## **PrimaFaculty- Faculty based System**

#### **Abstract**

In many colleges, we have noticed that students does not have proper knowledge regarding their faculty and are often seem to doubt their capabilities in respective fields. In addition to that, to keep transparency between students and faculty we should be well-versed with not only students as well as their faculty in every aspects.

The web application "**PrimaFaculty**" provides an easy and convenient search application for the students to know their teachers on a more personal level by having a full knowledge about their education and achievements. Students from any field can search for faculty to know them. Faculty can login with the application and update their details and achievements. They can search for available leaves as well. Android, being open source has already made its mark in the mobile application development. To make things handy, the user functionalities are developed as an Android application. Admin can login with the application and keep an eye on things. They can view the Faculty and can see to it that no wrong information has been provided.

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## 1. Project Description

#### 1.1 Introduction

The web application "**PrimaFaculty**" provides an easy and convenient search application for the students to know their teachers on a more personal level by having a full knowledge about their education and achievements. Students from any field can search for faculty to know them. Faculty can login with the application and update their details and achievements. They can search for available leaves as well. Android, being open source has already made its mark in the mobile application development. To make things handy, the user functionalities are developed as an Android application. Admin can login with the application and keep an eye on things. They can view the Faculty and can see to it that no wrong information has been provided.

#### 1.2 Motivation

It helps the students as a primary source of Faculty search. It also helps the students to search for their respective faculty of their department. Therefore, we can say that Online Faculty Search Portal System act as a bridge of communication between Students and Faculty. With the evolution of technology and internet being the main source of information for the students, these search portals and have become an excellent method to reach wide range of students. Initially, when we were unaware of these portals, we used to do research about colleges and their faculty stack through their respective websites. This requires lots of effort and time. However, later when we realized the importance of Faculty search portals, we were able to access the Faculty and know more about them through this.

#### 2. Background

Based on the **PrimaFaculty** application's requirements, we have made the choice of frameworks to be used. This application primarily consists of a web application that allows faculty to outline their full information consisting of education and achievements for which students can search and view according to their interest. The web application is developed using PHP, MySQL. The front end is developed using HTML, CSS, JavaScript.

#### 3. Related Work

#### 3.1 Existing System

The existing system for Faculty information includes traditional methods like getting the information through the faculty itself, or through the senior students or from administration department etc., which are too slow and stressful. With the advancement of internet, students rely on the online Faculty search portals, which makes the Faculty search efficient.

#### 3.1.1 Disadvantages

• Time Consuming

#### 3.2 Proposed System

**PrimaFaculty** is a PHP-based web application that provides functionalities of Faculty on desktop and on portable devices like Android based smart phones/tablets.

#### 3.2.1 Advantages

- Information-provider
- Portable

#### 3.2.2 Purpose of the System

**PrimaFaculty** is developed to provide an effective means for the admin to post Faculty- information and students to find out the information regarding the current faculty in the organization. In addition, Admin can view the reviews by provided by the applicants using Contact Us to make necessary improvements in their system if needed. PrimaFaculty is web based providing flexibility for the users.

#### 3.2.3 Objective

The objective of the web is to provide flexibility to the students by providing the functionalities of both Faculty search and Faculty information in a single application. In addition, this application provides an effective means for the admin to post faculty information i.e. resume. Admin can also view the reviews provided by the students.

### 4. Requirement Analysis

#### 4.1 Requirement Gathering

Requirement Analysis is the first and important step in the Software development activity for building robust and user-friendly applications. We have started working on determining the functionalities that the application should provide. We have done a good amount of research on existing systems and the disadvantages of those. Once the functional requirements are finalized, we did research on the current technologies that are widely used in the industry and decided to use PHP, MySQL, HTML5, CSS3, JavaScript replacing the traditional way of developing web applications using Struts, Servlets and JDBC.

#### **4.2 Requirement Specifications**

Below are the technical requirements to develop PrimaFaculty application.

#### **4.2.1** Software Requirements

• Operating System: Windows 10

• Database: MySQL

• Front End: HTML5, CSS3, JavaScript

Back End: PHP, SQLHosting: 000webhost

• Browser: Chrome or Firefox or any internet browser.

### 5. System Design

#### 5.1 System Design

Systems design is the process of defining the architecture, components, modules, interfaces, and data for a system to satisfy specified requirements. System designs are modelled using UML which is a standard object-oriented analysis and design language. The UML is a collection of diagrams and standard set of notations for specifying and visualizing various aspects such as requirements and design of software systems.

#### 5.1.1 Use Case Diagram

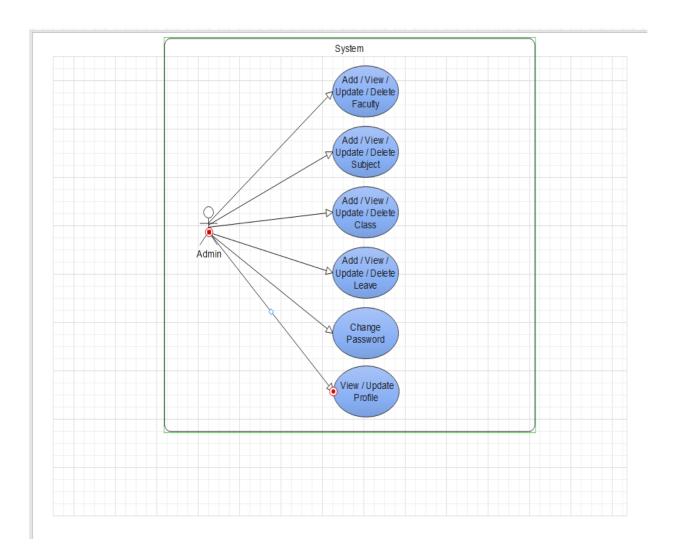
A diagram is a visualization of set of elements and the relationships between them. Use case is a set of scenarios, which defines functionalities of the system from a user's perspective. The main components of a use case diagram include actors, use cases and their relationships. They depict the interaction between actors and system to achieve certain goal. Thus, a use case diagram is important in modelling the behavior of a system.

Actors: The Actors of the system are Admin, Faculty and student.

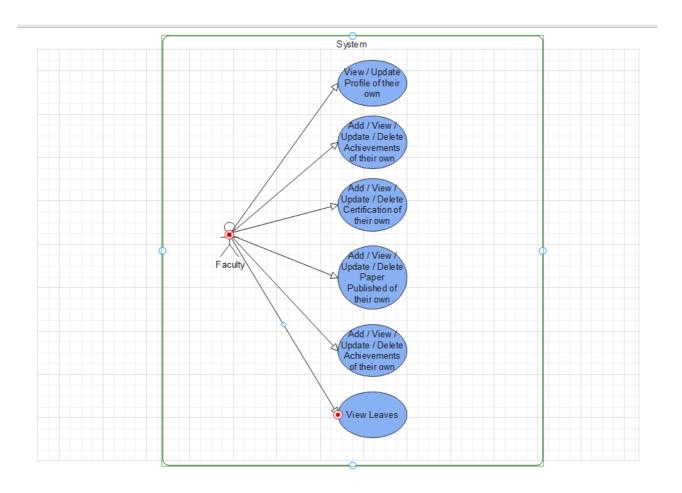
**Use cases:** We have identified a set of use cases based on the functionalities and goals of the application.

