/logout.php" class="nav__link">
        <i class="fas fa-sign-out-alt nav__icon"></i>
        <span class="nav__name">Logout</span>
    </a>
</div>
        </div>
    </div>
    </nav>
</div>
<main class="main__body">
    <div class="card__container">
        <!-- ADDING DYNAMIC NOTICES -->
    </div>
</main>
        <!-- POP-UP FORM -->
<div class="modal__form hidden">
    <div class="close__heading">
        <h3>Add your notice</h3>
        <i class="fas fa-times" id="closeButton"></i>
```

```
    </div>
    <form action="#" method="POST">
      <div class="form__control">
        <label for="title">Title</label>
        <input maxlength="50" required type="text" name="title" id="title" placeholder="Enter your title">
 <small          class="showCharacters"><span          id="currentCharacters">0</span>/<span id="remainingCharacters">50</span></small>
      </div>
      <div class="form__control">
        <label for="message">Message</label>
          <textarea required name="message" id="message" placeholder="Type your message..." name="message" id="" cols="10"
          rows="5"></textarea>
      </div>
      <?php
        if(removeSpecialCharacters() === 'Time Table') {
          ?>
            <div class="form__control">
              <label for="">Notice For</label>
              <select required name="notice_type" id="noticeType">
                <option value="class">Class</option>
                <option value="exam">Exam</option>
              </select>
            </div>
          <?php
