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**INTRODUCTION**

**Existing Attendance System:**

* Existing attendance management system is manual, in which everything has to be maintained with the manual process.
* Attendance records are maintained in register, book, files, etc.
* These records have to be kept safe and secure without being lost or damaged.
* So, a secure and safe place is required to keep these records, so that no any liquid substance or any animal like mouse, etc. could harm these data. Generally, they are stored in cup boards.
* For example, if someone has marked attendance on register, and unfortunately a register has come in contact with water or any liquid substance or any animal like mouse, it will lose the data which is stored in register.
* And if anyone has to check attendance record, then he or she has to find the register first, then he or she can access it.

**Proposed System**

* Now as we all know, almost everything can be done online.
* Like Money transfer, Shopping, Booking, Teaching, Data sharing, Admissions, Job search, etc. And so many other activities are done with the help of internet.
* So with the easy access and use of internet, we are going to take this existing attendance system on advance level.
* We are going to develop an online platform with high security so that the same process could be done easily without the waste of time, afford, and energy.
* So firstly, teachers/faculties are required to register on attendance management system.
* Once registration is done, faculty can easily add/remove students and marks attendance by just signing in to the application.
* And the records are maintained in a table format according to date, so that faculty can easily see it.
* So this system will save a lot of time, energy, and afford for teachers as well as institution.

**SYSTEM DESIGN**

System

Faculty

Students

**1. Faculty**

Faculties or teachers are the people who will first sign up on online attendance management system as **faculty**. And then after successful registration, they can login and add students and can mark attendance on daily basis.

Following data from faculty side will be provided to the system at the time of registration:

* Name
* Mobile
* Date of Birth
* Qualification
* Username
* User ID
* Password

**Faculty responsibilities:**

* Registration on system
* Login to system
* Add students
* Mark attendance

**2. System**

System is an online platform where attendance is maintained in a secured way. The faculties are registered here, and with the help of system, they can add/remove students, can marks attendance and maintain attendance records.

**System responsibilities:**

* Registration of faculties and admission of students
* Adding or removing students by faculties
* Display of registered student in faculty dashboard
* Display of current attendance status in faculty dashboard
* Display of attendance records in record tab of faculty dashboard according to date in a table format
* Maintaining record for each candidate and voter without making any duplicate record.
* Forget password facility for faculties

**3. Students**

Students are those who will be added by faculties into the system.

Following data from group/party side will be provided to the system at the time of registration:

* Name
* Roll no
* Course
* Semester
* Branch

**Flow Chart**

**Faculty – Sign up up**

**Add student**

**Faculty Login**

**System**

**Mark attendance**

**Results**

**ER Diagram**

Relationship

Attribute

Entity

Added

Faculty

Student

Attendance

Marking

**Data Flow Diagram**

Faculty

Registration

Login

Attendance record generated

Attendance marking

**Database design**

* MySQL is a technology which is used to maintain overall data of faculty, attendance record and students in this system.
* We created a database with name *“****student-attendance”*** in MySQL.
* Then we created below tables inside database

***Faculty***

***Student***

***Record***

Following fields are created in *Faculty* table:

* + ID
  + Name
  + Mobile
  + Date of Birth
  + Qualification
  + Username
  + User ID
  + Password
  + Created\_at
  + Modified \_at

Following fields are created in *Student* table:

* + ID
  + Name
  + Roll no
  + Course
  + Semester
  + Branch
  + User ID
  + Created\_at
  + Modified \_at

Following fields are created in *Record* table:

* + ID
  + SID
  + Status
  + Date
  + Day
  + Month
  + Year
  + Modified \_at

**Database Structure**

**student-attendance**

**faculty**

Database name

**record**

**id**

**name**

**student**

**mobile**

Tables

**dob**

**qualification**

**username**

**uid**

Fields

**password**

**created\_at**

**modified\_at**

**How to create database, table, and fields**

* Open XAMPP application.
* Click on ***Start*** button right next to MySQL module.
* Click on ***Admin*** button next to ***Start*** button on MySQL module.
* You’ll see ***phpmyadmin*** panel opened browser. There is a list of default databases on left hand side. So click on ***New***, give the name XYZ, and click on ***Create***.
* New database in created with the name of XYZ. Now inside XYZ database, there is an option ***New*** to create tables.
* Click on ***New*** and you’ll see option to add table name on top and below it the names of fields.
* Now add fields inside table like name, email, mobile, etc.
* Once all this done, you have finished the process of creating database, tables, and fields.

**How to run project**

* Suppose project name is XYZ. So place the XYZ project folder in “*xampp/htdocs/”* location in your respective drive.
* Open XAMPP Control Panel and Start ***Apache*** and ***MySQL.***
* Open browser and type “*localhost/XYZ*”.
* You will see the output in browser.

**APPLICATIONS**

This system is applicable in below fields for attendance purpose:

* **School**
* **College**
* **University**
* **Corporate**
* **Government**
* **Hospital**
* **Food and Restaurant**
* **Sports**
* **Entertainment**
* **Production**
* **Investment**
* **News and Media**
* **Technology**

**FUTURE ENHANCEMENTS**

**ADMIN MODULE**

* Admin functionality would be used to control overall attendance management system. Admin means main authority who owns college, school or university.
* Admin could add courses and their subjects
* Admin could see all attendance records and admin could see data of all registered teachers and students.

**STUDENT MODULE**

* Student can sign up on system.
* By logging in, student can track his or her attendance record

**TEACHER MODULE**

* Teacher can sign up on system.
* By logging in, teacher can mark attendance of the students who belongs to his or her subject, and can also monitor records.

**TECHNOLOGY DETAILS**

**HTML**

* **HTML** (HyperText Markup Language) is the most basic building block of the Web. It defines the meaning and structure of web content. Other technologies besides HTML are generally used to describe a web page's appearance/presentation ([CSS](https://developer.mozilla.org/en-US/docs/Web/CSS)) or functionality/behavior ([JavaScript](https://developer.mozilla.org/en-US/docs/Web/JavaScript)).
* "Hypertext" refers to links that connect web pages to one another, either within a single website or between websites. Links are a fundamental aspect of the Web. By uploading content to the Internet and linking it to pages created by other people, you become an active participant in the World Wide Web.
* HTML uses "markup" to annotate text, images, and other content for display in a Web browser. HTML markup includes special "elements" such as [<head>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/head), [<title>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/title), [<body>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/body), [<header>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/header), [<footer>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/footer), [<article>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/article), [<section>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/section), [<p>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/p), [<div>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/div), [<span>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/span), [<img>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/img), [<aside>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/aside), [<audio>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/audio), [<canvas>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/canvas), [<datalist>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/datalist), [<details>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/details), [<embed>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/embed), [<nav>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/nav), [<output>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/output), [<progress>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/progress), [<video>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/video), [<ul>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/ul), [<ol>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/ol), [<li>](https://developer.mozilla.org/en-US/docs/Web/HTML/Element/li) and many others.
* An HTML element is set off from other text in a document by "tags", which consist of the element name surrounded by "<" and ">".  The name of an element inside a tag is case insensitive. That is, it can be written in uppercase, lowercase, or a mixture. For example, the <title> tag can be written as <Title>, <TITLE>, or in any other way.

**CSS**

* Cascading Style Sheets (CSS) is a [style sheet language](https://en.wikipedia.org/wiki/Style_sheet_language) used for describing the [presentation](https://en.wikipedia.org/wiki/Presentation_semantics) of a document written in a [markup language](https://en.wikipedia.org/wiki/Markup_language) such as [HTML](https://en.wikipedia.org/wiki/HTML).[[1]](https://en.wikipedia.org/wiki/CSS#cite_note-1) CSS is a cornerstone technology of the [World Wide Web](https://en.wikipedia.org/wiki/World_Wide_Web), alongside HTML and [JavaScript](https://en.wikipedia.org/wiki/JavaScript).[[2]](https://en.wikipedia.org/wiki/CSS#cite_note-2)
* CSS is designed to enable the separation of presentation and content, including [layout](https://en.wikipedia.org/wiki/Page_layout), [colors](https://en.wikipedia.org/wiki/Color), and [fonts](https://en.wikipedia.org/wiki/Typeface).[[3]](https://en.wikipedia.org/wiki/CSS#cite_note-3) This separation can improve content [accessibility](https://en.wikipedia.org/wiki/Accessibility), provide more flexibility and control in the specification of presentation characteristics, enable multiple [web pages](https://en.wikipedia.org/wiki/Web_page) to share formatting by specifying the relevant CSS in a separate .css file which reduces complexity and repetition in the structural content as well as enabling the .css file to be [cached](https://en.wikipedia.org/wiki/Cache_(computing)) to improve the page load speed between the pages that share the file and its formatting.
* Separation of formatting and content also makes it feasible to present the same markup page in different styles for different rendering methods, such as on-screen, in print, by voice (via speech-based browser or [screen reader](https://en.wikipedia.org/wiki/Screen_reader)), and on [Braille-based](https://en.wikipedia.org/wiki/Braille_display) tactile devices. CSS also has rules for alternate formatting if the content is accessed on a [mobile device](https://en.wikipedia.org/wiki/Mobile_device).[[4]](https://en.wikipedia.org/wiki/CSS#cite_note-4)
* The name cascading comes from the specified priority scheme to determine which style rule applies if more than one rule matches a particular element. This cascading priority scheme is predictable.
* The CSS specifications are maintained by the [World Wide Web Consortium](https://en.wikipedia.org/wiki/World_Wide_Web_Consortium) (W3C). Internet media type ([MIME type](https://en.wikipedia.org/wiki/MIME_media_type)) text/css is registered for use with CSS by [RFC 2318](https://tools.ietf.org/html/rfc2318) (March 1998). The W3C operates a free [CSS validation service](https://en.wikipedia.org/wiki/W3C_Markup_Validation_Service#CSS_validation) for CSS documents.[[5]](https://en.wikipedia.org/wiki/CSS#cite_note-5)
* In addition to HTML, other markup languages support the use of CSS including [XHTML](https://en.wikipedia.org/wiki/XHTML), [plain XML](https://en.wikipedia.org/wiki/Plain_Old_XML), [SVG](https://en.wikipedia.org/wiki/Scalable_Vector_Graphics), and [XUL](https://en.wikipedia.org/wiki/XUL).

**JavaScript**

* JavaScript ([/ˈdʒɑːvəˌskrɪpt/](https://en.wikipedia.org/wiki/Help:IPA/English)),[[6]](https://en.wikipedia.org/wiki/JavaScript#cite_note-6) often abbreviated as JS, is a [programming language](https://en.wikipedia.org/wiki/Programming_language) that conforms to the [ECMAScript](https://en.wikipedia.org/wiki/ECMAScript) specification.[[7]](https://en.wikipedia.org/wiki/JavaScript#cite_note-tc39-7) JavaScript is [high-level](https://en.wikipedia.org/wiki/High-level_programming_language), often [just-in-time compiled](https://en.wikipedia.org/wiki/Just-in-time_compilation), and [multi-paradigm](https://en.wikipedia.org/wiki/Programming_paradigm). It has [curly-bracket syntax](https://en.wikipedia.org/wiki/List_of_programming_languages_by_type#Curly-bracket_languages), [dynamic typing](https://en.wikipedia.org/wiki/Dynamic_typing), [prototype-based](https://en.wikipedia.org/wiki/Prototype-based_programming) [object-orientation](https://en.wikipedia.org/wiki/Object-oriented_programming), and [first-class functions](https://en.wikipedia.org/wiki/First-class_function).
* Alongside [HTML](https://en.wikipedia.org/wiki/HTML) and [CSS](https://en.wikipedia.org/wiki/CSS), JavaScript is one of the core technologies of the [World Wide Web](https://en.wikipedia.org/wiki/World_Wide_Web).[[8]](https://en.wikipedia.org/wiki/JavaScript#cite_note-8) JavaScript enables interactive [web pages](https://en.wikipedia.org/wiki/Web_page) and is an essential part of [web applications](https://en.wikipedia.org/wiki/Web_application). The vast majority of [websites](https://en.wikipedia.org/wiki/Website) use it for [client-side](https://en.wikipedia.org/wiki/Client-side) page behavior,[[9]](https://en.wikipedia.org/wiki/JavaScript#cite_note-deployedstats-9) and all major [web browsers](https://en.wikipedia.org/wiki/Web_browser) have a dedicated [JavaScript engine](https://en.wikipedia.org/wiki/JavaScript_engine) to execute it.
* As a multi-paradigm language, JavaScript supports [event-driven](https://en.wikipedia.org/wiki/Event-driven_programming), [functional](https://en.wikipedia.org/wiki/Functional_programming), and [imperative](https://en.wikipedia.org/wiki/Imperative_programming) [programming styles](https://en.wikipedia.org/wiki/Programming_paradigm). It has [application programming interfaces](https://en.wikipedia.org/wiki/Application_programming_interface) (APIs) for working with text, dates, [regular expressions](https://en.wikipedia.org/wiki/Regular_expression), standard [data structures](https://en.wikipedia.org/wiki/Data_structure), and the [Document Object Model](https://en.wikipedia.org/wiki/Document_Object_Model) (DOM). However, the language itself does not include any [input/output](https://en.wikipedia.org/wiki/Input/output) (I/O), such as [networking](https://en.wikipedia.org/wiki/Computer_network), [storage](https://en.wikipedia.org/wiki/Data_storage), or [graphics](https://en.wikipedia.org/wiki/Computer_graphics) facilities, as the host environment (usually a web browser) provides those APIs.
* JavaScript engines were originally used only in web browsers, but they are now embedded in some [servers](https://en.wikipedia.org/wiki/Server_(computing)), usually via [Node.js](https://en.wikipedia.org/wiki/Node.js). They are also embedded in a variety of applications created with [frameworks](https://en.wikipedia.org/wiki/Software_framework) such as [Electron](https://en.wikipedia.org/wiki/Electron_(software_framework)) and [Cordova](https://en.wikipedia.org/wiki/Apache_Cordova).
* Although there are similarities between JavaScript and [Java](https://en.wikipedia.org/wiki/Java_(programming_language)), including language name, [syntax](https://en.wikipedia.org/wiki/Syntax_(programming_languages)), and respective [standard libraries](https://en.wikipedia.org/wiki/Standard_library), the two languages are distinct and differ greatly in design.