- Login- This use case denotes a set of actions required for Admin to login into the application.
- Add/View/Update/Delete Faculty- This use case denotes a set of actions required for admin to add/view/update/delete Faculty registered.

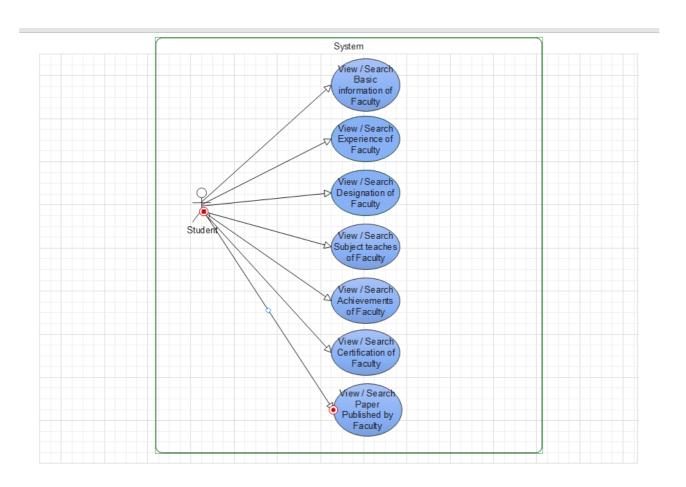
- Add/View/Update/Delete Subject- This use case denotes a set of actions required for admin to add/view/update/delete the subjects registered.
- Add/View/Update/Delete Class- This use case denotes a set of actions required for admin to add/view/update/delete the Class registered.
- Add/View/Update/Delete Leave- This use case denotes a set of actions required for admin to add/view/update/delete Leaves of Faculty.
- Change Password- This use case denotes a set of actions where admin can change password.
- **View/Update-** This use case denotes a set of actions required for admin to view/update the profiles of Faculty.



- **Login-** This use case denotes a set of actions required for Faculty to login into the application.
- **View/Update Profile-** This use case denotes a set of actions required for faculty to view/update profile of their own.
- Add/View/Update/Delete Achievements- This use case denotes a set of actions required for faculty to add/view/update/delete the achievements of their own.
- Add/View/Update/Delete Certification- This use case denotes a set of actions required for faculty to add/view/update/delete the Certification of their own.
- Add/View/Update/Delete Paper Published- This use case denotes a set of actions required for faculty to add/view/update/delete Paper Published of their own.
- **Apply for Leaves-** This use case denotes a set of actions where faculty can apply for leaves.



- Students can VIEW profile of faculty consisting of basic information.
- Students can VIEW profile of faculty consisting of Experience.
- Students can VIEW profile of faculty consisting of Designation.
- Students can VIEW profile of faculty consisting of the subject they teach.
- Students can VIEW profile of faculty consisting of their Achievements.
- Students can VIEW profile of faculty consisting of their Certification.
- Students can VIEW profile of faculty consisting of paper published by them.



