# Web Programming Exercise 2
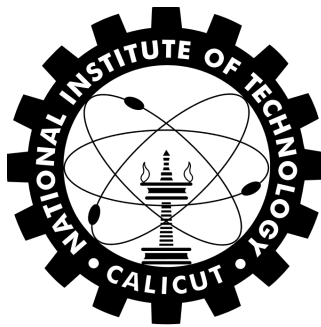
# Building A Dynamic Website using PHP, MySQL and AJAX

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Submitted By: Group 7

Github Link: [WebCoursera](WebCoursera)

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# Introduction

Our E-Learning Platform named WebCoursera is a platform through which students can enroll for various courses based on their interest. Currently the courses offered through the platform are HTML, CSS, Java, Javascript and Python.

On accessing the website the student is first directed to the login page. If the user is new, they would need to first sign up and on successful sign up they would be directed to the central dashboard. This page consists of details of the student, their enrollments and their upcoming evaluations. The student has the option to enroll and disenroll from a course as and when required. The Admin has the option to delete any user from the database. We have pages showing all the courses offered by the platform through which any student can enroll for a course as per their liking.

The platform also provides various pages such as help and support, contact us for the student to communicate with us any issue, and a query they would like to get resolved. The platform has also given their Terms and Conditions, Privacy Policy so as to ensure complete transparency with the students. Various filters such as filters based on length, sorting based on a weekly schedule are also added for each of the offered courses so that the students can access and complete a course in a timely manner. On the completion of the course, a certificate issued by the instructor is also given to the email ID of the student which was given by the student during the time of registration.

Project Github Link: https://github.com/sidmenon23/WebCoursera/tree/main

**Q1. Registered user details must be saved in the database. Login credentials must be validated and each user password must be protected from the insider attack. Use a suitable hashing algorithm to provide security strength to the stored password.**