**Boostrap**

* Bootstrap is a [free and open-source](https://en.wikipedia.org/wiki/Free_and_open-source) [CSS framework](https://en.wikipedia.org/wiki/CSS_framework) directed at responsive, [mobile-first](https://en.wikipedia.org/wiki/Responsive_web_design#Mobile_first,_unobtrusive_JavaScript,_and_progressive_enhancement) [front-end web development](https://en.wikipedia.org/wiki/Front-end_web_development). It contains [CSS](https://en.wikipedia.org/wiki/CSS)- and (optionally) [JavaScript](https://en.wikipedia.org/wiki/JavaScript)-based design templates for [typography](https://en.wikipedia.org/wiki/Web_design#Typography), [forms](https://en.wikipedia.org/wiki/Form_(HTML)), [buttons](https://en.wikipedia.org/wiki/Button_(computing)#HTML), [navigation](https://en.wikipedia.org/wiki/Web_navigation#Local_website_navigation), and other interface components.
* Bootstrap is a web framework that focuses on simplifying the development of informative web pages (as opposed to [web apps](https://en.wikipedia.org/wiki/Web_Apps)). The primary purpose of adding it to a web project is to apply Bootstrap's choices of color, size, font and layout to that project. As such, the primary factor is whether the developers in charge find those choices to their liking. Once added to a project, Bootstrap provides basic style definitions for all [HTML elements](https://en.wikipedia.org/wiki/HTML_element). The result is a uniform appearance for prose, tables and form elements across [web browsers](https://en.wikipedia.org/wiki/Web_browser). In addition, developers can take advantage of CSS classes defined in Bootstrap to further customize the appearance of their contents. For example, Bootstrap has provisioned for light- and dark-colored tables, page headings, more prominent pull quotes, and text with a highlight.
* Bootstrap also comes with several JavaScript components in the form of [jQuery](https://en.wikipedia.org/wiki/JQuery) plugins. They provide additional user interface elements such as [dialog boxes](https://en.wikipedia.org/wiki/Dialog_box), [tooltips](https://en.wikipedia.org/wiki/Tooltip), and carousels. Each Bootstrap component consists of an HTML structure, CSS declarations, and in some cases accompanying JavaScript code. They also extend the functionality of some existing interface elements, including for example an auto-complete function for input fields.
* Example of a webpage using Bootstrap framework rendered in [Firefox](https://en.wikipedia.org/wiki/Firefox)
* The most prominent components of Bootstrap are its layout components, as they affect an entire web page. The basic layout component is called "Container", as every other element in the page is placed in it. Developers can choose between a fixed-width container and a fluid-width container. While the latter always fills the width of the web page, the former uses one of the four predefined fixed widths, depending on the size of the screen showing the page:
* Smaller than 576 pixels
* 576–768 pixels
* 768–992 pixels
* 992–1200 pixels
* Larger than 1200 pixels
* Once a container is in place, other Bootstrap layout components implement a CSS Flexbox layout through defining rows and columns.
* A precompiled version of Bootstrap is available in the form of one CSS file and three JavaScript files that can be readily added to any project. The raw form of Bootstrap, however, enables developers to implement further customization and size optimizations. This raw form is modular, meaning that the developer can remove unneeded components, apply a theme and modify the uncompiled [Sass](https://en.wikipedia.org/wiki/Sass_(stylesheet_language)) files.

**jQuery**

* jQuery is a [JavaScript library](https://en.wikipedia.org/wiki/JavaScript_library) designed to simplify [HTML](https://en.wikipedia.org/wiki/HTML) [DOM](https://en.wikipedia.org/wiki/Document_Object_Model) tree traversal and manipulation, as well as [event handling](https://en.wikipedia.org/wiki/Event_handling), [CSS animation](https://en.wikipedia.org/wiki/CSS_animation), and [Ajax](https://en.wikipedia.org/wiki/Ajax_(programming)).[[3]](https://en.wikipedia.org/wiki/JQuery#cite_note-jquery.com-3) It is [free, open-source software](https://en.wikipedia.org/wiki/Free_and_open_source_software) using the permissive [MIT License](https://en.wikipedia.org/wiki/MIT_License).[[4]](https://en.wikipedia.org/wiki/JQuery#cite_note-jqorg-license2-4) As of May 2019, jQuery is used by 73% of the 10 million most popular websites.[[5]](https://en.wikipedia.org/wiki/JQuery#cite_note-:0-5) [Web](https://en.wikipedia.org/wiki/World_Wide_Web) analysis indicates that it is the most widely deployed JavaScript library by a large margin, having at least 3 to 4 times more usage than any other JavaScript library.[[5]](https://en.wikipedia.org/wiki/JQuery#cite_note-:0-5)[[6]](https://en.wikipedia.org/wiki/JQuery#cite_note-libscore.com-6)
* jQuery's syntax is designed to make it easier to navigate a document, select [DOM](https://en.wikipedia.org/wiki/Document_Object_Model) elements, create [animations](https://en.wikipedia.org/wiki/Animation), handle [events](https://en.wikipedia.org/wiki/Event_(computing)), and develop [Ajax](https://en.wikipedia.org/wiki/Ajax_(programming)) applications. jQuery also provides capabilities for developers to create [plug-ins](https://en.wikipedia.org/wiki/Plug-in_(computing)) on top of the JavaScript library. This enables developers to create [abstractions](https://en.wikipedia.org/wiki/Abstraction_(computer_science)) for low-level interaction and animation, advanced effects and high-level, themeable widgets. The modular approach to the jQuery library allows the creation of powerful [dynamic web pages](https://en.wikipedia.org/wiki/Dynamic_web_page) and Web applications.
* The set of [jQuery core features](https://en.wikipedia.org/wiki/JQuery#Features)—DOM element selections, traversal and manipulation—enabled by its *selector engine* (named "Sizzle" from v1.3), created a new "programming style", fusing algorithms and DOM data structures. This style influenced the architecture of other [JavaScript frameworks](https://en.wikipedia.org/wiki/Comparison_of_JavaScript_frameworks) like [YUI v3](https://en.wikipedia.org/wiki/YUI_Library) and [Dojo](https://en.wikipedia.org/wiki/Dojo_Toolkit), later stimulating the creation of the standard *Selectors API*.[[7]](https://en.wikipedia.org/wiki/JQuery#cite_note-7) Later, this style has been enhanced with a deeper algorithm-data fusion in an heir of jQuery, the [D3.js](https://en.wikipedia.org/wiki/D3.js) framework.
* [Microsoft](https://en.wikipedia.org/wiki/Microsoft) and [Nokia](https://en.wikipedia.org/wiki/Nokia) bundle jQuery on their platforms.[[8]](https://en.wikipedia.org/wiki/JQuery#cite_note-2008-09-28-8) Microsoft includes it with [Visual Studio](https://en.wikipedia.org/wiki/Microsoft_Visual_Studio)[[9]](https://en.wikipedia.org/wiki/JQuery#cite_note-9) for use within Microsoft's [ASP.NET AJAX](https://en.wikipedia.org/wiki/ASP.NET_AJAX) and [ASP.NET MVC](https://en.wikipedia.org/wiki/ASP.NET_MVC) frameworks while Nokia has integrated it into the Web Run-Time widget development platform.

**Ajax**

* Ajax (also AJAX [/ˈeɪdʒæks/](https://en.wikipedia.org/wiki/Help:IPA/English); short for "Asynchronous [JavaScript](https://en.wikipedia.org/wiki/JavaScript) and [XML](https://en.wikipedia.org/wiki/XML)")[[1]](https://en.wikipedia.org/wiki/Ajax_(programming)#cite_note-garrett-1)[[2]](https://en.wikipedia.org/wiki/Ajax_(programming)#cite_note-2) is a set of [web development](https://en.wikipedia.org/wiki/Web_development) techniques using many web technologies on the [client side](https://en.wikipedia.org/wiki/Client_side) to create [asynchronous](https://en.wikipedia.org/wiki/Asynchronous_I/O) [web applications](https://en.wikipedia.org/wiki/Web_application). With Ajax, web applications can send and retrieve data from a [server](https://en.wikipedia.org/wiki/Web_server) asynchronously (in the background) without interfering with the display and behaviour of the existing page. By decoupling the data interchange layer from the presentation layer, Ajax allows web pages and, by extension, web applications, to change content dynamically without the need to reload the entire page.[[3]](https://en.wikipedia.org/wiki/Ajax_(programming)#cite_note-wrox-3) In practice, modern implementations commonly utilize [JSON](https://en.wikipedia.org/wiki/JSON) instead of XML.
* Ajax is not a single technology, but rather a group of technologies. [HTML](https://en.wikipedia.org/wiki/Hypertext_Markup_Language) and [CSS](https://en.wikipedia.org/wiki/Cascading_Style_Sheets) can be used in combination to mark up and style information. The webpage can then be modified by JavaScript to dynamically display—and allow the user to interact with—the new information. The built-in [XMLHttpRequest](https://en.wikipedia.org/wiki/XMLHttpRequest) object, or since 2017 the new "fetch()" function within JavaScript, is commonly used to execute Ajax on webpages, allowing websites to load content onto the screen without refreshing the page. Ajax is not a new technology, or different language, just existing technologies used in new ways.
* The term Ajax has come to represent a broad group of Web technologies that can be used to implement a Web application that communicates with a server in the background, without interfering with the current state of the page. In the article that coined the term Ajax,[[1]](https://en.wikipedia.org/wiki/Ajax_(programming)#cite_note-garrett-1)[[3]](https://en.wikipedia.org/wiki/Ajax_(programming)#cite_note-wrox-3) Jesse James Garrett explained that the following technologies are incorporated:
* [HTML](https://en.wikipedia.org/wiki/HTML) (or [XHTML](https://en.wikipedia.org/wiki/XHTML)) and [CSS](https://en.wikipedia.org/wiki/CSS) for presentation
* The [Document Object Model](https://en.wikipedia.org/wiki/Document_Object_Model) (DOM) for dynamic display of and interaction with data
* [JSON](https://en.wikipedia.org/wiki/JSON) or [XML](https://en.wikipedia.org/wiki/XML) for the interchange of data, and [XSLT](https://en.wikipedia.org/wiki/XSLT) for XML manipulation
* The [XMLHttpRequest](https://en.wikipedia.org/wiki/XMLHttpRequest) object for asynchronous communication
* [JavaScript](https://en.wikipedia.org/wiki/JavaScript) to bring these technologies together
* Since then, however, there have been a number of developments in the technologies used in an Ajax application, and in the definition of the term Ajax itself. XML is no longer required for data interchange and, therefore, XSLT is no longer required for the manipulation of data. [JavaScript Object Notation](https://en.wikipedia.org/wiki/JSON) (JSON) is often used as an alternative format for data interchange,[[14]](https://en.wikipedia.org/wiki/Ajax_(programming)#cite_note-tapestry-14) although other formats such as preformatted HTML or plain text can also be used.[[15]](https://en.wikipedia.org/wiki/Ajax_(programming)#cite_note-devx-json-15) A variety of popular JavaScript libraries, including JQuery, include abstractions to assist in executing Ajax requests.