#### **5.1.2** Database Schema

```
Database: `userdb`
-- Table structure for table `achieve`
CREATE TABLE `achieve` (
 'id' int(11) NOT NULL,
 `fname` varchar(255) NOT NULL,
 `atype` varchar(255) NOT NULL,
 `aname` varchar(255) NOT NULL,
 'dateach' date NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
-- Dumping data for table `achieve`
INSERT INTO 'achieve' ('id', 'fname', 'atype', 'aname', 'dateach') VALUES
(2, 'Guddu', 'paper published', 'best teaching methods', '2021-09-14');
-- Table structure for table `certification`
CREATE TABLE `certification` (
 'id' int(11) NOT NULL,
 `fname` varchar(255) NOT NULL,
 `cername` varchar(255) NOT NULL,
 'date' date NOT NULL,
 `pic` varchar(255) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
-- Dumping data for table `certification`
```

```
INSERT INTO 'certification' ('id', 'fname', 'cername', 'date', 'pic') VALUES
(1, 'guddu', 'pro', '2021-09-01', 'upload/Akbar_2.jpg'),
(3, 'guddu', 'test image1', '2021-09-25', 'upload/vAjcwGb.jpeg'),
(4, 'guddu', 'test image', '2021-09-22', 'upload/screen.jpeg');
-- Table structure for table `class`
CREATE TABLE `class` (
 'id' int(11) NOT NULL,
 `cname` varchar(255) NOT NULL,
 `fname` varchar(255) NOT NULL,
 `cbranch` varchar(255) NOT NULL,
 `cdate` date NOT NULL,
 `time` varchar(255) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
-- Dumping data for table `class`
INSERT INTO 'class' ('id', 'cname', 'fname', 'cbranch', 'cdate', 'time') VALUES
(3, 'SQL', 'guddu', 'Engineering', '2021-09-22', '23:28'),
(4, 'php', 'faculty', 'Applied Science', '2021-09-22', '19:28'),
(5, 'dbms', 'faculty', 'Applied Sciences', '2021-09-08', '18:46');
-- Table structure for table `fac_leave`
CREATE TABLE `fac_leave` (
 'id' int(11) NOT NULL,
 `fname` varchar(255) NOT NULL,
 'reason' varchar(255) NOT NULL,
 `apdate` date NOT NULL,
 'duration' varchar(255) NOT NULL,
 `status` varchar(255) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
                                     [12]
```

```
-- Dumping data for table `fac_leave`
INSERT INTO `fac_leave` (`id`, `fname`, `reason`, `apdate`, `duration`, `status`)
VALUES
(15, 'Guddu', 'not well', '2021-09-30', '1 month', 'Apporved'),
(16, 'Guddu', 'testing', '2021-10-15', '1 month', 'Declined');
-- Table structure for table `subject`
CREATE TABLE `subject` (
 `id` int(11) NOT NULL,
 `name` varchar(255) NOT NULL,
 `branch` varchar(255) NOT NULL,
 'dept' varchar(255) NOT NULL,
 `facteach` varchar(255) NOT NULL,
 'date added' timestamp(6) NOT NULL DEFAULT current_timestamp(6) ON
UPDATE current_timestamp(6)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
-- Dumping data for table `subject`
INSERT INTO `subject` (`id`, `name`, `branch`, `dept`, `facteach`, `date added`)
VALUES
(3, 'dbms', 'CSE', 'Engineering', 'testfac', '2021-09-16 13:11:42.297134'),
(4, 'science', 'chem', 'Applied Science', 'testfac', '2021-09-30 13:02:51.257766'),
(5, 'Building Blocks', 'CE', 'Engineering', 'Guddu', '2021-09-30 12:55:06.907027'),
(6, 'Thermodynamics and Statistical Mechanics', 'phy', 'Applied Science', 'testfac',
'2021-09-30 13:33:03.083457'),
(7, 'Organic Chemistry', 'chem', 'Applied Science', 'Guddu', '2021-09-30
13:33:30.903258'),
(8, 'applied mathematics', 'math', 'Applied Science', 'testfac', '2021-09-30
13:34:14.058889'),
(9, 'Behavior', 'human', 'Humanities', 'Guddu', '2021-09-30 13:34:35.098142'),
(10, 'Basics of cricket', 'sport', 'Humanities', 'testfac', '2021-09-30 13:34:54.754924'),
```

```
(11, 'C ++', 'IT', 'Engineering', 'Guddu', '2021-09-30 13:35:11.515200'),
(12, 'Wire Type', 'EE', 'Engineering', 'testfac', '2021-09-30 13:35:31.214458'),
(13, 'CNG programming', 'ME', 'Engineering', 'Guddu', '2021-09-30
13:35:49.968372'),
(14, 'Arduino', 'ECE', 'Engineering', 'testfac', '2021-09-30 13:36:04.118150');
-- Table structure for table `user`
CREATE TABLE `user` (
 `id` int(11) NOT NULL,
 `role` enum('admin','faculty','user') NOT NULL,
 `username` varchar(255) NOT NULL,
 `password` varchar(255) NOT NULL,
 `name` varchar(255) NOT NULL,
 `sansw` varchar(255) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
-- Dumping data for table `user`
INSERT INTO `user` (`id`, `role`, `username`, `password`, `name`, `sansw`)
VALUES
(1, 'admin', 'sudhanshu', 'sudhanshu123', 'sudhanshu bajpai', 'vedant'),
(3, 'user', 'user', 'user', 'user', 'user123'),
(7, 'faculty', 'Guddu', 'gudduu123', 'Guddu', 'guddu'),
(8, 'faculty', 'faculty', 'faculty', 'testfac', 'faculty');
-- Table structure for table `userinfo`
CREATE TABLE `userinfo` (
 `id` int(11) NOT NULL,
 `name` varchar(255) NOT NULL,
 `mob_no` int(10) NOT NULL,
 `add1` varchar(255) NOT NULL,
```

```
`add2` varchar(255) NOT NULL,
 `postcode` int(25) NOT NULL,
 'joined_on' varchar(255) NOT NULL,
 `area` varchar(255) NOT NULL,
 'email' varchar(255) NOT NULL,
 'education' varchar(255) NOT NULL,
 `country` varchar(255) NOT NULL,
 `state` varchar(255) NOT NULL,
 `exp` int(100) NOT NULL,
 `dtt_time` timestamp NOT NULL DEFAULT current_timestamp()
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
-- Dumping data for table `userinfo`
INSERT INTO `userinfo` (`id`, `name`, `mob_no`, `add1`, `add2`, `postcode`,
'joined_on', 'area', 'email', 'education', 'country', 'state', 'exp', 'dtt_time')
VALUES
(3, 'Guddu', 2147483647, '161, Rathod Layout, Anant Nagar, Nagpur', 'jafar nagar',
440013, '2021-09-01', 'anant nagar', 'bajpai.sudhanshu007@gmail.com', 'B.E', 'India',
'Maharashtra', 5, '2021-09-24 13:26:05');
-- Indexes for dumped tables
-- Indexes for table `achieve`
ALTER TABLE `achieve`
 ADD PRIMARY KEY ('id');
-- Indexes for table `certification`
ALTER TABLE `certification`
 ADD PRIMARY KEY ('id');
-- Indexes for table `class`
ALTER TABLE `class`
```

```
ADD PRIMARY KEY (`id`);
-- Indexes for table `fac_leave`
ALTER TABLE `fac_leave`
 ADD PRIMARY KEY (`id`);
-- Indexes for table `subject`
ALTER TABLE `subject`
ADD PRIMARY KEY ('id');
-- Indexes for table `user`
ALTER TABLE `user`
ADD PRIMARY KEY (`id`);
-- Indexes for table `userinfo`
ALTER TABLE `userinfo`
ADD PRIMARY KEY (`id`);
-- AUTO_INCREMENT for dumped tables
-- AUTO_INCREMENT for table `achieve`
ALTER TABLE `achieve`
MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=3;
-- AUTO_INCREMENT for table `certification`
ALTER TABLE `certification`
MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=6;
```

```
-- AUTO_INCREMENT for table `class`
ALTER TABLE `class`
MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=6;
-- AUTO_INCREMENT for table `fac_leave`
ALTER TABLE `fac_leave`
MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT,
AUTO INCREMENT=17;
-- AUTO_INCREMENT for table `subject`
ALTER TABLE `subject`
MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=15;
-- AUTO INCREMENT for table `user`
ALTER TABLE `user`
MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=10;
-- AUTO INCREMENT for table `userinfo`
ALTER TABLE `userinfo`
MODIFY 'id' int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=4;
COMMIT;
```

## 6. Database Design

The database that is used to design the web application is MySQL. MySQL workbench is used to create tables and run queries. In this application development, we have used MySQL to store details.

## 7. Implementation

The PrimaFaculty is a web-based, which revolutionizes the way students search for faculty-information. The application provides a flexible and easy to use environment on desktops as well as portable devices like smart phones/tablets for the users to achieve their respective objective. The modules that we have implemented in the Faculty Search Portal are as listed.

- Admin
- Faculty
- Student

#### **7.1 Admin**

The admin module provides various functionalities. The admin users are responsible for activating and deactivating the student's as well as Faculty's accounts. They can also add/view/update/delete Faculty, Subject, Class, Leave and can change password.

#### 7.2 Faculty

The Faculty module have various functionalities. The Faculty users are responsible for add/view/update/delete achievements, certification, paper published of their own. They can also view their profile and apply for leaves as well.

#### 7.3 Student

The Student module have various functionalities. The Student users can view profile of the faculty consisting of their information.

### 8. Graphical User Interface

The Graphical User Interface are developed using HTML5, CSS, JavaScript, PHP to provide an easy-to-understand interactive screens. Various screens and the navigation between screens are discussed below.