## MySQL DataBase With Registered Users

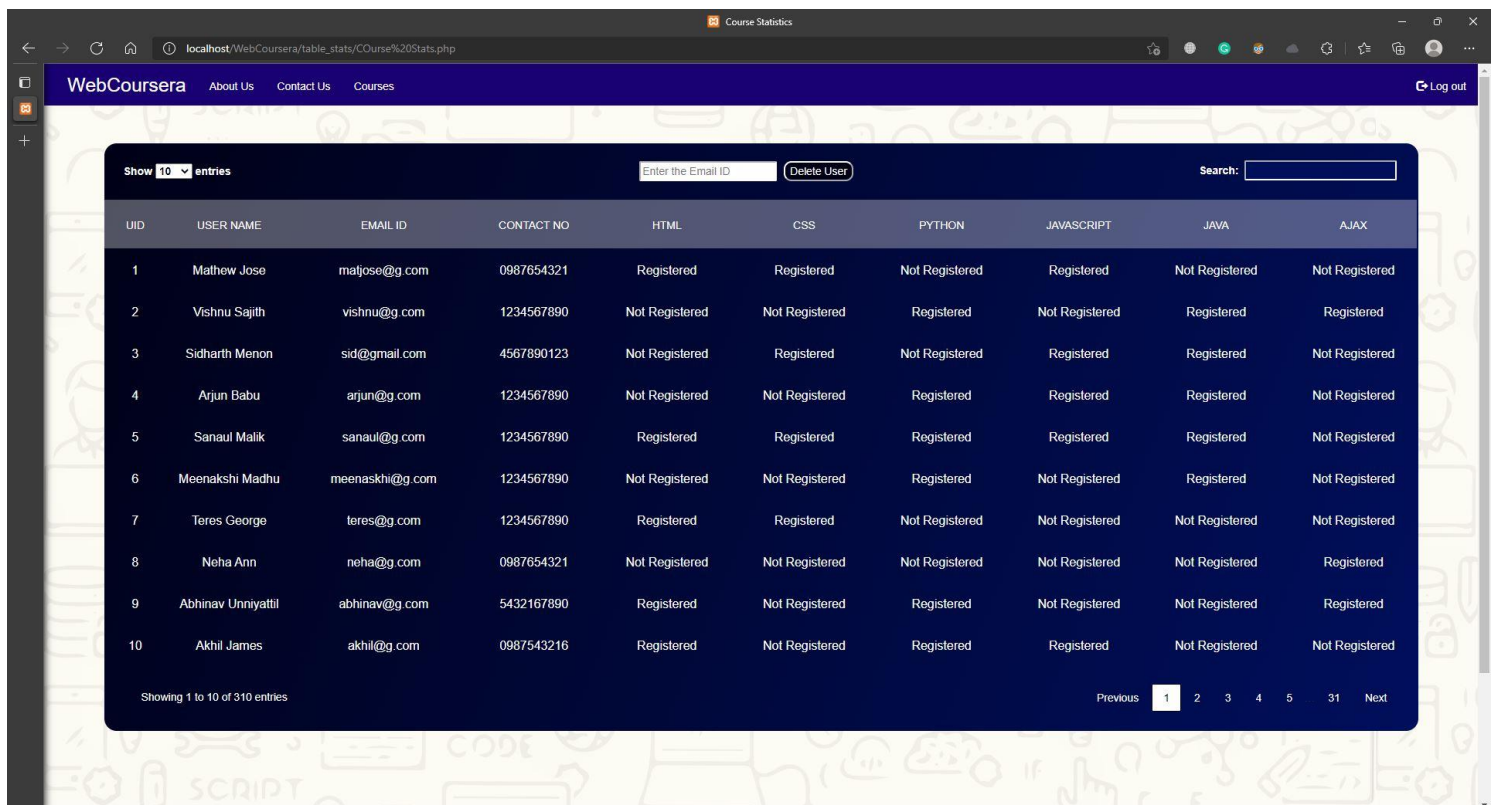| userID | admin | emailID | fName | lName | password | phoneNo | gender | html | css | js | java | python | ajax |
|--------|-------|---------|-------|-------|----------|---------|--------|------|-----|-----|------|--------|------|
| 1617701295e764 | 1 | admin@admin.admin | Admin | Admin | $2y$12$Kbq/Bubwvbke4Cfi7F.n6.4nOmjaLlXFW0K3p9jdALX... | 1234567890 | Male | 0 | 0 | 0 | 0 | 0 | 0 |
| 1617701c2a834b | 0 | matjose@g.com | Mathew | Jose | $2y$12$.3EmjqWhkW4K87WMUf9vP.itQM3ENXv6rmBoEROmJHv... | 0987654321 | Male | 1 | 1 | 1 | 0 | 0 | 0 |
| 1617701ea6bb8e | 0 | vishnu@g.com | Vishnu | Sajith | $2y$12$PvpJNxtIb0dVrX7Is6pH.eNI4rLOrQpkRTLG6XCQKd7... | 1234567890 | Male | 0 | 0 | 0 | 1 | 1 | 1 |
| 1617701fe8ac73 | 0 | sid@gmail.com | Sidharth | Menon | $2y$12$fCYAQbHWKw9VV3/SHoB1nuSxTk8vCeV1WMa8uPJUr00... | 4567890123 | Male | 0 | 1 | 1 | 1 | 0 | 0 |
| 161770218a0d00 | 0 | arjun@g.com | Arjun | Babu | $2y$12$Uk0CZDXvteLnOitSosELIOYDYC33KWAmXw0cBSES4g7... | 1234567890 | Male | 0 | 0 | 1 | 1 | 1 | 0 |
| 161770244d8842 | 0 | sanaul@g.com | Sanaul | Malik | $2y$12$2MAdyZTmZIjhETub8pQv9efcptlplrA/W1vEIQBbhoo... | 1234567890 | Male | 1 | 1 | 1 | 0 | 0 | 0 |
| 16177027b2e186 | 0 | meenaskhi@g.com | Meenakshi | Madhu | $2y$12$i2eXIaeneQETuJU9oLXRW./3dwC7d1KuDlNuH8Ti0pp... | 1234567890 | Female | 0 | 0 | 0 | 1 | 1 | 0 |
| 1617702c174717 | 0 | teres@g.com | Teres | George | $2y$12$fr/gwiJ.IdyAmT.eRQ/YveUVy7iYiVoENMt8/4s904v... | 1234567890 | Female | 1 | 1 | 0 | 0 | 0 | 0 |
| 1617702e42c9d7 | 0 | neha@g.com | Neha | Ann | $2y$12$mVcmKlxKB9Pf08y040xcUu1Bm5L2IjF9N5Rwz9G2tKX... | 0987654321 | Female | 0 | 0 | 0 | 0 | 0 | 1 |
| 161770309ee0e1 | 0 | abhinav@g.com | Abhinav | Unniyattil | $2y$12$zjsanq47E0Fs33jB65JNHep9XF0aFn/3J/.Y8VBBWOL... | 5432167890 | Male | 1 | 0 | 0 | 0 | 1 | 1 |
| 161770335151ea | 0 | akhil@g.com | Akhil | James | $2y$12$KCWndsUB.X4m7YLEp99EtOwuMn2aw.fXz8BkjAhMxKd... | 0987543216 | Male | 1 | 0 | 1 | 0 | 1 | 0 |