**PHP**

* Hypertext Preprocessor is a server side scripting language designed for web development and also used as a general purpose programming language. It was originally created by Rasmus Lerdorf in 1994. The php reference is now produced by the php group. Php originally stood for personal home page. But now it stands for recursive initialism php hypertext preprocessor.
* Php code may be embedded into html code. 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 executable. The web server combines the results of 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 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, with the original implementation acting as the de facto standard which other implementations aimed to follow. Since 2014 work has gone on to create a formal php specification

## What is a PHP File?

* PHP files can contain text, HTML, CSS, JavaScript, and PHP code
* PHP code are executed on the server, and the result is returned to the browser as plain HTML
* PHP files have extension ".php"

## What Can PHP Do?

* PHP can generate dynamic page content
* PHP can create, open, read, write, delete, and close files on the server
* PHP can collect form data
* PHP can send and receive cookies
* PHP can add, delete, modify data in your database
* PHP can be used to control user-access
* PHP can encrypt data

With PHP you are not limited to output HTML. You can output images, PDF files, and even flash movies. You can also output any text, such as XHTML and XML.

## Why PHP?

* PHP runs on various platforms (Windows, Linux, UNIX, Mac OS X, etc.)
* PHP is compatible with almost all servers used today (Apache, IIS, etc.)
* PHP supports a wide range of databases
* PHP is free. Download it from the official PHP resource: [www.php.net](http://www.php.net/)
* PHP is easy to learn and runs efficiently on the server side

PHP is an amazing and popular language!

It is powerful enough to be at the core of the biggest blogging system on the web (WordPress)!  
It is deep enough to run the largest social network (Facebook)!  
It is also easy enough to be a beginner's first server side language!

**Advantages of PHP:**

The reason behind the popularity of PHP is its several advantages. PHP is most suited for the purpose of web development. The advantages of PHP are discussed briefly below:

1. **Cross Platform.**

* All the PHP based applications can run on various types of platforms. PHP is supported by majority of Operating Systems, some of which includes Solaris, UNIX, Windows and Linux. The mentioned platforms can be used to write codes in PHP and also view web pages or run the PHP based applications.
* PHP easily interfaces with MySQL and Apache both. An effortless integration of PHP can be done with various other technologies like Java and there is no requirement of re-development. Therefore, saving both time and money, giving it an important advantage.

1. **Easy database connection.**

* A programming language like PHP is widely used on the internet and needs to connect to the database very often. Therefore, having a feature that could help PHP to connect to database easily is mandatory. Several websites such as the ecommerce websites require good database management system.
* PHP has a built-in module that helps it in connecting with database easily. Therefore, PHP has a great demand in the field of web development where a data driven website needs to be developed. PHP significantly reduces the time needed in developing the web application that needs an efficient database management system.

1. **Easy to use.**

* PHP is widely used because it is easy to use. In contrast with other programming languages that are complex, PHP is simple, fluent, clean and organized; hence it is a boon for the new users. PHP has a well-organized syntax which is logical at the same time.
* PHP does not require any intensive studying or manual to use it. Command functions of PHP are easily understood as the user can easily figure out from the name of the commands itself what it does. A person who is new to PHP can still code because the syntax is somewhat similar to C.
* A person who is new to PHP can still code because the syntax is somewhat similar to C. Hence, if a person who knows C can easily code in PHP. Hence, it is easier to create and optimize the application using PHP.

1. **Speed**

* Speed is the primary need of web development. There are people who face the challenge of slow internet connection and slow data speed. Furthermore, a fast loading website is always preferred by people across the globe.When compared to other programming languages, PHP is found to be the fastest programming language.
* In normal circumstances, it takes a lot of time to connect to the database, when you attempt to fetch certain data from the database. It takes a lot of time in connecting to the database, then executing the statement and finally getting the data. PHP performs these set of tasks faster than other scripting languages. PHP is faster in both connecting to the database and in using other important applications.
* The high speed of PHP gives it an advantage over other scripting languages and gives it an application in important administrations such as the server administration and mail functionalities.

1. **Open source.**

* One of the important advantages of PHP is that it is Open Source. Therefore, PHP is readily available and is entirely free. In contrast to other scripting languages used for web development which requires the user to pay for the support files, PHP is open to everyone, anytime and anywhere.
* A beginner in PHP need not worry about the support as PHP is maintained and developed by a large group of PHP developers which helps in creating support community of PHP that helps people in PHP implementation and manipulation.

[**MYSQL**](https://www.mysql.com/)

MYSQL is an open source software. It is actually a relational database management system(RDBMS). This SQL stands for Structured Query Language.It is the most popular and best RDBMS used for developing a variety of web-based software applications. With the help of MYSQL, it is possible to organize the information, manage, retrieve and update the data whenever you wish to do. 

**XAMPP**

XAMPP is an open source free software developed by [Apache friends](https://www.apachefriends.org/download.html). XAMPP software package contains Apache distributions for Apache server, MariaDB, PHP, and Perl. And it is basically a local host or a local server. This local server works on your own desktop or laptop computer. You can just install this software on your laptop or desktop and test the clients or your website before uploading it to the remote web server or computer. This XAMPP server software gives you suitable environment for testing MYSQL, PHP, Apache and Perl projects on the local computer.

The full form of XAMPP is X stands for Cross-platform, (A) Apache server, (M) MariaDB, (P) PHP and (P)Perl. The Cross-platform usually means that it can run on any computer with any operating system.

Next MariaDB is the most famous database server and it is developed by MYSQL team. PHP usually provides a space for web development. PHP is a server-side scripting language. And the last Perl is a programming language and is used to develop a web application.

### What are the Main Tools of XAMPP and its definition?

XAMPP contains tools such as Apache, MYSQL, PHP, and Perl. We will see these tools.

[**Apache**](https://httpd.apache.org/)

Apache server is an open source free software which is initially developed by a group of software developers and now it is maintained by Apache software foundation. Apache HTTP is a remote server(computer) if someone request files, images or documents using their browser they will serve those files to clients using HTTP servers. Mainly hosting companies use this application to create a VPS server and shared hosting for their clients.

[MYSQL](https://www.mysql.com/)

MYSQL is an open source software. It is actually a relational database management system(RDBMS). This SQL stands for Structured Query Language.It is the most popular and best RDBMS used for developing a variety of web-based software applications. With the help of MYSQL, it is possible to organize the information, manage, retrieve and update the data whenever you wish to do.

**PHP**

The full form of PHP is Hypertext Preprocessor. It is a server-side scripting language that helps you to create dynamic websites. This language is mainly used to build web-based software applications. It is an open source software and works fine with MYSQL. What actually happens is, the PHP code will be executed on the server and at the browser side its HTML code will be displayed.

[Perl](https://www.perl.org/)

Perl is usually said to be general purpose programming language. This Perl language is interpreted and highly dynamic. Actually, this language is used for web development, GUI development, system administration etc. Perl is capable of working with HTML, XML and other markup languages.

In the latest version of XAMPP, there are additional tools such as Mail server Mercury, OpenSSL, phpMyAdmin etc. With the above tools, you can create a full-fledged desktop server.

**XAMPP Screen View**

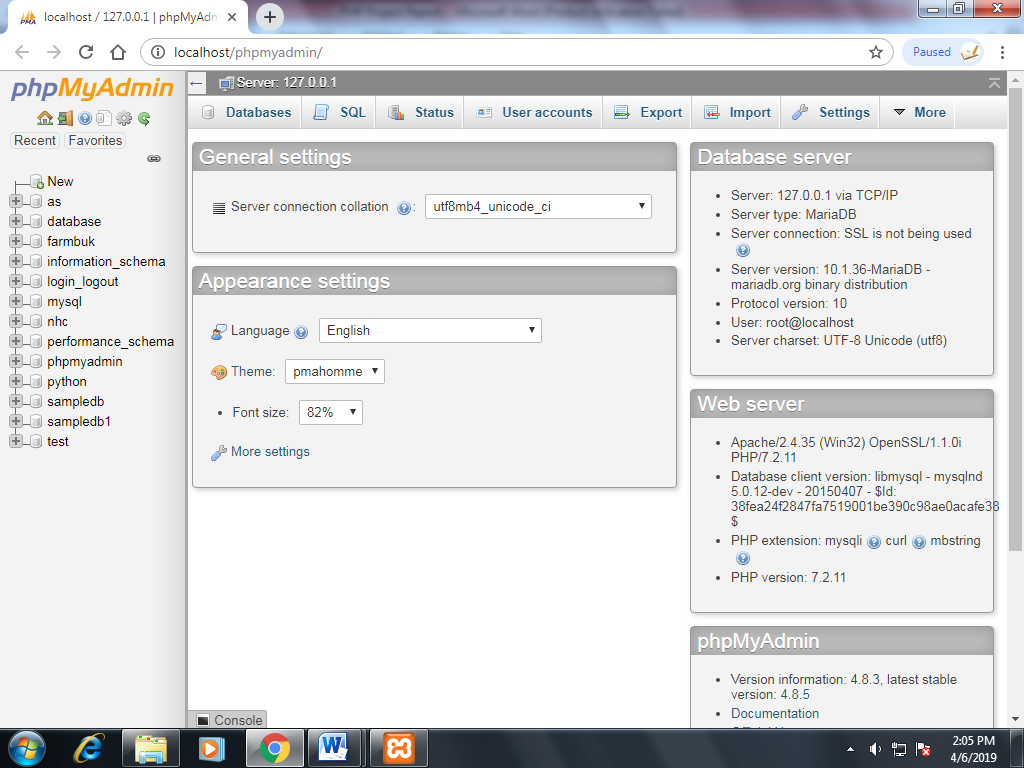
**Control Panel**

****

**Apache**

****

**MySQL**

****

**HARDWARE & SOFTWARE REQUIREMENT SPECIFICATION**

**Hardware specifications**

[**Operating system**](https://en.wikipedia.org/wiki/Operating_system) **:** [Windows Server 2008](https://en.wikipedia.org/wiki/Windows_Server_2008) and later [Windows Vista](https://en.wikipedia.org/wiki/Windows_Vista) and later [Mac OS X 10.6](https://en.wikipedia.org/wiki/Mac_OS_X_10.6) and later

[CentOS](https://en.wikipedia.org/wiki/CentOS), [Ubuntu](https://en.wikipedia.org/wiki/Ubuntu_(operating_system)), [Fedora](https://en.wikipedia.org/wiki/Fedora_(operating_system)), [Gentoo](https://en.wikipedia.org/wiki/Gentoo_Linux),  [Arch](https://en.wikipedia.org/wiki/Arch_Linux), [SUSE](https://en.wikipedia.org/wiki/SUSE)

**Platform** : [IA-32](https://en.wikipedia.org/wiki/IA-32) (Windows package only) and [x64](https://en.wikipedia.org/wiki/X64) (macOS and Linux packages only)