        }else {
          ?>
```

```html
                    <div class="form__control">
                        <label for="">Notice type</label>
                        <select required name="notice_type" id="noticeType">
                            <option value="announcement">Accouncement</option>
                            <option value="Daily Attendance">Daily Attendance</option>
                            <option value="test_marks">Test marks</option>
                        </select>
                    </div>
                    <?php
                }
            ?>
            <div class="form__control">
                <label for="myFile">Attach your PDF file</label>
                <input type="file" name="my_file" id="myFile">
            </div>
            <button type="submit" class="post__button">POST</button>
        </form>
    </div>
    <div class="overlay hidden"></div>

    <!-- Send Email Pop-Up -->
    <div class="send__mail hidden">
        <div class="close__heading">
            <h3>Send email to recipient</h3>
            <div id="loading"></div>
            <i class="fas fa-times" id="closeSendEmailButton"></i>
        </div>
        <div class="send__mail__container">
            <div class="formBx">
                <form action="#" method="POST" id="sendEmailForm">
                    <div class="form__control">
                        <label for="title">Title</label>
<input required type="text" name="title" id="sendMailTitle" placeholder="Enter your title">
```

```html
            </div>
            <div class="form__control">
                <label for="message">Message</label>


    <textarea required name="message" id="sendMailMessage" placeholder="Type your message..."
name="message" id="" cols="10"
                 rows="7"></textarea>
            </div>
 <button type="submit" class="post__button" id="sendEmailButton">SEND</button>
        </form>
      </div>
      <div class="parents__name">
        <!-- Adding dynamic users -->
      </div>
    </div>
  </div>
  <div class="overlay2 hidden"></div>
  <?php
    if(isset($_SESSION['role']) && $_SESSION['role'] == 'teacher') {
      ?>
        <div class="add__icon">
          <i class="fas fa-plus" id="addIcon"></i>
        </div>
      <?php
    }
  ?>