#### Web application screens:

#### 8.1 Homepage





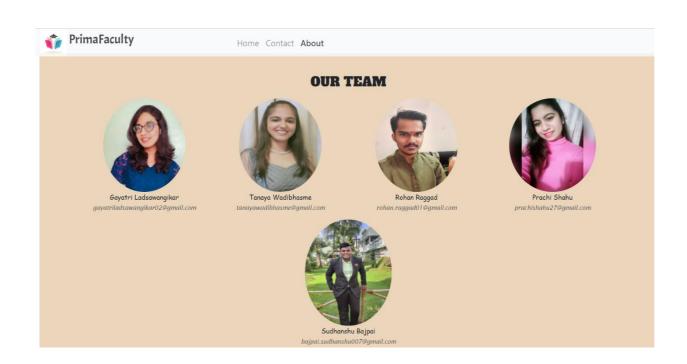
## 8.2 About Us



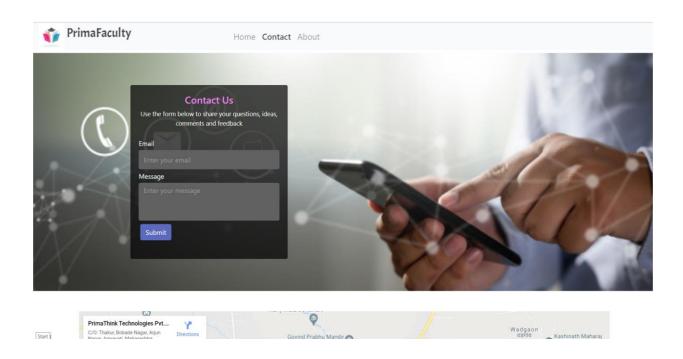
Home Contact About

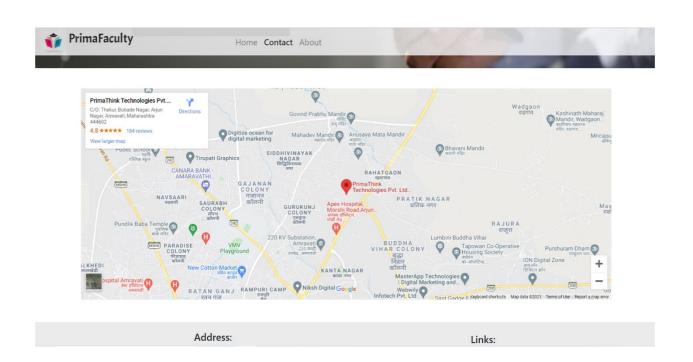


Primafaculty is a whole and sole website related to the faculty of XYZ College. It was established on 10th July 2020. This website manages the faculty of the respective college and provides assistance to faculty to manage their information related to their career such as their resume and other work related stuff regarding to college. It also provides information to their students about their faculty and their achievements and education. This helps to maintain the transparency between faculty and students and let the students understand their faculty at a deeper level. Primafaculty makes sure that the faculty can assily access their information and keep it undated for their students and organization.



# 8.3 Contact Us





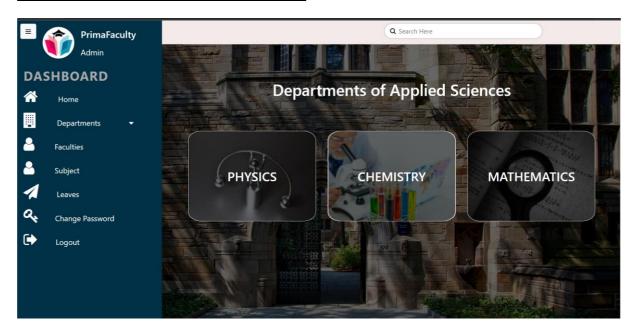
# 8.4 Login



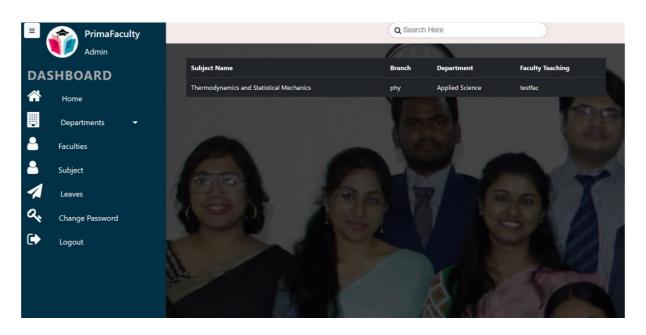
# 8.5.1 Operations Admin can perform Admin Dashboard



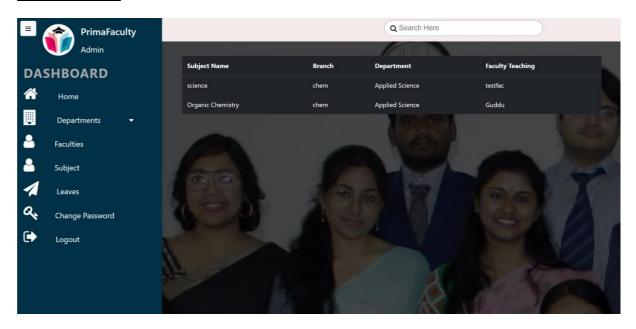
## **Department of applied science:**



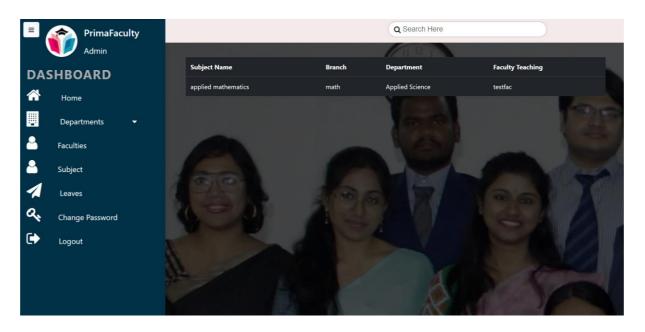
# **Subjects Physics:**



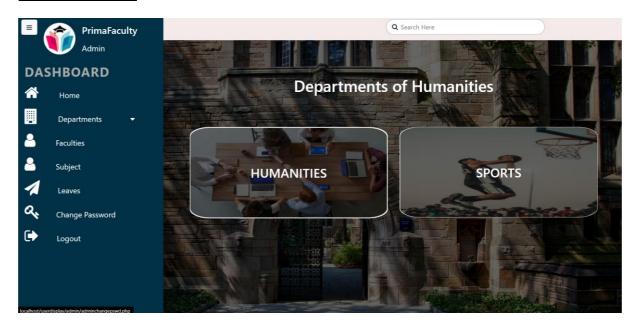
# **Chemistry:**



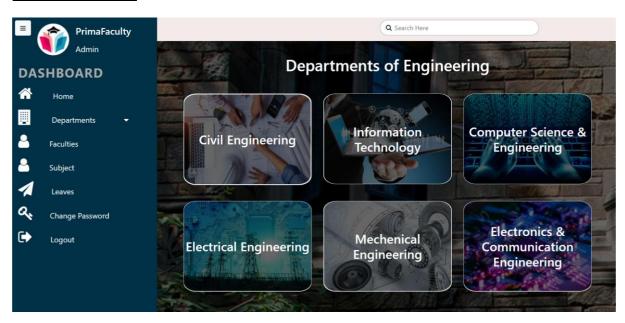
## Maths:



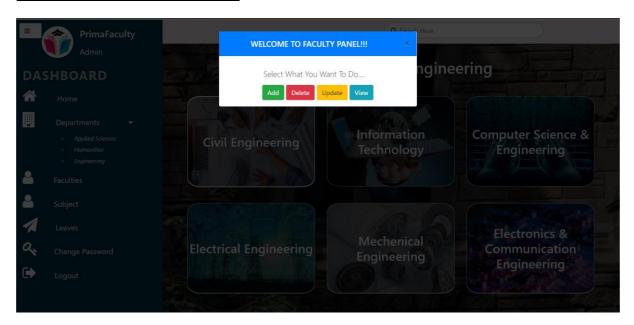
#### **Humanities:**



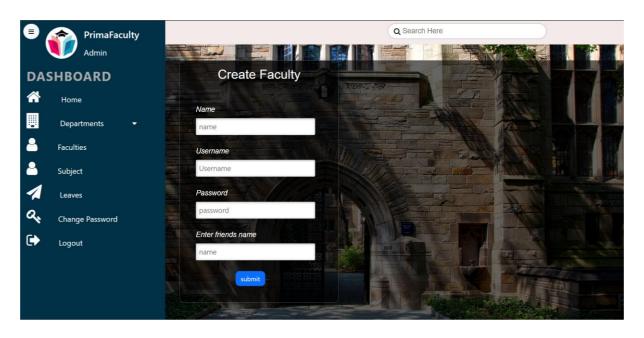
## **Engineering:**



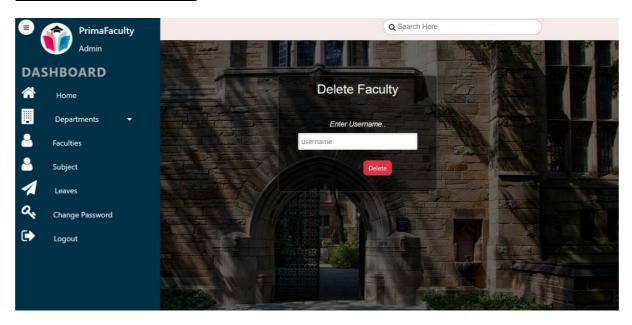
## **Modal for faculty panel:**



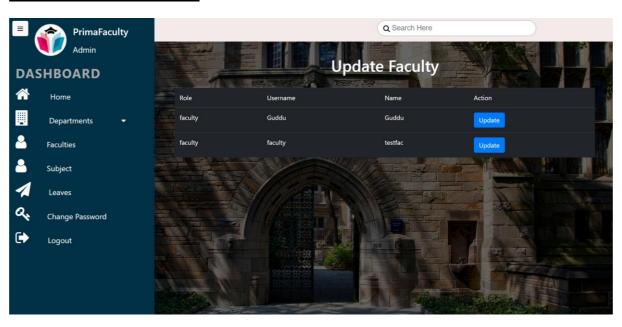
## **Add faculty:**



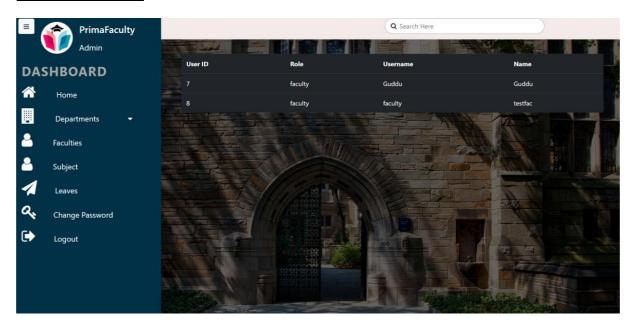
# **Delete faculty page:**



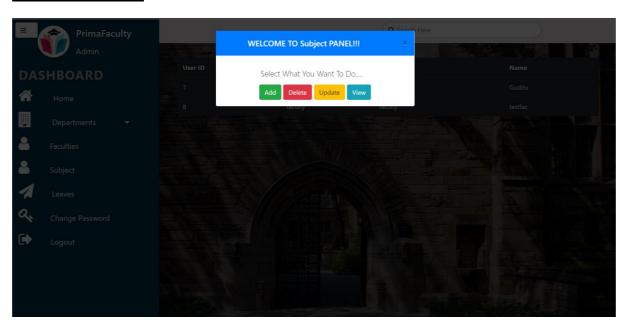
## **Update faculty page:**



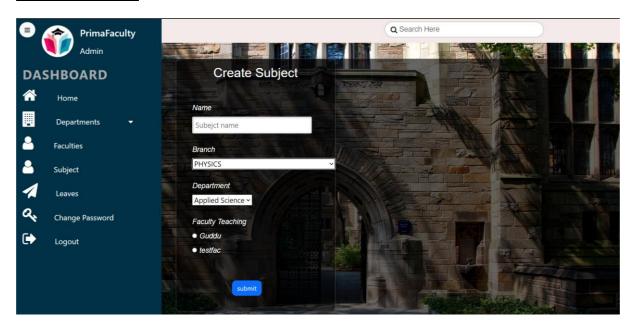
# **View faculty:**



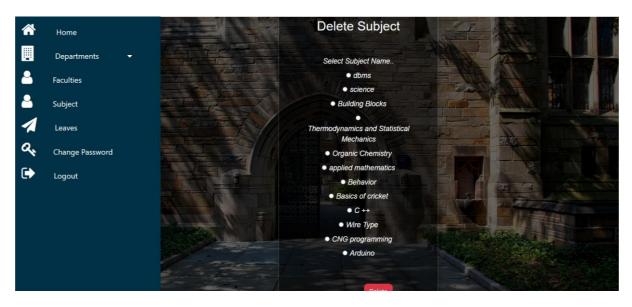
# Subject modal



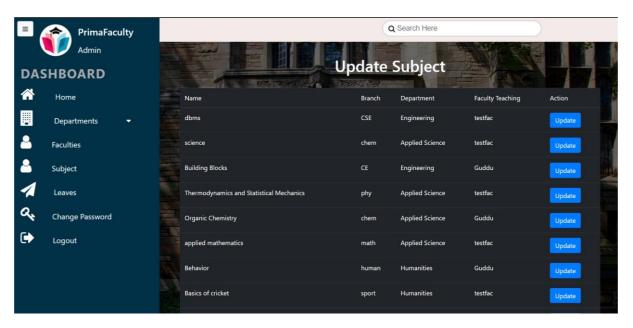
## Add subject:



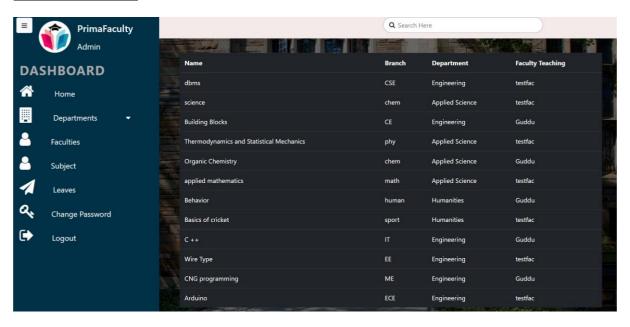
# **Delete subject:**



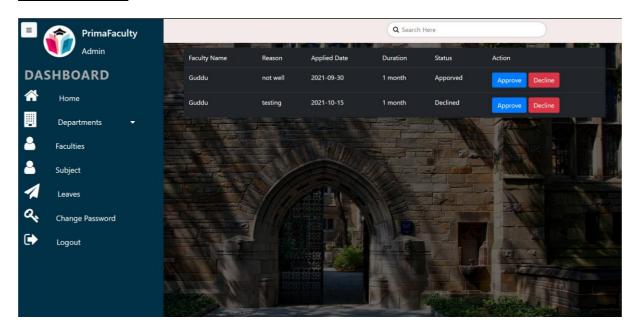
## **Update subject:**



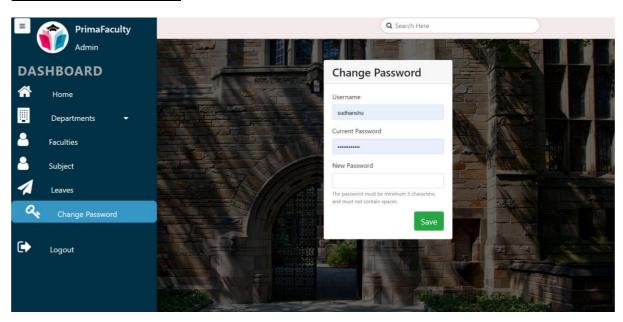
## View subject:



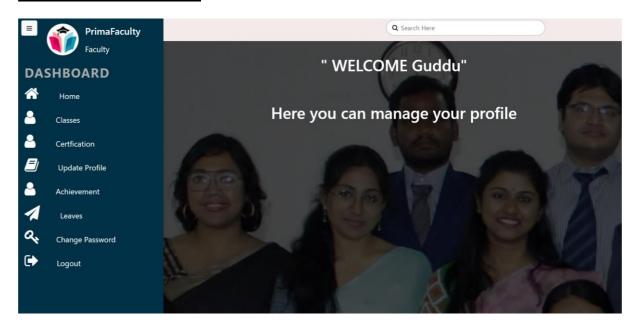
#### Leave page:



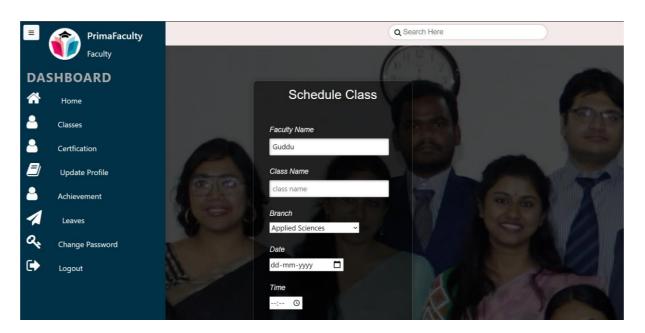
## **Change password:**



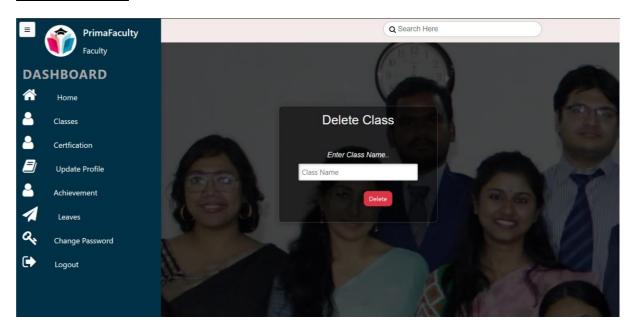
# 8.5.2Operations Faculty can perform : Faculty Dashboard:



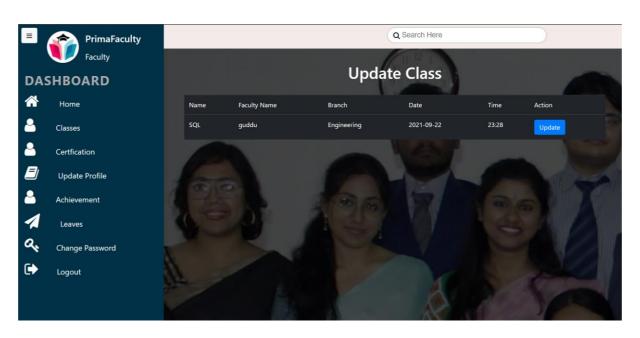
## Schedule class page:



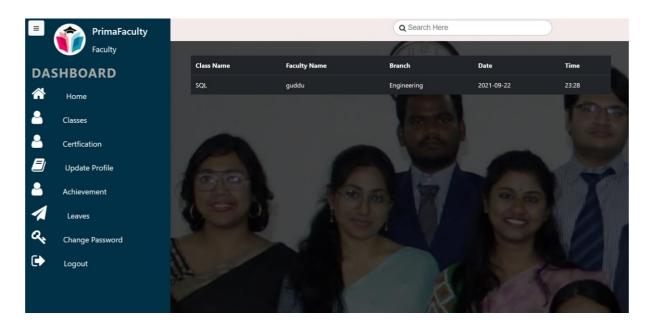
# **Delete class:**



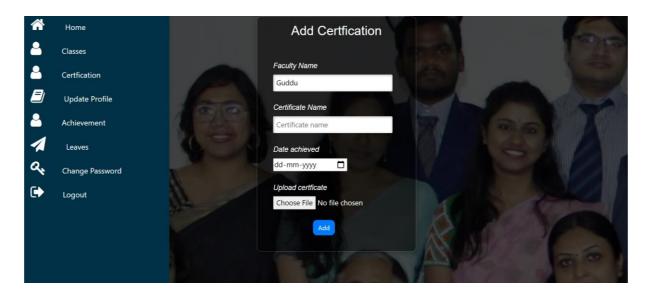
## **Update class:**



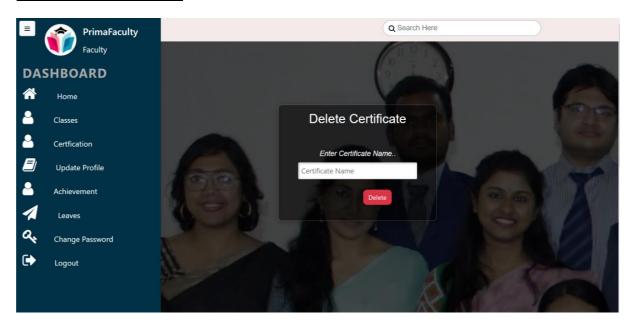
## **View scheduled class:**



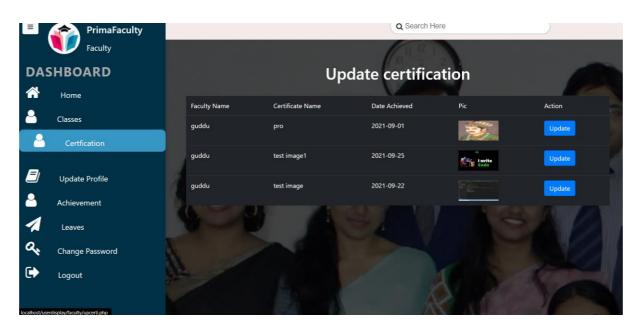
# **Add certification:**



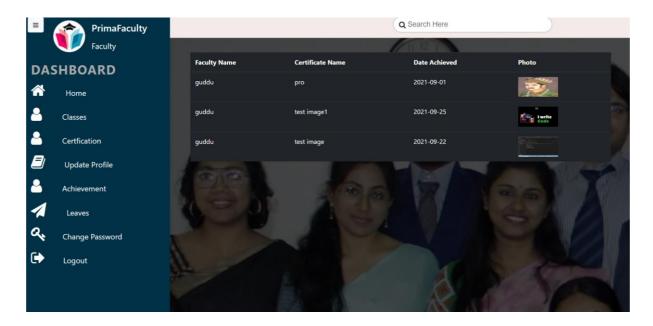
## **Delete certificate:**



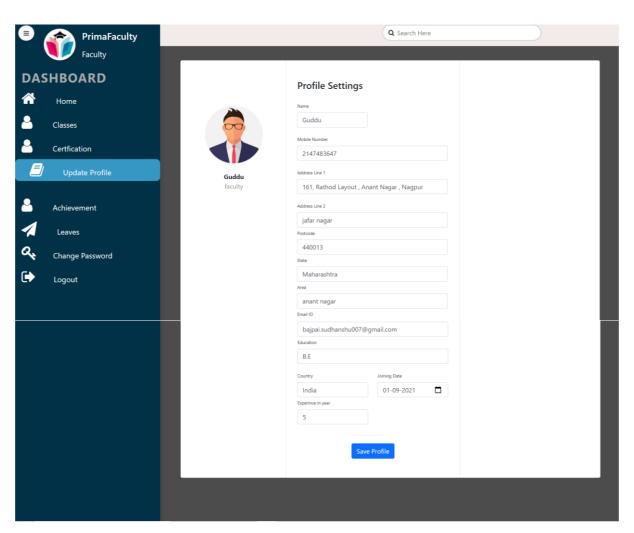
# **Update certificate:**



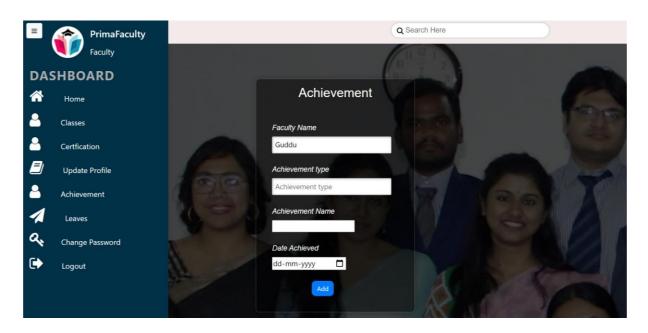
## **View certificate:**



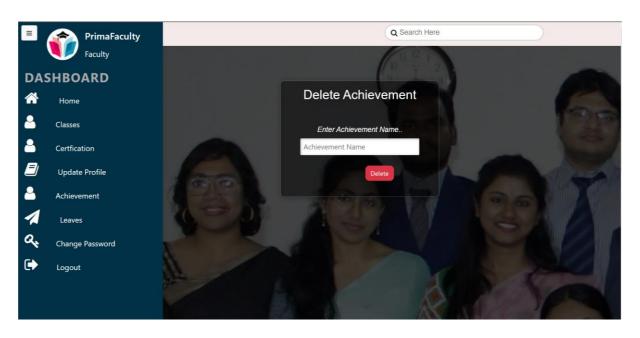
# Faculty update profile page:



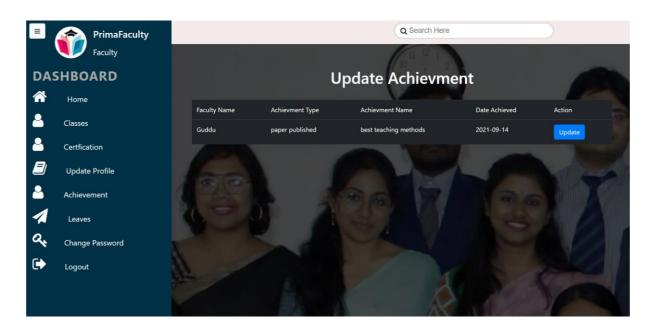
## **Add achievement:**



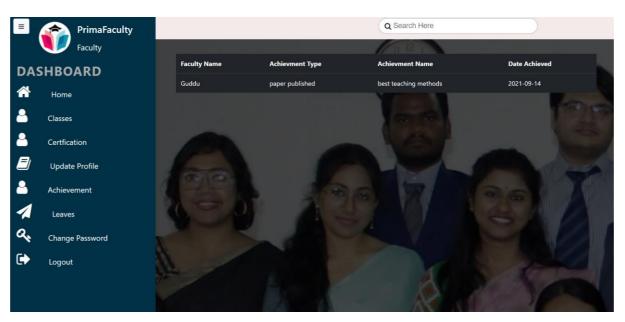
# **Delete achievement:**



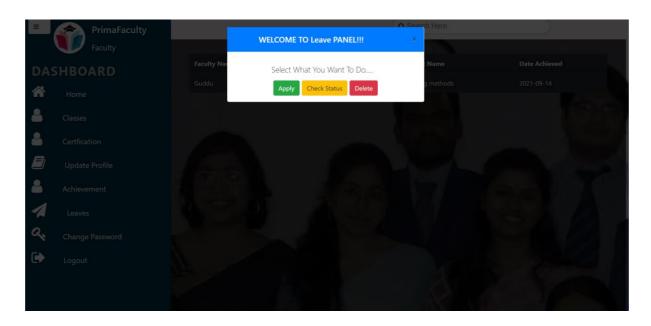
## **Update achievement:**



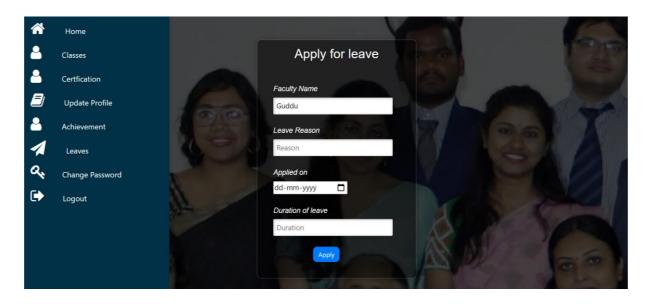
#### **View achievement:**



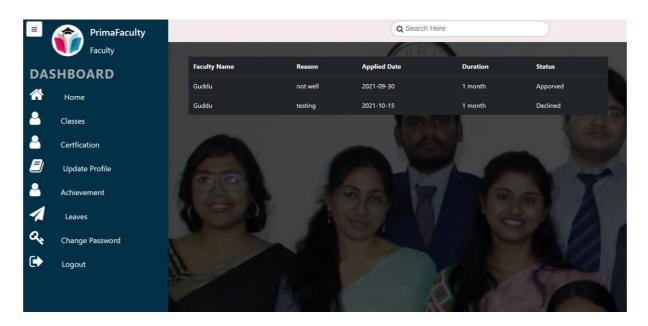
## **Leave modal:**



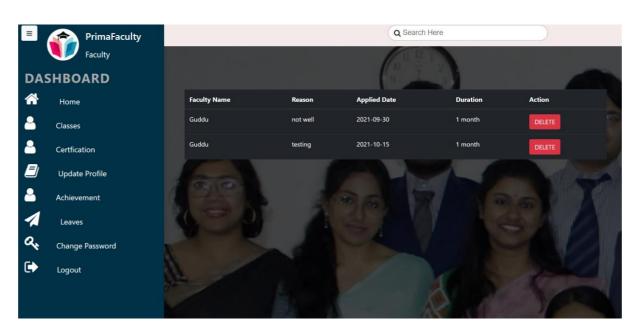
# **Apply for leave:**



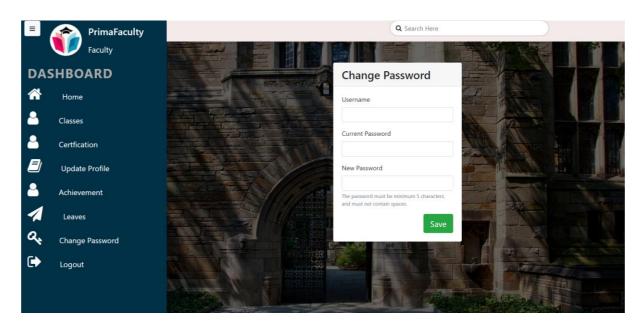
## **Status:**



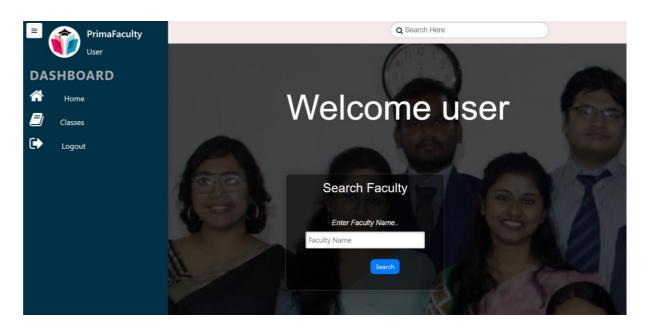
# **Delete leave:**



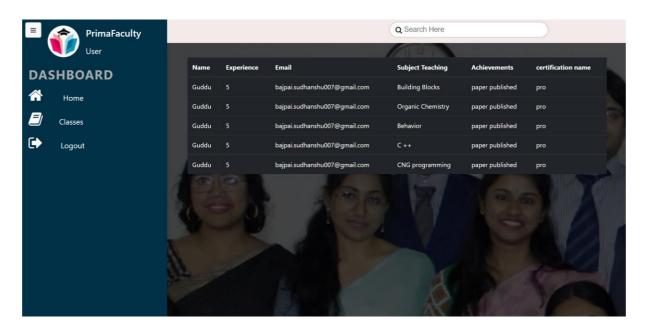
#### **Change password:**



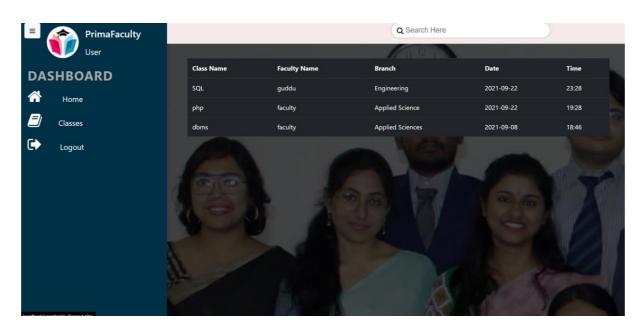
# **8.5.3 Operations students can perform Student Dashboard:**



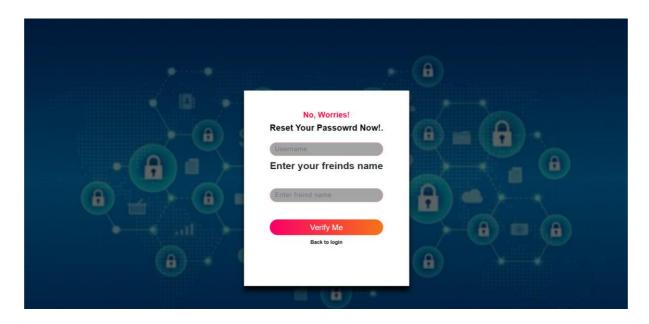
## Faculty details in user page:



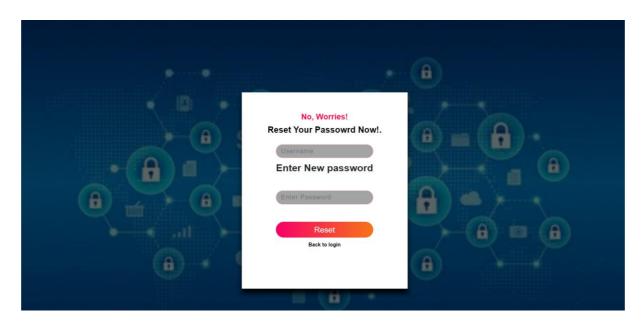
# View Scheduled class page:



## Forgot password verification page:



# **After verification page:**



#### 9. Conclusion

PrimaFaculty stands as a revolutionizing element in the sphere of transparency between students and faculty. They act as a communication bridge between Faculty and students. This application helps faculty to have a greater exposure to the candidate. The web application provides flexibility to the students to view the information about their faculty. This application provides an enhanced user experience for both faculty and student. It provides user friendly interface which facilitates in reaching wide range of students. The application has achieved all the requirements that were initially set in the requirements gathering phase. This project taught us some best practices in the technology stack like PHP, My SQL, HTML, CSS, JavaScript. Starting from requirements elicitation to design, construction, implementation, we have gained a very good experience working with various technologies at every phase. Development of this project boosted our confidence in web development.