**Size** : Windows: 156 MB Linux: 150 MB

macOS: 161 MB

**Software specifications**

**Database :** MySQL

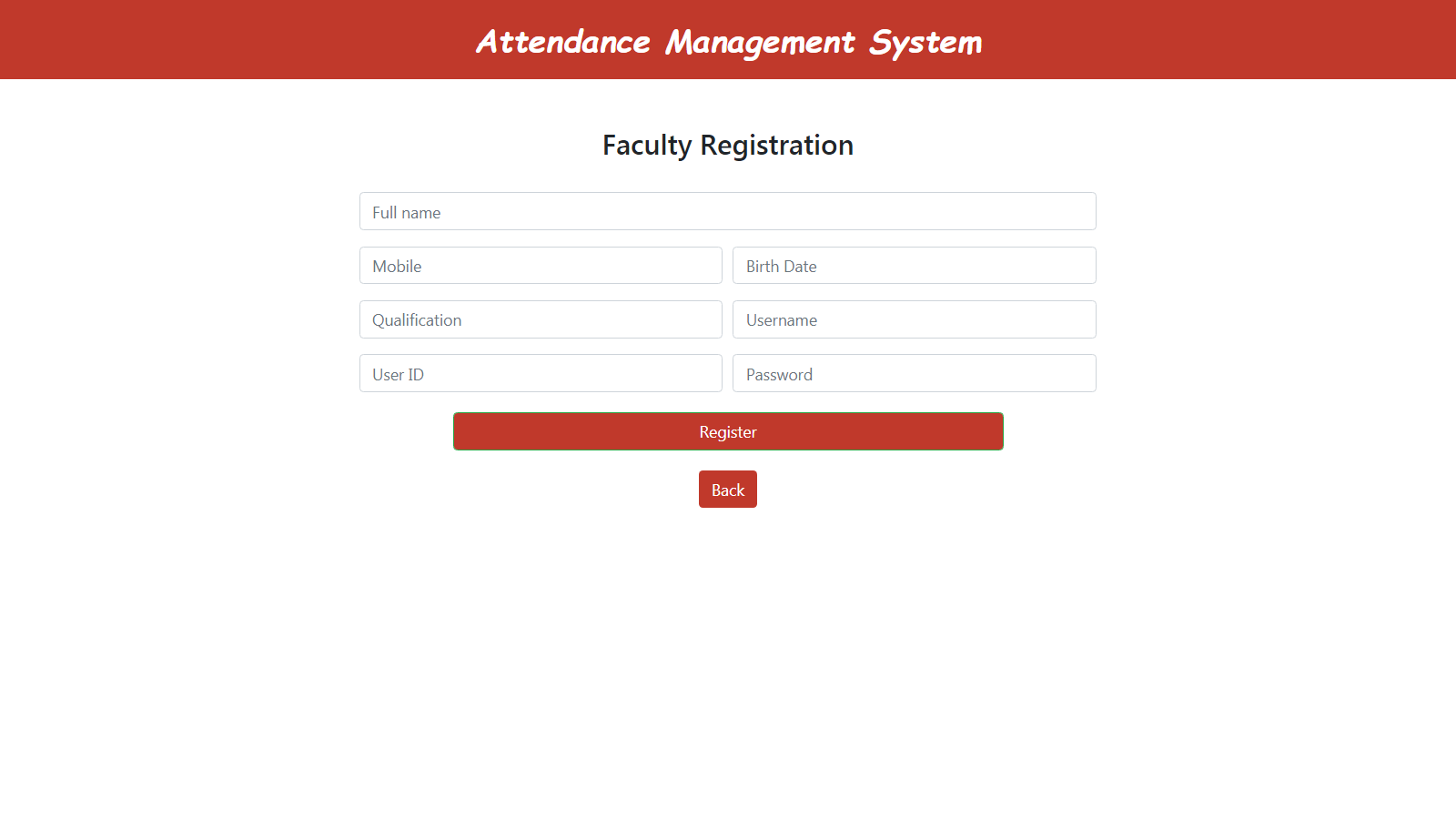
**Server :** Apache

**PROJECT SNAP SHOTS**

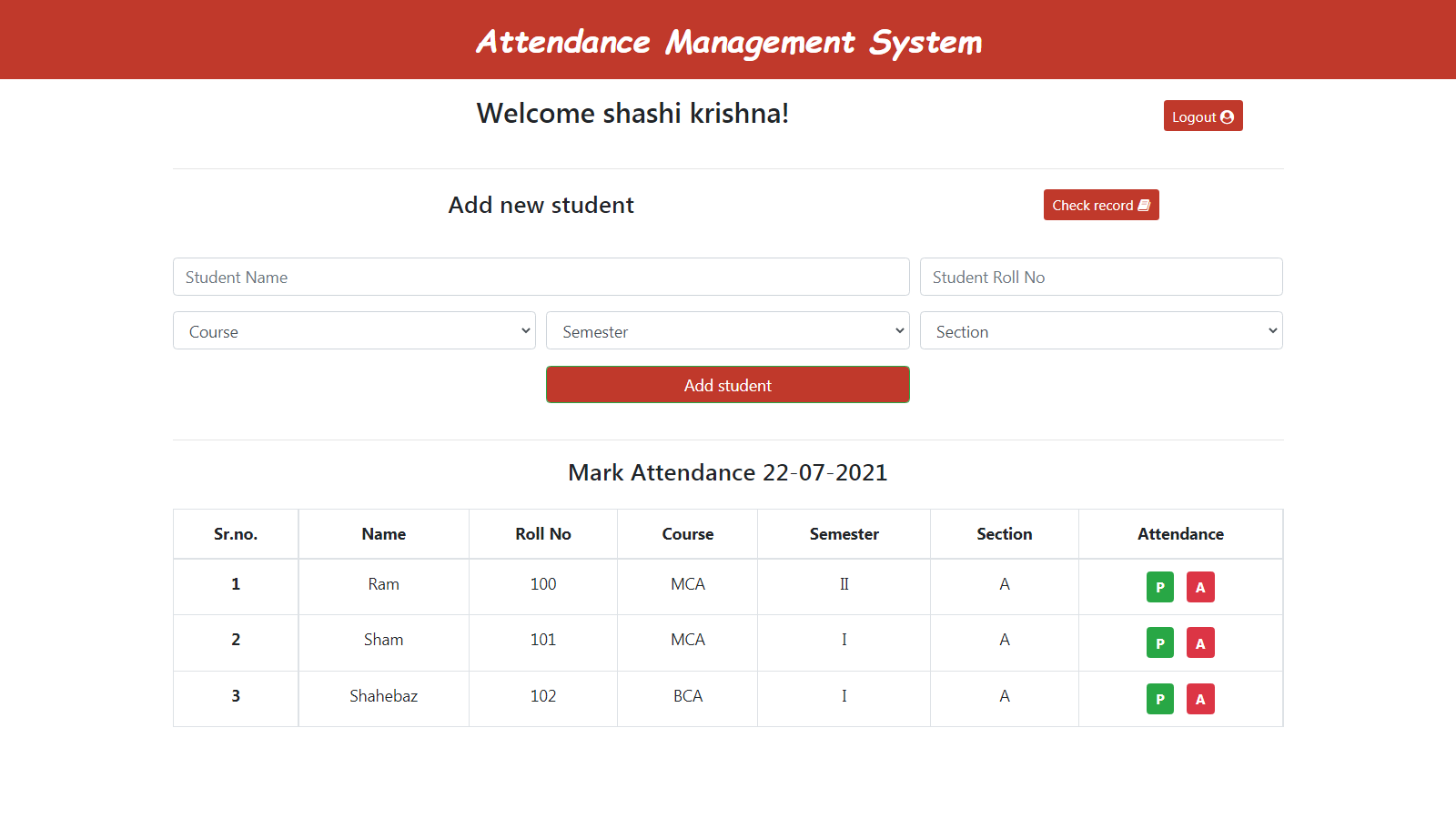
**Homepage**



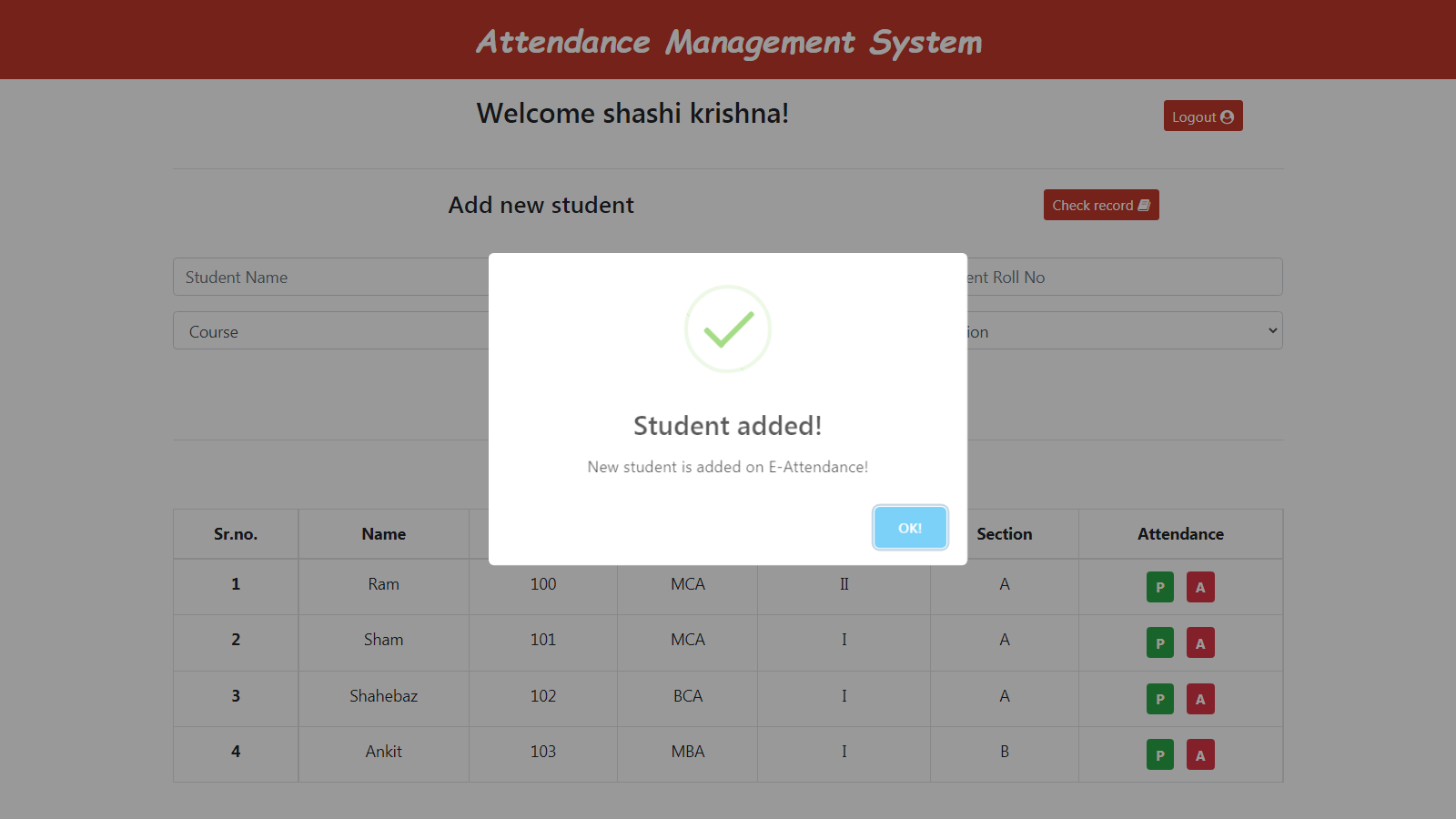
**Registration page**



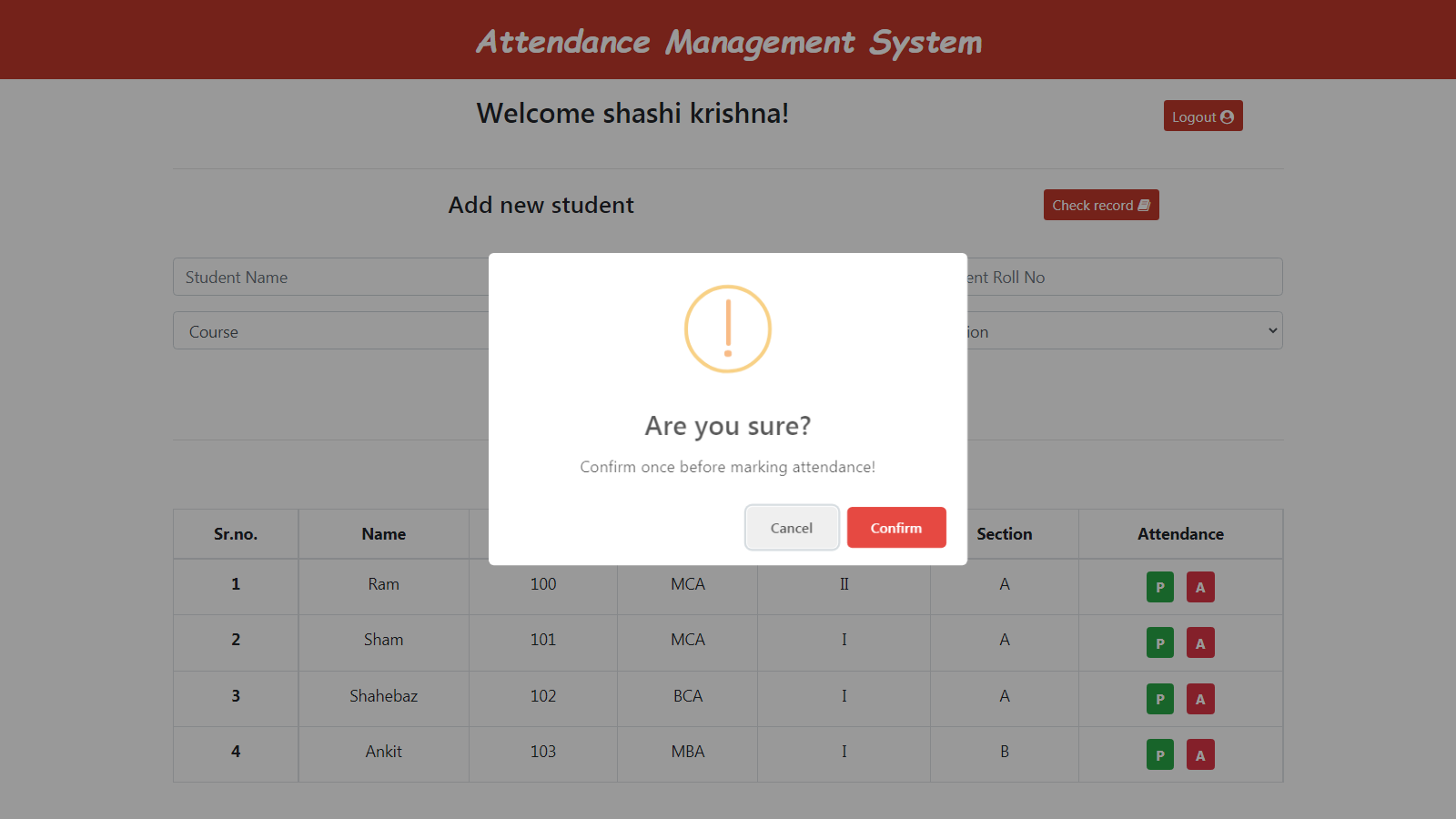
**Faculty Dashboard**



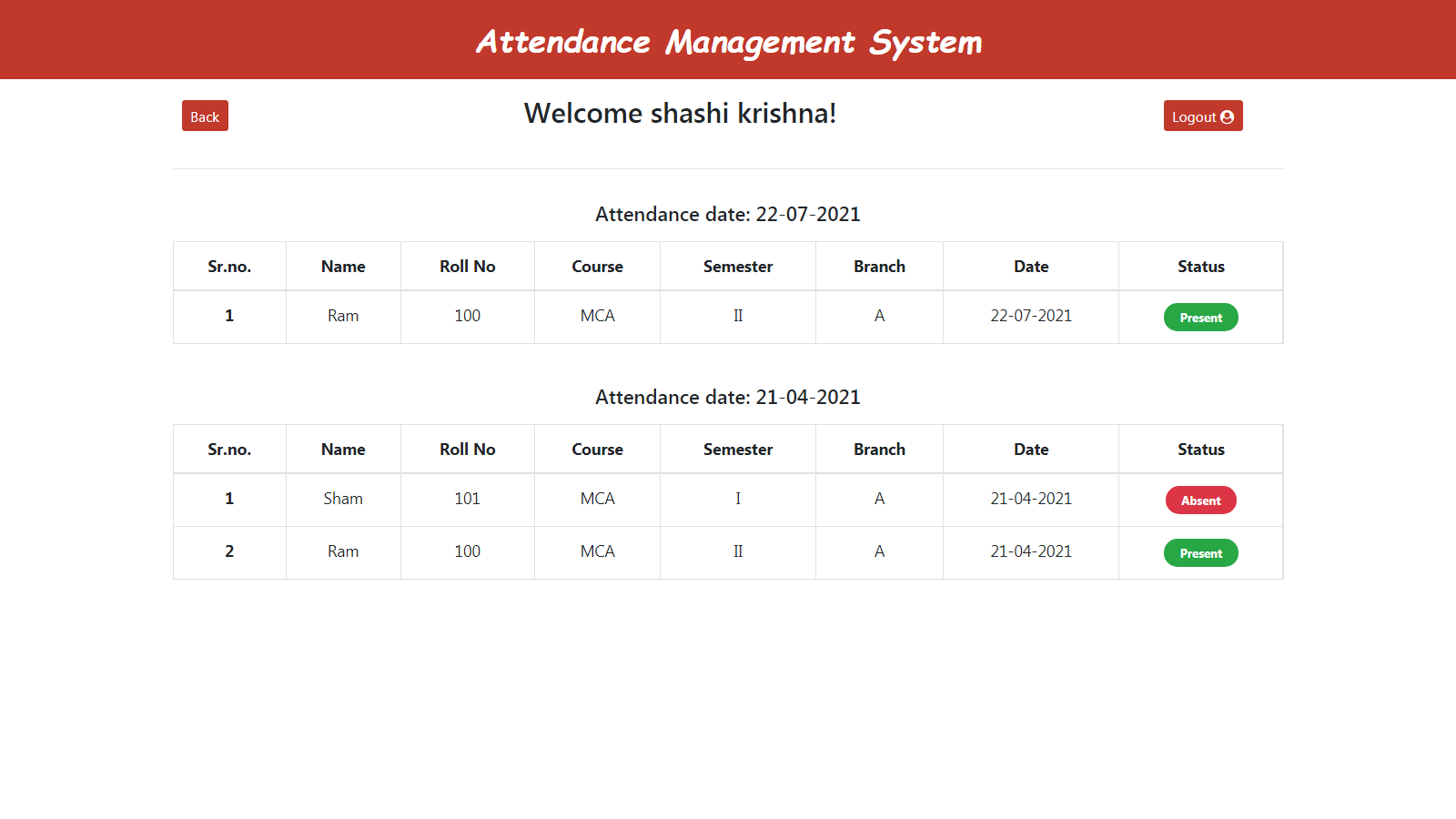
**Adding student**



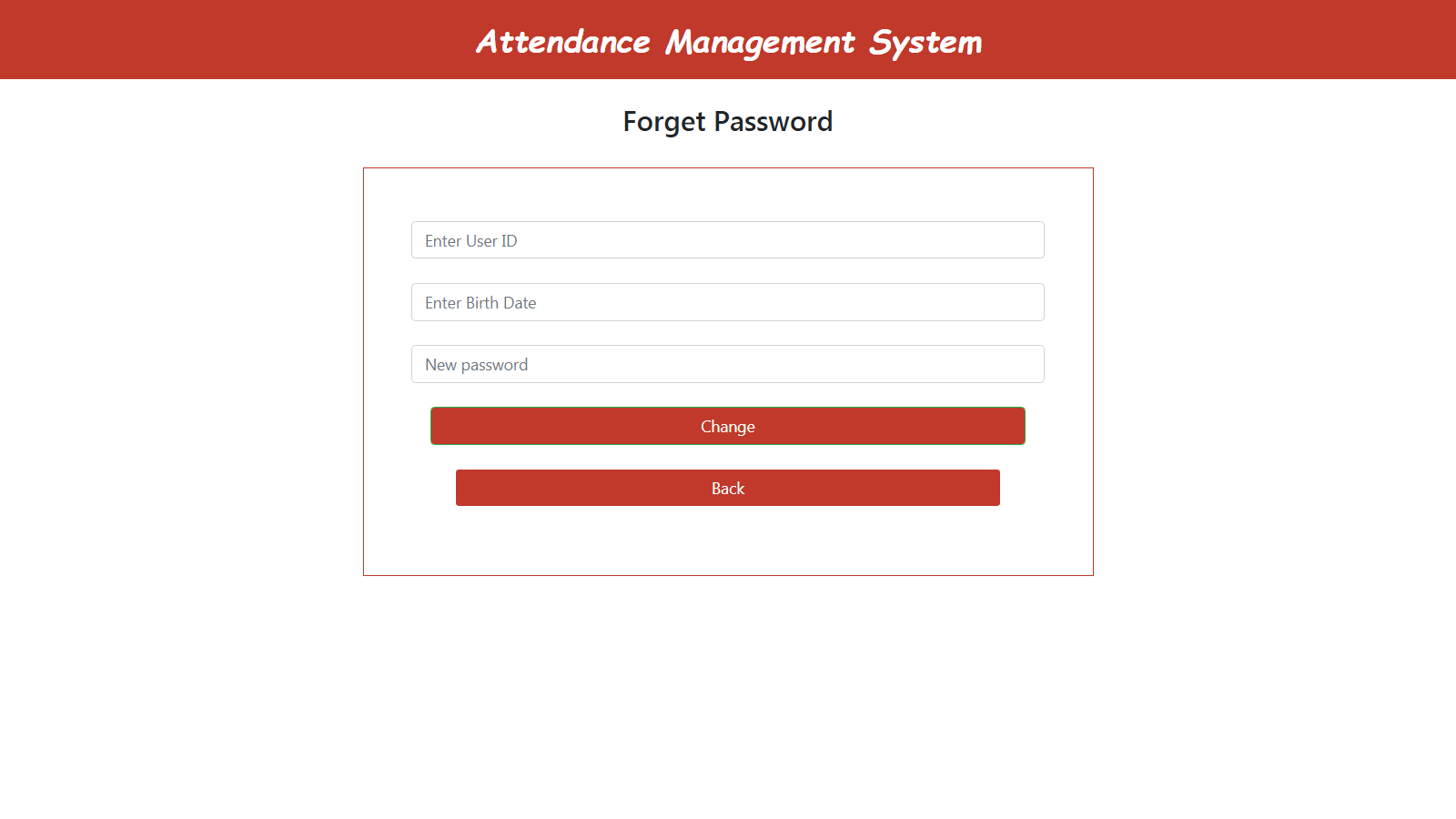
**Marking attendance**



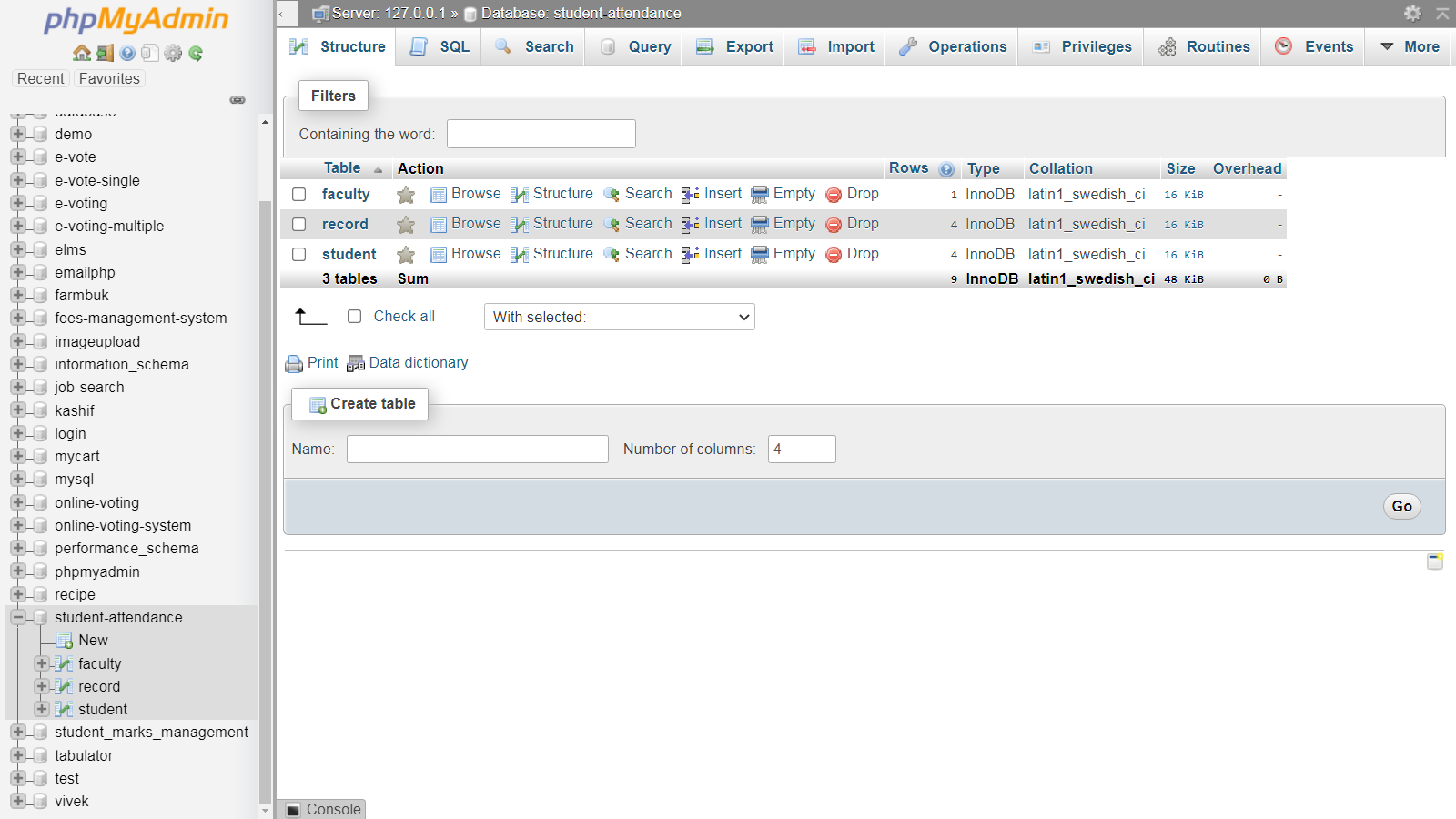
**Attendance records**



**Forget password**



**Database structure**



**SOURCE CODE**

**Homepage (HTML)**

<!doctype html>

<html lang="en">

<head>

  <!-- Required meta tags -->

  <meta charset="utf-8">

  <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">

  <!-- Bootstrap CSS -->

  <title>Home - Attendance Management System</title>

  <link rel="stylesheet" href="resources/Bootstrap/css/bootstrap.min.css">

    <link rel="stylesheet" href="resources/font-awesome/css/font-awesome.min.css">

    <link rel="stylesheet" href="resources/css/stylesheet.css">

    <script src="resources/Jquery/jquery-3.5.1.js"></script>

    <script src="resources/Bootstrap/js/bootstrap.min.js"></script>

    <script src="resources/js/sweetalert.min.js"></script>

</head>

<body>

<div id="headerSection" class="sticky-top">

    <div class="container" >

        <div class="row">

            <div class="col-sm-12 text-center pt-3">

                <p id="brand">Attendance Management System</p>

            </div>

        </div>

    </div>

</div>

<div id="bodySection">

    <div class="container">

        <div class="row pt-4 pb-2 align-items-center">

            <div class="col-md-12">

                <img src="uploads/logo.png" class="img-fluid">

            </div>

        </div>

        <div class="row py-1">

            <div class="col-md-7 text-center">

                <img src="uploads/name.jpg" class="img-fluid" width="100%">

            </div>

            <div class="col-md-5 text-center">

                <div id="loginSection" class="text-center">

                <br>

                    <h4>Faculty Login</h4>

                    <h4><i class="fa fa-user-circle fa-3x py-2" style="color:#c0392b"></i></h4>

                    <form>

                        <div class="form-row py-1 px-5">

                            <div class="form-group col-md-12">

                            <input type="text" id="uid" class="form-control" placeholder="User ID">

                            </div>

                        </div>

                        <div class="form-row py-1 px-5">

                            <div class="form-group col-md-12">

                            <input id="pass" type="password" class="form-control" placeholder="Password">

                            </div>

                        </div>

                        <div class="form-row py-1 px-5">

                            <div class="form-group col-md-12">

                            <input type="button" style="background-color:#c0392b" onclick="loginFun()" class="form-control btn btn-success" value="Login">

                            <div class="pt-2">Forget password? <a href="routes/forget\_pass.php">Click here</a></div>

                            </div>

                        </div>

                        <div class="form-row py-1">

                            <div class="form-group col-md-12">

                                <h5>New registration? <a href="routes/register.php">Click here</a></h5>

                            </div>

                        </div>

                    </form>

                </div>

            </div>

        </div>

    </div>

</div>

<script src="resources/js/login.js"></script>

</body>

</html>

**Registration (HTML)**

<?php

    session\_start();

?>

<!doctype html>

<html lang="en">

<head>

  <!-- Required meta tags -->

  <meta charset="utf-8">

  <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">

  <!-- Bootstrap CSS -->

  <title>Registration - Attendance Management System</title>

  <link rel="stylesheet" href="../resources/Bootstrap/css/bootstrap.min.css">

    <link rel="stylesheet" href="../resources/font-awesome/css/font-awesome.min.css">

    <link rel="stylesheet" href="../resources/css/stylesheet.css">

    <link rel="stylesheet" href="../resources/Jquery/jquery-ui.css">

    <script src="../resources/Jquery/jquery-3.5.1.js"></script>

    <script src="../resources/Jquery/jquery-ui.js"></script>

    <script src="../resources/Bootstrap/js/bootstrap.min.js"></script>

    <script src="../resources/js/sweetalert.min.js"></script>

</head>

<body>

<div id="headerSection" class="sticky-top">