## SignUp Error When Passwords Do Not Match
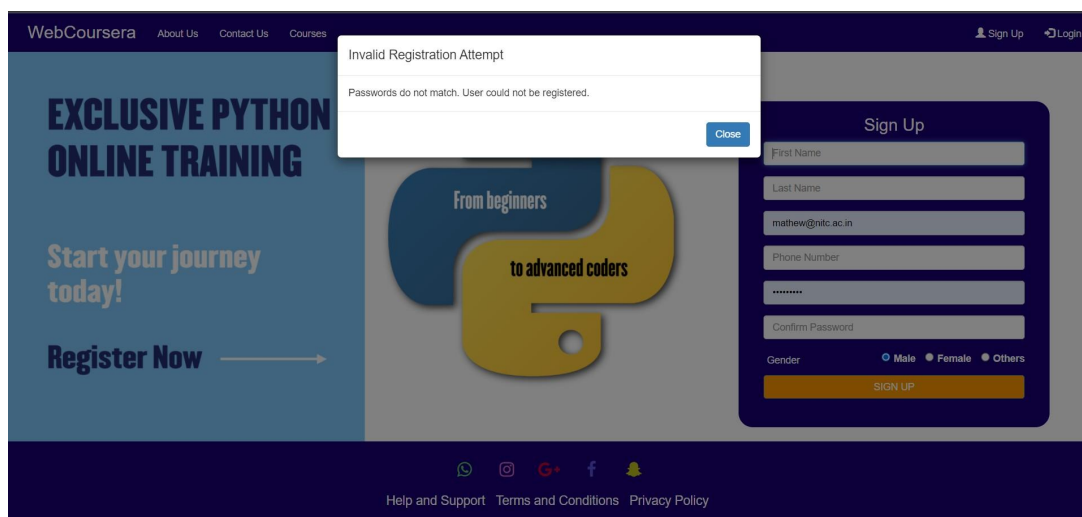


## Login Error When Password Does Not Match
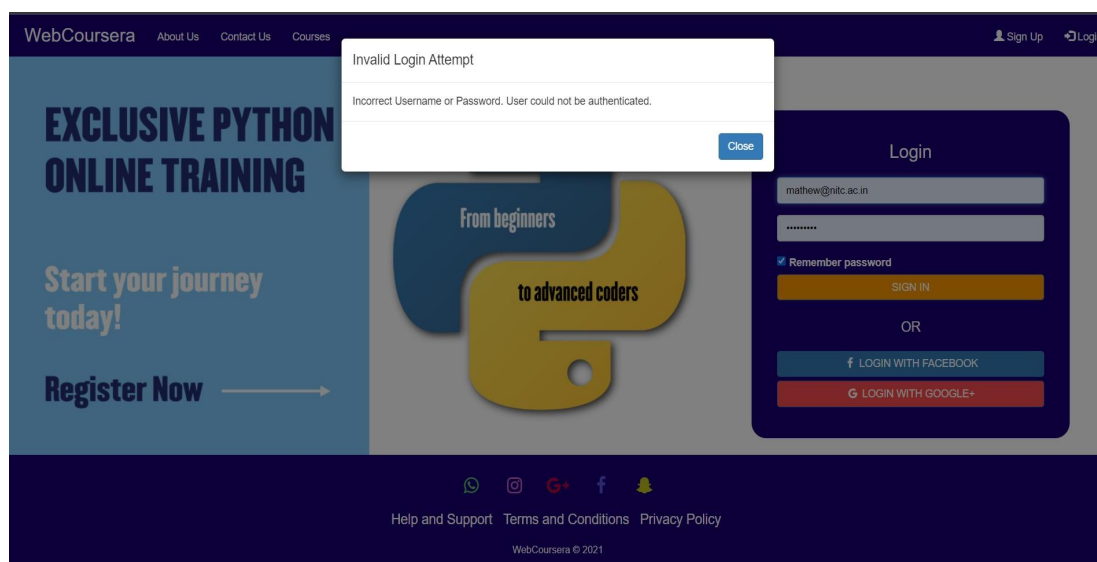
During Signup, once the user enters their details, form validation is done for each field using Javascript. Once the details are collected, we encrypt the password for each user before storing it in the database. This is done to ensure the data security on the platform. To hash the password, we use the **bcrypt** algorithm provided by PHP. Once the password in plaintext has been hashed to a cipher text, all the details of the new user including the hashed password will be stored in the database.

When a user tries to login to the system again, the entered password will be checked with the hashed password using the password_verify() function and only if this returns TRUE, the user will be directed to their Home Page or Dashboard.