  <script src="./javascript/main.js"></script>
  <script src="./javascript/notices.js"></script>
  <script src="./javascript/send-mail.js"></script>
</body>
</html>
```
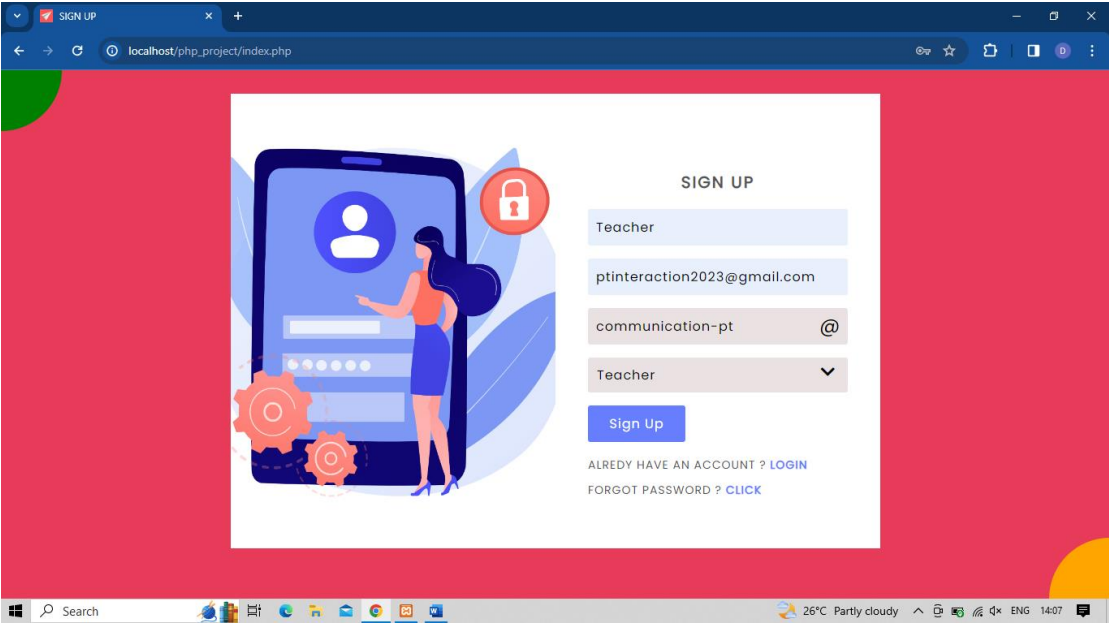
SCREENSHOTS

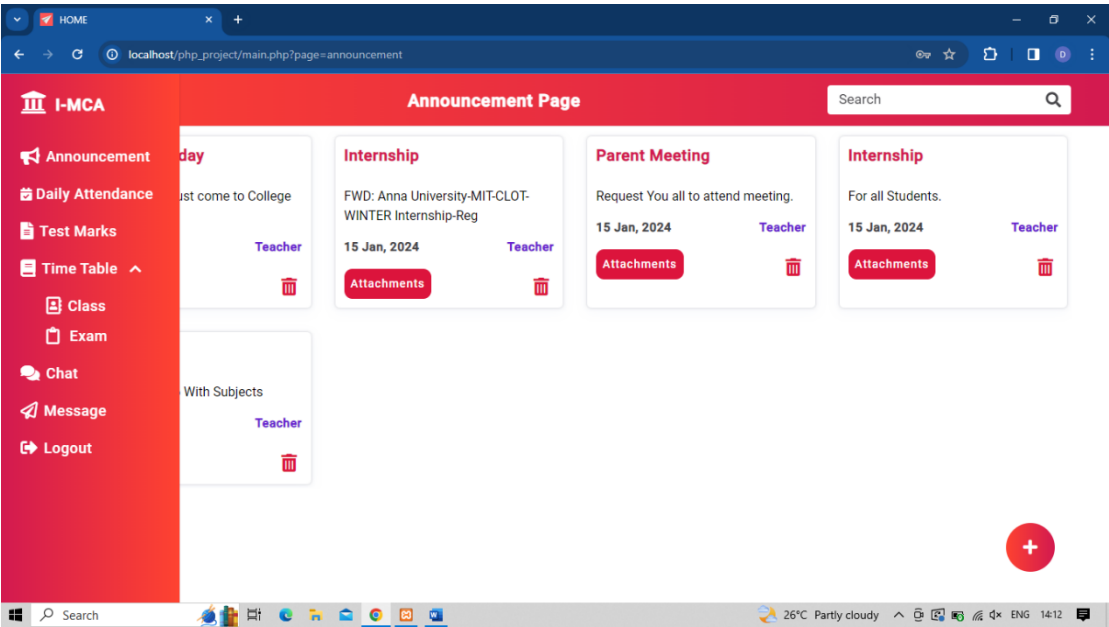### Signup Page (Teacher Signup)

Signup Page (Parent Signup)
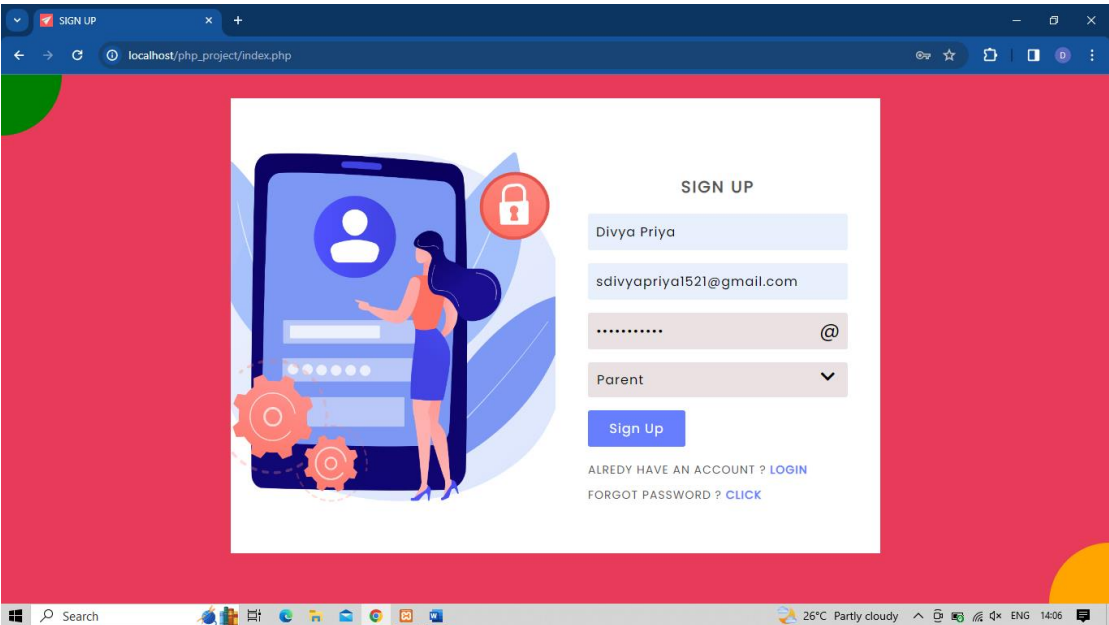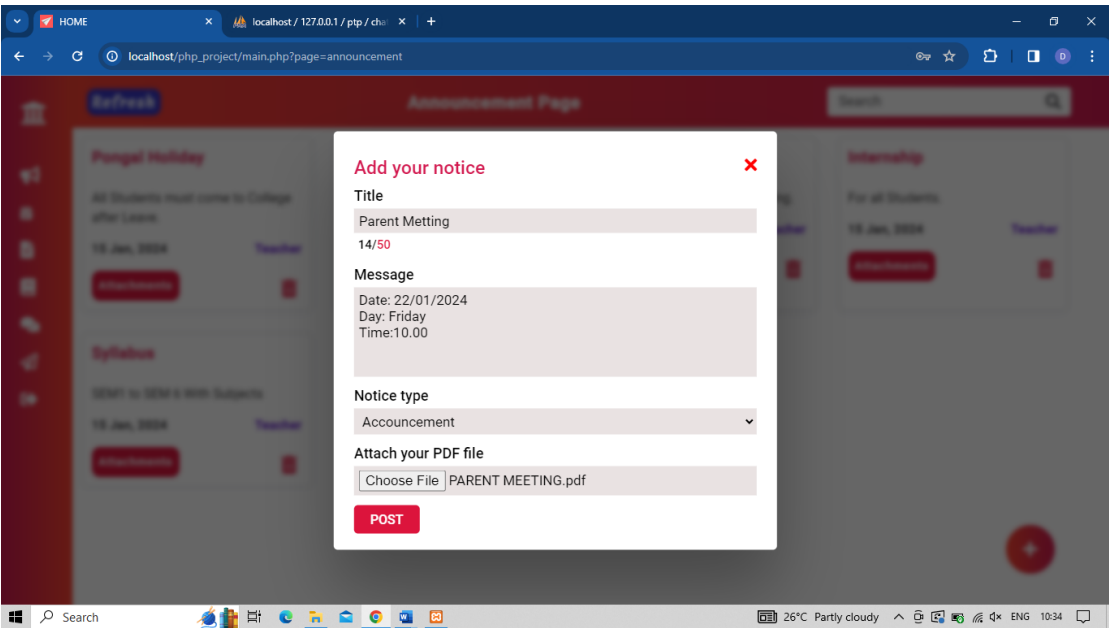
LoginPage
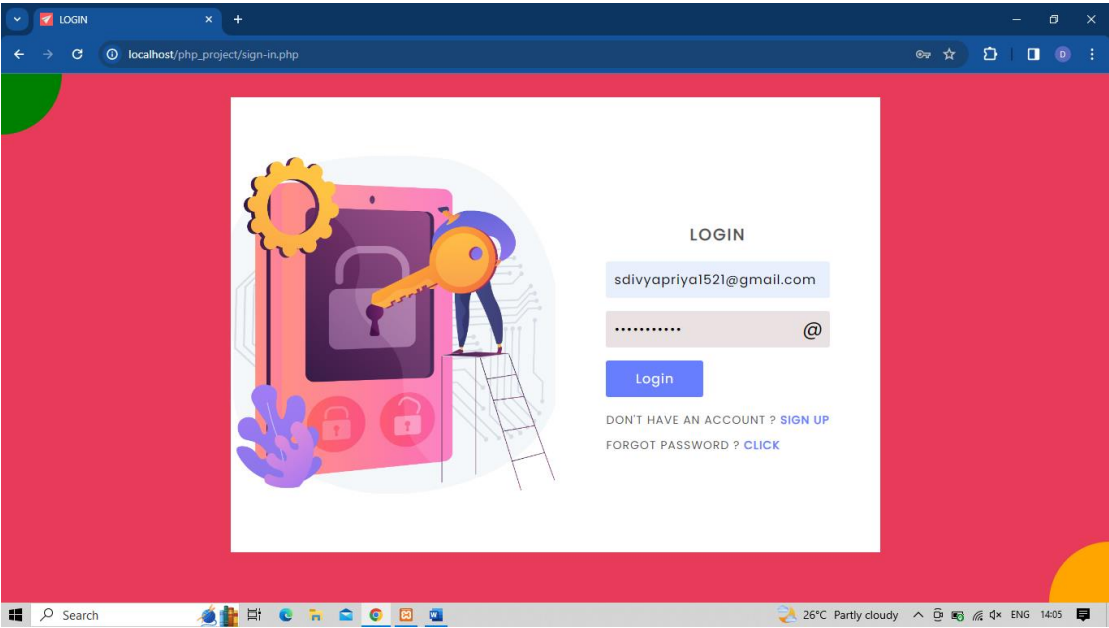
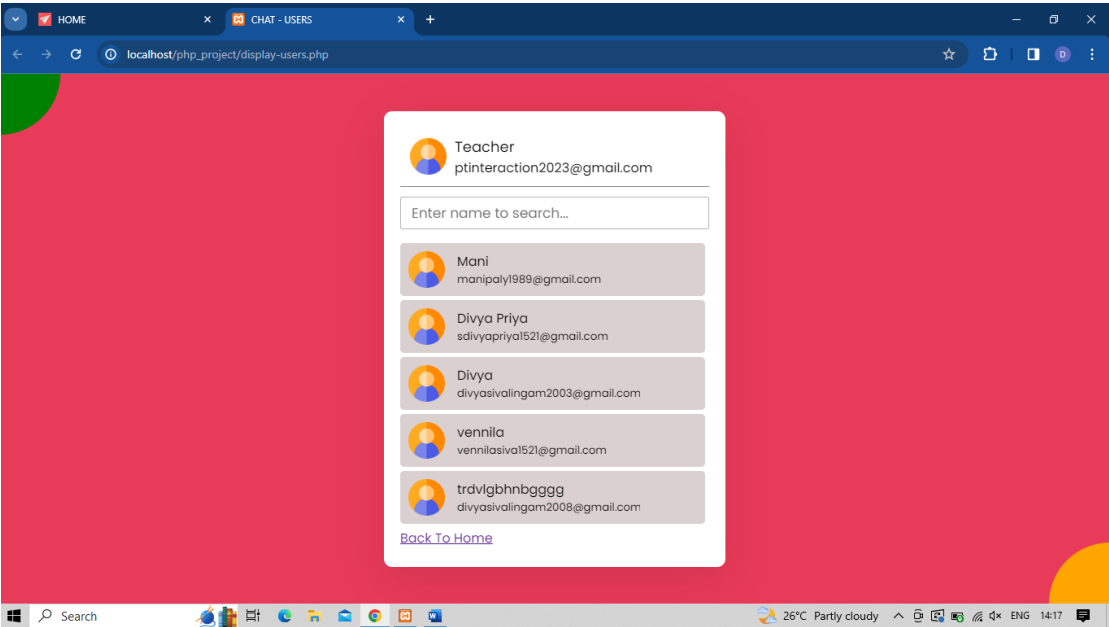## Home Page (Faculty)

Notice (Faculty)

Chart Box (Faculty)

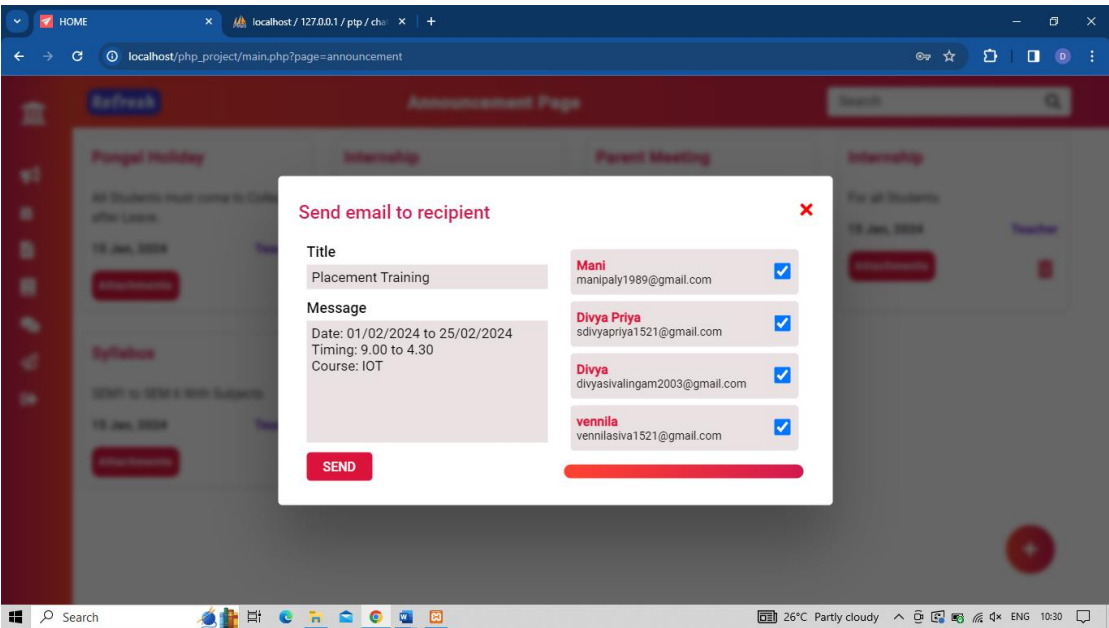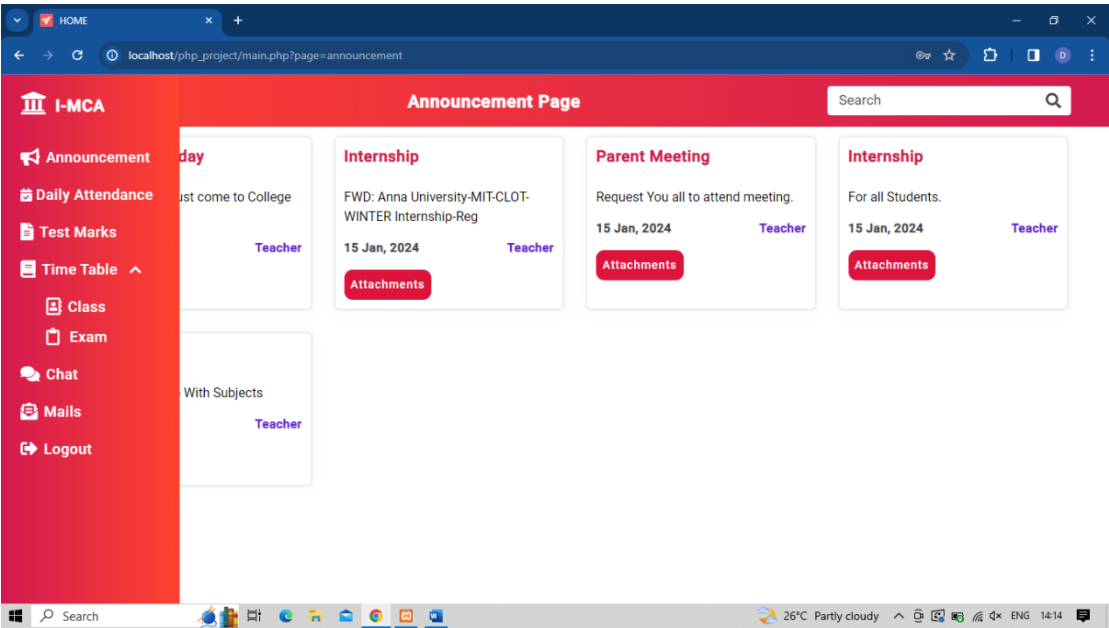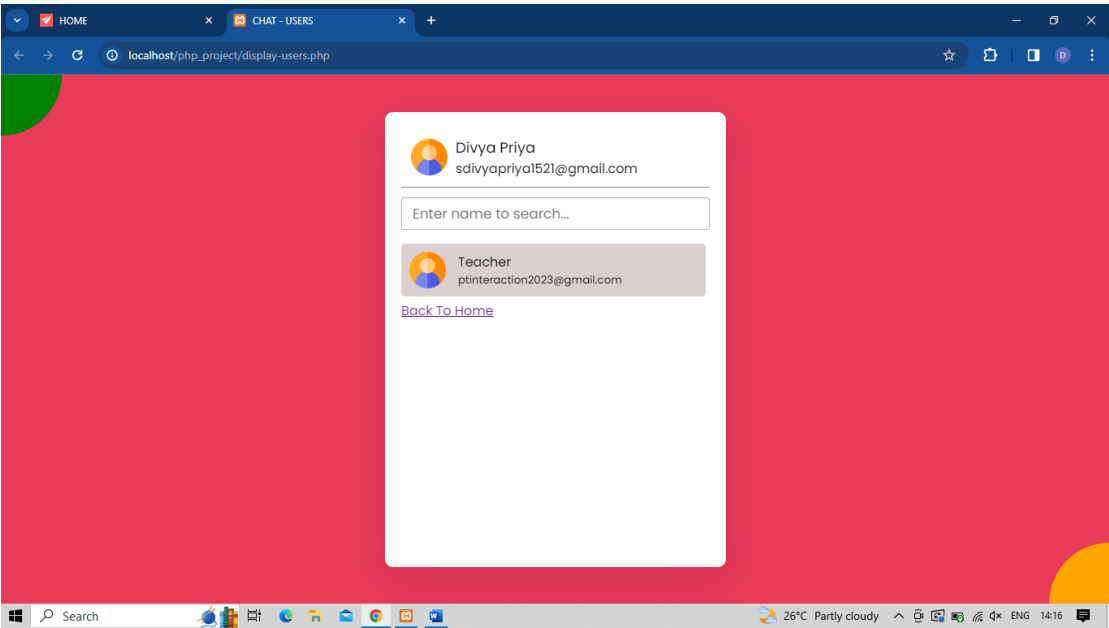## Mail to Parent (Faculty)

Home Page (Parent)

Chart Box (Parent)

Mails from Faculty (Parent)