    <div class="container" >

        <div class="row">

            <div class="col-sm-12 text-center pt-3">

                <p id="brand">Attendance Management System</p>

            </div>

        </div>

    </div>

</div>

<div id="bodySection">

    <div class="container">

        <div class="row align-items-center pt-5 text-center">

            <div class="col-md-12"><h3>Faculty Registration</h3></div>

        </div>

        <div class="row py-4">

            <div class="col-md-12">

                <div id="regSection" class="text-center">

                    <form id="regForm" enctype="multipart/form-data">

                        <div class="form-row">

                            <div class="form-group col-md-2 m-0 p-0"></div>

                            <div class="form-group col-md-8">

                            <input id ="fname" type="text" class="form-control" placeholder="Full name">

                            </div>

                            <div class="form-group col-md-2 m-0 p-0"></div>

                        </div>

                        <div class="form-row">

                            <div class="form-group col-md-2 m-0 p-0"></div>

                            <div class="form-group col-md-4">

                            <input id ="mobile" type="number" class="form-control" placeholder="Mobile">

                            </div>

                            <div class="form-group col-md-4">

                            <input id ="dob" type="text" class="form-control" placeholder="Birth Date">

                            </div>

                            <div class="form-group col-md-2 m-0 p-0"></div>

                        </div>

                        <div class="form-row">

                            <div class="form-group col-md-2 m-0 p-0"></div>

                            <div class="form-group col-md-4">

                            <input id ="quali" type="text" class="form-control" placeholder="Qualification">

                            </div>

                            <div class="form-group col-md-4">

                            <input id ="uname" name="mobile" type="text" class="form-control" placeholder="Username">

                            </div>

                            <div class="form-group col-md-2 m-0 p-0"></div>

                        </div>

                        <div class="form-row">

                            <div class="form-group col-md-2 m-0 p-0"></div>

                            <div class="form-group col-md-4">

                            <input id ="uid" type="password" class="form-control" placeholder="User ID">

                            </div>

                            <div class="form-group col-md-4">

                            <input id ="pass" type="password" class="form-control" placeholder="Password">

                            </div>

                            <div class="form-group col-md-2 m-0 p-0"></div>

                        </div>

                        <div class="form-row py-1">

                            <div class="form-group col-md-3"></div>

                            <div class="form-group col-md-6">

                            <input onclick="regFun()" type="button" style="background-color:#c0392b; color:white" class="form-control btn btn-success" id="register" value="Register">

                            </div>

                            <div class="form-group col-md-3"></div>

                        </div>

                    </form>

                    <a href="../"><button type="button" class="btn" style="background-color:#c0392b; color:white"

>Back</button></a>

                </div>

            </div>

        </div>

    </div>

</div>

<script src="../resources/js/register.js"></script>

</body>

</html>

**Main Dashboard (HTML)**

<?php

    session\_start();

    if(!isset($\_SESSION['uid'])){

        header('location:logout.php');

    }

?>

<!doctype html>

<html lang="en">

<head>

  <!-- Required meta tags -->

  <meta charset="utf-8">

  <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">

  <!-- Bootstrap CSS -->

  <title>Dashboard - Attendance Management System</title>

  <link rel="stylesheet" href="../resources/Bootstrap/css/bootstrap.min.css">

    <link rel="stylesheet" href="../resources/font-awesome/css/font-awesome.min.css">

    <link rel="stylesheet" href="../resources/css/stylesheet.css">

    <script src="../resources/Jquery/jquery-3.5.1.js"></script>

    <script src="../resources/Bootstrap/js/bootstrap.min.js"></script>

    <script src="../resources/js/sweetalert.min.js"></script>

    </head>

<body>

<div id="headerSection" class="sticky-top">

    <div class="container" >

        <div class="row">