## Q2. Display all the registered users in the e-learning course website.



The details which were collected for each user are stored in a MySQL database. The contents of the database are filled while a new user Signs Up to the platform. To display all the details of the USER table, we retrieve the information using PHP. This table displayed above has the following functionalities:

- To display the personal and registration details of all users registered to WebCoursera.
- The Admin is the only one who can access this table and has the option to:
  - Delete any user from the database.
  - Search for any user in the database.
- The table has the ability to sort through any column and this function can be used to see which users have registered for a course and which users have not.

## Q3. Delete the users from the database after the successful completion of the course work.

### Disenroll Option after successful completion of Course.
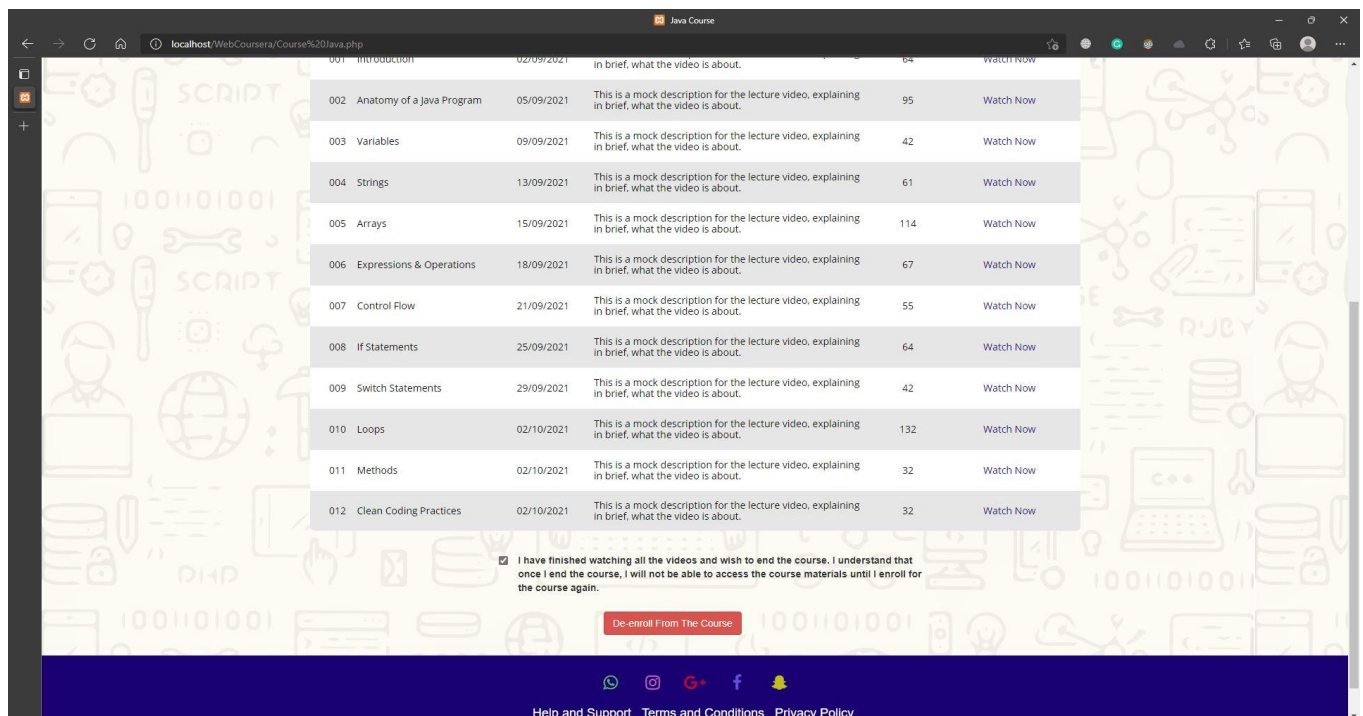


After successful completion of the course the user will have a declaration stating he/she has completed the course and wants to disenroll from the course. On selecting the checkbox and clicking on the Disenroll from Course button the user is disenrolled from the course and is redirected to the dashboard. Also a certificate gets downloaded to the user's computer. The user is deleted from the particular course table in the database and the corresponding change is reflected in the users table as well.