            <div class="col-sm-12 text-center pt-3">

                <p id="brand">Attendance Management System</p>

            </div>

        </div>

    </div>

</div>

<div id="bodySection">

    <div class="container">

        <div class="row align-items-center py-3">

            <div class="col-md-10 text-center">

                <h3>Welcome <?php echo $\_SESSION['faculty']?>!</h3>

            </div>

            <div class="col-md-2 text-center">

                <a href="logout.php"><button class="btn btn-sm btn-primary">Logout <i class="fa fa-user-circle"></i></button></a>

            </div>

        </div>

        <hr>

        <div class="row py-1">

            <div class="col-md-12 text-center">

                <form>

                    <div class="form-row">

                        <div class="form-group text-center col-md-8">

                        <h4>Add new student</h4>

                        </div>

                        <div class="form-group text-center col-md-4">

                        <a href="record.php"><button type="button" class="btn btn-sm " style="background-color:#c0392b; color:white"

>Check record <i class="fa fa-book"></i></button></a>

                        </div>

                    </div>

                </form>

                <form>

                    <div class="form-row pt-3">

                        <div class="form-group col-md-8">

                            <input class="form-control" type="text" placeholder="Student Name" id="name">

                        </div>

                        <div class="form-group col-md-4">

                            <input class="form-control" type="text" placeholder="Student Roll No" id="roll">

                        </div>

                    </div>

                    <div class="form-row">

                        <div class="form-group col-md-4">

                            <select class="form-control" id="course">

                                <option value="">Course</option>

                                <option value="MBA">MBA</option>

                                <option value="MCA">MCA</option>

                                <option value="BCA">BCA</option>

                                <option value="BBA">BBA</option>

                                <option value="BEC">BEC</option>

                            </select>

                        </div>

                        <div class="form-group col-md-4">

                            <select class="form-control" id="semester">

                                <option value="">Semester</option>

                                <option value="I">I</option>

                                <option value="II">II</option>

                                <option value="III">III</option>

                                <option value="IV">IV</option>

                                <option value="V">V</option>

                                <option value="VI">VI</option>

                                <option value="VII">VII</option>

                                <option value="VIII">VIII</option>

                            </select>

                        </div>

                        <div class="form-group col-md-4">

                            <select class="form-control" id="branch">

                                <option value="">Section</option>

                                <option value="A">A</option>

                                <option value="B">B</option>

                                <option value="C">C</option>

                                <option value="D">D</option>

                            </select>

                        </div>

                    </div>

                    <div class="form-row">

                        <div class="form-group col-md-4 p-0 m-0"></div>

                        <div class="form-group col-md-4">

                            <button class="btn btn-success form-control" style="background-color:#be2edd" type="button" onclick="addStudent()">Add student</button>

                        </div>

                        <div class="form-group col-md-4 p-0 m-0"></div>

                    </div>

                </form>

            </div>

        </div>

        <hr>

        <div class="row">

            <div class="col-md-12 text-center">

                <h4>Mark Attendance <?php echo date('d-m-Y') ?> </h4>

                <div class="py-3" id="studentList"></div>

            </div>

        </div>

    </div>

</div>

<script src="../resources/js/student.js">

</script>

</body>

</html>

**Records (HTML)**

<?php

    session\_start();

    if(!isset($\_SESSION['uid'])){

        header('location:logout.php');

    }

?>

<!doctype html>

<html lang="en">

<head>

  <!-- Required meta tags -->

  <meta charset="utf-8">

  <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">

  <!-- Bootstrap CSS -->

  <title>Dashboard - Attendance Management System</title>

  <link rel="stylesheet" href="../resources/Bootstrap/css/bootstrap.min.css">

    <link rel="stylesheet" href="../resources/font-awesome/css/font-awesome.min.css">

    <link rel="stylesheet" href="../resources/css/stylesheet.css">

    <script src="../resources/Jquery/jquery-3.5.1.js"></script>

    <script src="../resources/Bootstrap/js/bootstrap.min.js"></script>

    <script src="../resources/js/sweetalert.min.js"></script>

    </head>

<body>

<div id="headerSection" class="sticky-top">

    <div class="container" >

        <div class="row">

            <div class="col-sm-12 text-center pt-3">

                <p id="brand">Attendance Management System</p>

            </div>

        </div>

    </div>

</div>

<div id="bodySection">

    <div class="container">

        <div class="row align-items-center py-3">

            <div class="col-md-1 text-center">

                <a href="main.php"><button class="btn btn-sm" style="background-color:#c0392b; color:white"

>Back</button></a>

            </div>

            <div class="col-md-9 text-center">

                <h3>Welcome <?php echo $\_SESSION['faculty']?>!</h3>

            </div>

            <div class="col-md-2 text-center">

                <a href="logout.php"><button class="btn btn-sm" style="background-color:#c0392b; color:white"

>Logout <i class="fa fa-user-circle"></i></button></a>

            </div>

        </div>

        <hr>

        <div class="row">

            <div class="col-md-12 text-center">

                <div class="py-3" id="studentList"></div>

            </div>

        </div>

    </div>

</div>

<script src="../resources/js/record.js"></script>

</body>

</html>

**Dashboard (Javascript)**

getStudents();

function addStudent() {

  var name = $("#name").val();

  var course = $("#course").val();

  var roll = $("#roll").val();

  var semester = $("#semester").val();

  var branch = $("#branch").val();

  if (

    name == "" ||

    course == "" ||

    roll == "" ||

    semester == "" ||

    branch == ""

  ) {

    alert("Fields should be blank!");

  } else {

    $.ajax({

      url: "../api/api.php",

      type: "POST",

      dataType: "json",

      contentType: "application/json",

      data: JSON.stringify({

        call: 3,

        name: name,

        course: course,

        roll: roll,

        semester: semester,

        branch: branch,

      }),

      success: function (data) {

        if (data == 1) {

          swal({

            title: "Student added!",

            text: "New student is added on E-Attendance!",

            icon: "success",

            button: "OK!",

          });

          $("#name").val("");

          $("#course").val("");

          $("#roll").val("");

          $("#semester").val("");

          $("#branch").val("");

          getStudents();

        } else {

          swal({

            title: "Error!",

            text: "Some error occured!",

            icon: "error",

            button: "OK!",

          });

        }

      },

    });

  }

}

function searchStudent() {

  var course = $("#course1").val();

  var semester = $("#semester1").val();

  var branch = $("#branch1").val();

  if (course == "" || semester == "" || branch == "") {

    alert("Fields should be blank!");

  } else {

    $.ajax({

      url: "../api/api.php",

      type: "POST",

      dataType: "json",

      contentType: "application/json",

      data: JSON.stringify({

        call: 6,

        course: course,

        semester: semester,

        branch: branch,

      }),

      success: function (data) {

        if (data.length > 0) {

          var sr = 1;

          var students = "";

          $.each(data, function (i, d) {

            students +=

              "<tr>" +

              '<th scope="row">' +

              sr +

              "</th>" +

              '<td colspan="2">' +

              d.name +

              "</td>" +

              '<td scope="col">' +

              d.roll\_no +

              "</td>" +

              '<td scope="col">' +

              d.course +

              "</td>" +

              '<td scope="col">' +

              d.semester +

              "</td>" +

              '<td scope="col">' +

              d.branch +

              "</td>" +

              "</tr>";

            sr++;

          });

          $("#studentList").html(

            '<div class="table-responsive-md" style="background-color:white">' +

              '<table class="table table-bordered">' +

              "<thead>" +

              "<tr>" +

              '<th scope="col">Sr.no.</th>' +

              '<th colspan="2">Name</th>' +

              '<th scope="col">Roll No</th>' +

              '<th scope="col">Course</th>' +

              '<th scope="col">Semester</th>' +

              '<th scope="col">Section</th>' +

              "</tr>" +

              "</thead>" +

              "<tbody>" +

              students +

              "</tbody>" +

              "</table></div>"

          );

        } else {

          $("#studentList").html("<p><b>No matching records found!</b>");

        }

      },

    });

  }

}

function getStudents() {

  $.ajax({

    url: "../api/api.php",

    type: "POST",

    dataType: "json",

    contentType: "application/json",

    data: JSON.stringify({

      call: 4,

    }),

    success: function (data) {

      console.log(data);

      var studentsData = data[0];

      var day = parseInt(data[1][0]);

      var month = parseInt(data[1][1]);

      var year = parseInt(data[1][2]);

      var todayDate = data[2];

      var sr = 1;

      var students = "";

      var present = 1;

      var absent = 0;

      var status = '';

      $.each(studentsData, function (i, d) {

        if((d.date==null) || (todayDate!=d.date && d.status!=0)){

          status = '<button class="btn btn-sm btn-success" onclick="conFirm(\''+d.id+'\',\''+1+'\')" type="button"><b>P</b></button> &nbsp <button class="btn btn-sm btn-danger" onclick="conFirm(\''+d.id+'\',\''+0+'\')" type="button"><b>A</b></button>';

          students +=

              "<tr>" +

              '<th scope="row">' +

              sr +

              "</th>" +

              '<td colspan="2">' +

              d.name +

              "</td>" +

              '<td scope="col">' +

              d.roll\_no +

              "</td>" +

              '<td scope="col">' +

              d.course +

              "</td>" +

              '<td scope="col">' +

              d.semester +

              "</td>" +

              '<td scope="col">' +

              d.branch +

              "</td>" +

              '<td scope="col">' +

              status +

              "</td>" +

              "</tr>";

            sr++;

        }

        else if(day==d.day && month==d.month && year==d.year && d.record==1){

          status = '<span class="badge badge-success badge-pill px-3 py-2">Present</span>';

          students +=

              "<tr>" +

              '<th scope="row">' +

              sr +

              "</th>" +

              '<td colspan="2">' +

              d.name +

              "</td>" +

              '<td scope="col">' +

              d.roll\_no +

              "</td>" +

              '<td scope="col">' +

              d.course +

              "</td>" +

              '<td scope="col">' +

              d.semester +

              "</td>" +

              '<td scope="col">' +

              d.branch +

              "</td>" +

              '<td scope="col">' +

              status +

              "</td>" +

              "</tr>";

            sr++;

        }

        else if(day==d.day && month==d.month && year==d.year && d.record==0){

          status = '<span class="badge badge-danger badge-pill px-3 py-2" type="button"><b>Absent</b></span>';

          students +=

              "<tr>" +

              '<th scope="row">' +

              sr +

              "</th>" +

              '<td colspan="2">' +

              d.name +

              "</td>" +

              '<td scope="col">' +

              d.roll\_no +

              "</td>" +

              '<td scope="col">' +

              d.course +

              "</td>" +

              '<td scope="col">' +

              d.semester +

              "</td>" +

              '<td scope="col">' +

              d.branch +

              "</td>" +

              '<td scope="col">' +

              status +

              "</td>" +

              "</tr>";

            sr++;

        }

        else{

          return null;

        }

      });

      $("#studentList").html(

        '<div class="table-responsive-md" style="background-color:white">' +

          '<table class="table table-bordered">' +

          "<thead>" +

          "<tr>" +

          '<th scope="col">Sr.no.</th>' +

          '<th colspan="2">Name</th>' +

          '<th scope="col">Roll No</th>' +

          '<th scope="col">Course</th>' +

          '<th scope="col">Semester</th>' +

          '<th scope="col">Section</th>' +

          '<th scope="col">Attendance</th>' +

          "</tr>" +

          "</thead>" +

          "<tbody>" +

          students +

          "</tbody>" +

          "</table></div>"

      );

    },

  });

}

function conFirm(id, record){

  var sid = id;

  var record = record;

  swal({

      title: 'Are you sure?',

      text: "Confirm once before marking attendance!",

      icon: "warning",

      buttons: ['Cancel', 'Confirm'],

      dangerMode: true,

      })

      .then((ok) => {

      if (ok) {

          addAttendance(sid, record);

      } else {

          swal("Think again!");

      }

  });

}

function addAttendance(sid, record) {

  var sid = sid;

  var record = record;

  $.ajax({

      url: "../api/api.php",

      type: "POST",

      dataType: "json",

      contentType: "application/json",

      data: JSON.stringify({

        call: 8,

        sid :sid,

        record : record

      }),

      success: function (data) {

        if (data == 1) {

          getStudents();

        } else {

          swal({

            title: "Error!",

            text: "Some error occured!",

            icon: "error",

            button: "OK!",

          });

        }

      },

    });

}

**Records (Javascript)**

getStudents();

function getStudents() {

  $.ajax({

    url: "../api/api.php",

    type: "POST",

    dataType: "json",

    contentType: "application/json",

    data: JSON.stringify({

      call: 12,

    }),

    success: function (data) {

      var studentsData = data;

      var sr = 1;

      var students = "";

      var record = '';

      var sid = '';

      var studentList = '';

      var status = '';

      $.each(studentsData, function (i, d) {

        console.log(studentsData);

        status = (d.record==1) ? '<span class="badge badge-success badge-pill px-3 py-2">Present</span>' : '<span class="badge badge-danger badge-pill px-3 py-2"><b>Absent</b></span>';

        if(record==''){

          students =

          "<tr>" +

          '<th scope="row">' +

          sr +

          "</th>" +

          '<td colspan="2">' +

          d.name +

          "</td>" +

          '<td scope="col">' +

          d.roll\_no +

          "</td>" +

          '<td scope="col">' +

          d.course +

          "</td>" +

          '<td scope="col">' +

          d.semester +

          "</td>" +

          '<td scope="col">' +

          d.branch +

          "</td>" +

          '<td scope="col">' +

          d.date +

          "</td>" +

          '<td scope="col">' +

          status +

          "</td>" +

          "</tr>";

          studentList += '<h5 class="pb-2">Attendance date: '+d.date+'</h5><div class="table-responsive-md" style="background-color:white">' +

          '<table class="table table-bordered">' +

          "<thead>" +

          "<tr>" +

          '<th scope="col">Sr.no.</th>' +

          '<th colspan="2">Name</th>' +

          '<th scope="col">Roll No</th>' +

          '<th scope="col">Course</th>' +

          '<th scope="col">Semester</th>' +

          '<th scope="col">Section</th>' +

          '<th scope="col">Date</th>' +

          '<th scope="col">Status</th>' +

          "</tr>" +

          "</thead>" +

          "<tbody>" +

          students;

          record = d.date;

          sr++;

        }

        else if(record==d.date){

          students =

          "<tr>" +

          '<th scope="row">' +

          sr +

          "</th>" +

          '<td colspan="2">' +

          d.name +

          "</td>" +

          '<td scope="col">' +

          d.roll\_no +

          "</td>" +

          '<td scope="col">' +

          d.course +

          "</td>" +

          '<td scope="col">' +

          d.semester +

          "</td>" +

          '<td scope="col">' +

          d.branch +

          "</td>" +

          '<td scope="col">' +

          d.date +

          "</td>" +

          '<td scope="col">' +

          status +

          "</td>" +

          "</tr>";

          studentList+=students;

          record = d.date;

          sr++;

        }

        else if(record!=d.date){

          sr = 1;

          students =

          "<tr>" +

          '<th scope="row">' +

          sr +

          "</th>" +

          '<td colspan="2">' +

          d.name +

          "</td>" +

          '<td scope="col">' +

          d.roll\_no +

          "</td>" +

          '<td scope="col">' +

          d.course +

          "</td>" +

          '<td scope="col">' +

          d.semester +

          "</td>" +

          '<td scope="col">' +

          d.branch +

          "</td>" +

          '<td scope="col">' +

          d.date +

          "</td>" +

          '<td scope="col">' +

          status +

          "</td>" +

          "</tr>";

          studentList+="</tbody>"+

          '</table></div><br><h5 class="pb-2">Attendance date: '+d.date+'</h5><div class="table-responsive-md" style="background-color:white">' +

          '<table class="table table-bordered">' +

          "<thead>" +

          "<tr>" +

          '<th scope="col">Sr.no.</th>' +

          '<th colspan="2">Name</th>' +

          '<th scope="col">Roll No</th>' +

          '<th scope="col">Course</th>' +

          '<th scope="col">Semester</th>' +

          '<th scope="col">Branch</th>' +

          '<th scope="col">Date</th>' +

          '<th scope="col">Status</th>' +

          "</tr>" +

          "</thead>" +

          "<tbody>" +

          students;

          record = d.date;

          sr++;

        }

      });

      $("#studentList").html(studentList);

    },

  });

}

**Registration (Javascript)**

$(document).ready(function () {

  $("#dob").datepicker({

    maxDate: 0,

    changeMonth: true,

    changeYear: true,

    yearRange: "1950:2020",

  });

});

function regFun() {

  var fname = $("#fname").val();

  var uname = $("#uname").val();

  var uid = $("#uid").val();

  var quali = $("#quali").val();

  var pass = $("#pass").val();

  var dob = $("#dob").val();

  var mobile = $("#mobile").val();

  if (

    fname == "" ||

    uname == "" ||

    uid == "" ||

    quali == "" ||

    pass == "" ||

    dob == "" ||

    mobile == ""

  ) {

    alert("Fields should be blank!");

  } else {

    $.ajax({

      url: "../api/api.php",

      type: "POST",

      dataType: "json",

      contentType: "application/json",

      data: JSON.stringify({

        call: 1,

        fname: fname,

        uname: uname,

        uid: uid,

        quali: quali,

        pass: pass,

        dob: dob,

        mobile: mobile,

      }),

      success: function (data) {

        if (data == 1) {

          swal({

            title: "Registration successfull!",

            text: "Welcome to Online Attendance Management System!",

            icon: "success",

            button: "OK!",

          }).then((value) => {

            window.location = "../";

          });

        } else if (data == 2) {

          swal({

            title: "User already exists!",

            text: "Mobile number is already taken. Try another!",

            icon: "warning",

            button: "OK!",

          });

        } else {

          swal({

            title: "Error!",

            text: "Some error occured!",

            icon: "error",

            button: "OK!",

          });

        }

      },

    });

  }

}

**Login (Javascript)**

function loginFun() {

  var uid = $("#uid").val();

  var pass = $("#pass").val();

  if (uid == "" || pass == "") {

    alert("Fields cannot be empty!");

  } else {

    $.ajax({

      url: "api/api.php",

      type: "POST",

      dataType: "json",

      contentType: "application/json",

      data: JSON.stringify({

        call: 2,

        uid: uid,

        pass: pass,

      }),

      success: function (data) {

        if (data == 1) {

          window.location = "routes/main.php";

        } else {

          swal({

            title: "Invalid credentials!",

            text: "Enter proper details!",

            icon: "error",

            button: "OK!",

          });

        }

      },

    });

  }

}

**Forget Password (Javascript)**

$(document).ready(function () {

  $("#dob").datepicker({

    maxDate: 0,

    changeMonth: true,

    changeYear: true,

    yearRange: "1950:2020",

  });

  $("#changePass").click(function () {

    var uid = $("#uid").val();

    var dob = $("#dob").val();

    var pass = $("#pass").val();

    if (uid == "" || dob == "" || pass == "") {

      alert("Fields cannot be left blank!");

    } else {

      $.ajax({

        url: "../api/api.php",

        type: "POST",

        dataType: "json",

        contentType: "application/json",

        data: JSON.stringify({

          call: 5,

          uid: uid,

          dob: dob,

          pass: pass,

        }),

        success: function (data) {

          if (data == 1) {

            swal({

              title: "Password changed!",

              text: "New password is set!",

              icon: "success",

              button: "OK!",

            }).then((vote) => {

              window.location = "../";

            });

          } else {

            swal({

              title: "Invalid Credentials!",

              text: "Invalid! user id / date of birth",

              icon: "error",

              button: "OK!",

            });

          }

        },

      });

    }

  });

});

**Backened API (PHP)**

<?php

session\_start();

include('connect.php');

$json = json\_decode(file\_get\_contents("php://input"),true);

// Faculty registration

if($json['call']==1){

    $fname = $json['fname'];

    $uname = $json['uname'];

    $uid = $json['uid'];

    $mobile = $json['mobile'];

    $dob = $json['dob'];

    $quali = $json['quali'];

    $pass = md5($json['pass']);

    $date = date('d-m-Y');

    $check = mysqli\_query($con, "select \* from faculty where mobile='$mobile'");

    if(mysqli\_num\_rows($check)>0){

        echo json\_encode($response['success']=2);

    }

    else{

        $query = mysqli\_query($con, "insert into faculty (name, mobile, dob, qualification, username, uid, password, created\_at) values('$fname','$mobile','$dob','$quali', '$uname', '$uid', '$pass', '$date')");

        if($query){

            echo json\_encode($response['success']=1);

        }

        else{

            echo json\_encode($response['success']=0);

        }

    }

}

// Faculty login

if($json['call']==2){

    $uid = $json['uid'];

    $pass = md5($json['pass']);

    $check = mysqli\_query($con, "select \* from faculty where uid='$uid' and password='$pass'");

    if(mysqli\_num\_rows($check)>0){

        $\_SESSION['uid']=$uid;

        $fetch = mysqli\_fetch\_array($check);

        $\_SESSION['faculty'] = $fetch['username'];

        echo json\_encode($response['success']=1);

    }

    else{

        echo json\_encode($response['success']=0);

    }

}

// Add student

if($json['call']==3){

    $name = $json['name'];

    $course = $json['course'];

    $roll = $json['roll'];

    $semester = $json['semester'];

    $branch = $json['branch'];

    $date = date('d-m-Y');

    $query = mysqli\_query($con, "insert into student (name, roll\_no, course, semester, branch, created\_at) values('$name','$roll','$course','$semester', '$branch', '$date')");

    if($query){

        echo json\_encode($response['success']=1);

    }

    else{

        echo json\_encode($response['success']=0);

    }

}

// Get students

if($json['call']==4){

    $day = date('d');

    $month = date('m');

    $year = date('Y');

    $date = [$day, $month, $year];

    $todayDate = date('d-m-Y');

    $getStudents = mysqli\_query($con, "select student.id, student.name, student.roll\_no, student.course, student.semester, student.branch, student.created\_at, record.sid, record.status, record.record, record.day, record.month, record.year, record.date from student LEFT JOIN record ON student.id = record.sid ORDER BY student.id ASC");

    if(mysqli\_num\_rows($getStudents)>0){

        $students = mysqli\_fetch\_all($getStudents, MYSQLI\_ASSOC);

        $empty = mysqli\_free\_result($getStudents);

        echo json\_encode([$students, $date, $todayDate]);

    }

    else{

        echo json\_encode($response['success']=0);

    }

}

// Forget password

if($json['call']==5){

    $uid = $json['uid'];

    $dob = $json['dob'];

    $pass = md5($json['pass']);

    $check = mysqli\_query($con, "select \* from faculty where uid='$uid' and dob='$dob'");

    if(mysqli\_num\_rows($check)>0){

        $update = mysqli\_query($con, "update faculty set password='$pass' where uid='$uid' and dob='$dob'");

        if($update){

            echo json\_encode($response['success']=1);

        }

        else{

            echo json\_encode($response['success']=0);

        }

    }

    else{

        echo json\_encode($response['success']=0);

    }

}

// Search student

if($json['call']==6){

    $course = $json['course'];

    $semester = $json['semester'];

    $branch = $json['branch'];

    $getStudents = mysqli\_query($con, "select \* from student where course='$course' and semester='$semester' and branch='$branch'");

    if(mysqli\_num\_rows($getStudents)>0){

        $students = mysqli\_fetch\_all($getStudents, MYSQLI\_ASSOC);

        $empty = mysqli\_free\_result($getStudents);

        echo json\_encode($students);

    }

    else{

        echo json\_encode($response['success']=0);

    }

}

// Populate students data

if($json['call']==7){

    $getStudents = mysqli\_query($con, "select \* from student");

    if(mysqli\_num\_rows($getStudents)>0){

        $students = mysqli\_fetch\_all($getStudents, MYSQLI\_ASSOC);

        $empty = mysqli\_free\_result($getStudents);

        echo json\_encode($students);

    }

    else{

        echo json\_encode($response['success']=0);

    }

}

// Add record

if($json['call']==8){

    $sid = $json['sid'];

    $record = $json['record'];

    $day = date('d');

    $month = date('m');

    $year = date('Y');

    $date = date('d-m-Y');

    $changeStatus = mysqli\_query($con,"update record set status=0 where sid=$sid");

    if($changeStatus){

        $query = mysqli\_query($con, "insert into record (sid, status, record, date, day, month, year) values('$sid', 1 , '$record', '$date', '$day', '$month', '$year')");

        if($query){

            echo json\_encode($response['success']=1);

        }

        else{

            echo json\_encode($response['success']=0);

        }

    }

}

// Get records

if($json['call']==9){

    $getRecords = mysqli\_query($con, "select student.name, student.course, student.branch, student.semester, record.subject\_name, record.sid, record.id, record.subject\_code, record.ese, record.ct, record.ta from student LEFT JOIN record ON student.id=record.sid WHERE student.id=record.sid ");

    if(mysqli\_num\_rows($getRecords)>0){

        $records = mysqli\_fetch\_all($getRecords, MYSQLI\_ASSOC);

        $empty = mysqli\_free\_result($getRecords);

        echo json\_encode($records);

    }

    else{

        echo json\_encode($response['success']=0);

    }

}

// Edit record

if($json['call']==10){

    $sid = $json['sid'];

    $id = $json['id'];

    $getRecord = mysqli\_query($con, "select ese, id, sid, ct, ta from record WHERE sid='$sid' and id='$id' ");

    if(mysqli\_num\_rows($getRecord)>0){

        $record = mysqli\_fetch\_array($getRecord, MYSQLI\_ASSOC);

        $empty = mysqli\_free\_result($getRecord);

        echo json\_encode($record);

    }

    else{

        echo json\_encode($response['success']=0);

    }

}

// Save record

if($json['call']==11){

    $sid = $json['sid'];

    $id = $json['id'];

    $new\_ese = $json['new\_ese'];

    $new\_ct = $json['new\_ct'];

    $new\_ta = $json['new\_ta'];

    $update = mysqli\_query($con, "update record set ese='$new\_ese', ct='$new\_ct', ta='$new\_ta' where sid='$sid' and id='$id'");

    if($update){

        echo json\_encode($response['success']=1);

    }

    else{

        echo json\_encode($response['success']=0);

    }

}

if($json['call']==12){

    $query = mysqli\_query($con, "select student.id, student.name, student.roll\_no, student.course, student.semester, student.branch, student.created\_at, record.sid, record.status, record.date, record.record from student LEFT JOIN record ON student.id = record.sid WHERE student.id = record.sid ORDER BY record.id DESC");

    if(mysqli\_num\_rows($query)>0){

        $records = mysqli\_fetch\_all($query, MYSQLI\_ASSOC);

        $empty = mysqli\_free\_result($query);

        echo json\_encode($records);

    }

    else{

        echo json\_encode(0);

    }

}

?>

**Database Connectivity (PHP)**

<?php

    $con = mysqli\_connect('localhost','root','','student-attendance') or die('connection error');

?>

**Logout (PHP)**

<?php

    session\_start();

    session\_destroy();

    header('location:../index.php');

?>

**Stylesheet (CSS)**

#headerSection {

  background-color: #be2edd;

}

#brand {

  font-weight: 600;

  color: white;

  font-style: italic;

  font-family: cursive;

  font-size: xx-large;

}

#loginSection {

  padding: 5px;

  border: 1px solid #be2edd;

  background-color: white;

  border-radius: 20px;

}

#adminSection {

  padding: 15px;

  border: 1px solid #34495e;

  background-color: white;

  border-radius: 20px;

}

#component {

  background-color: white;

  border-radius: 10px;

}