### Delete functionality for Admin
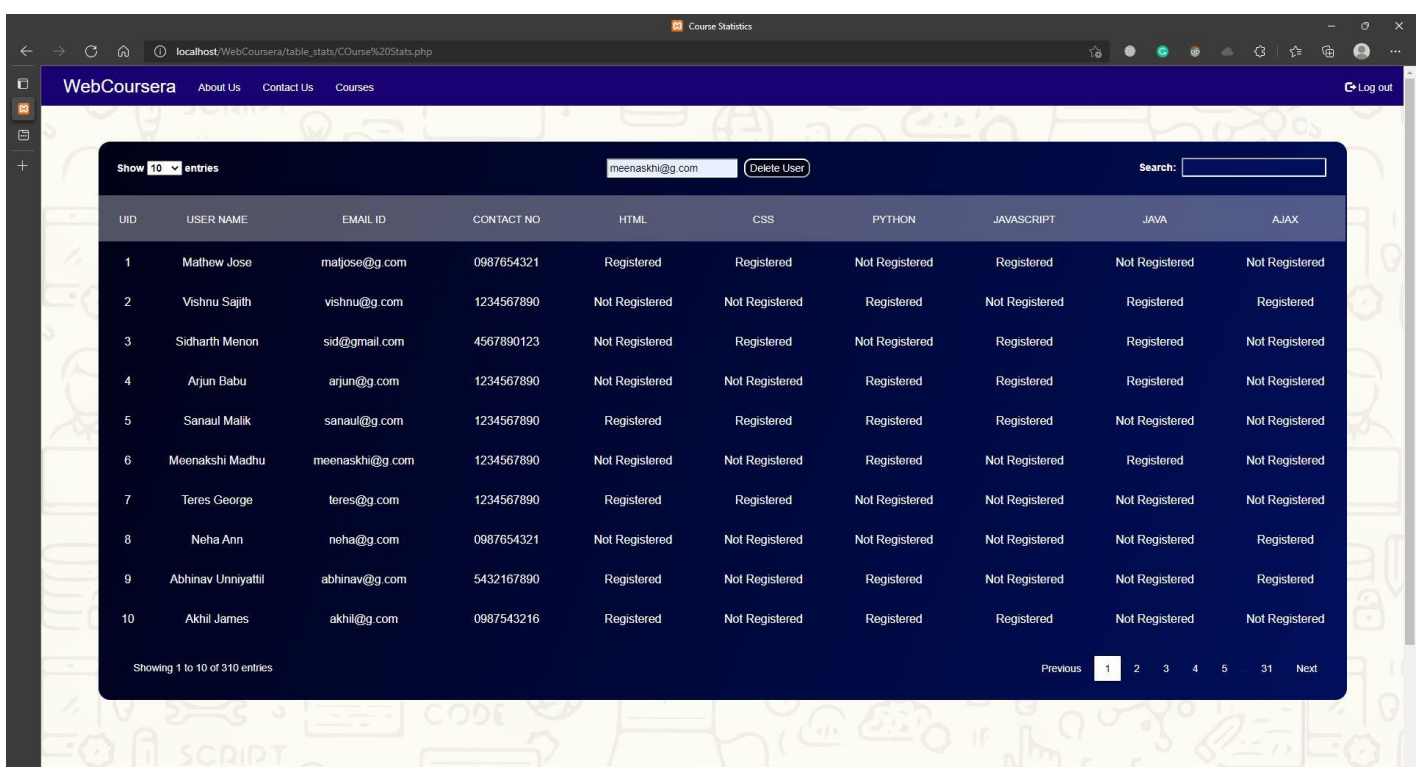
The Admin also has the functionality to delete a user completely from the database if the user is found violating any of the policies of the WebCoursera platform. The user will lose access to the account and will be deleted. The functionality is implemented using a form, where the admin can enter the email-id of the user who has to be deleted.

## Q4. Display the number of registered users for each course.



| | | |
|---|---|---|
| **HTML 5** | **CSS** | **Javascript** |
| Level: Beginner | Level: Intermediate | Level: Beginner |
| Instructor: Mosh | Instructor: Michael | Instructor: Sarah |
| Rating: ★★★ | Rating: ★★ | Rating: ★★★★★ |
| No. of Registered Students: 5 | No. of Registered Students: 4 | No. of Registered Students: 5 |
| Enroll   View More | Enroll   View More | Enroll   View More |
| **Python** | **AJAX** | **Java** |
| Level: Beginner | Level: Hard | Level: Beginner |
| Instructor: Surya | Instructor: Christopher | Instructor: Abel |
| Rating: ★★★★ | Rating: ★★ | Rating: ★★★★ |
| No. of Registered Students: 6 | No. of Registered Students: 3 | No. of Registered Students: 5 |
| Enroll   View More | Enroll   View More | Enroll   View More |

Once the student logs into the portal, they can view all the courses that are provided by the platform. Under the details of each course, the number of students who have registered for a course is also mentioned, so that the students can see the popularity of a course and then decide whether or not to enrol for it.

## Q5. The navigation bar should search for a specified string pattern.
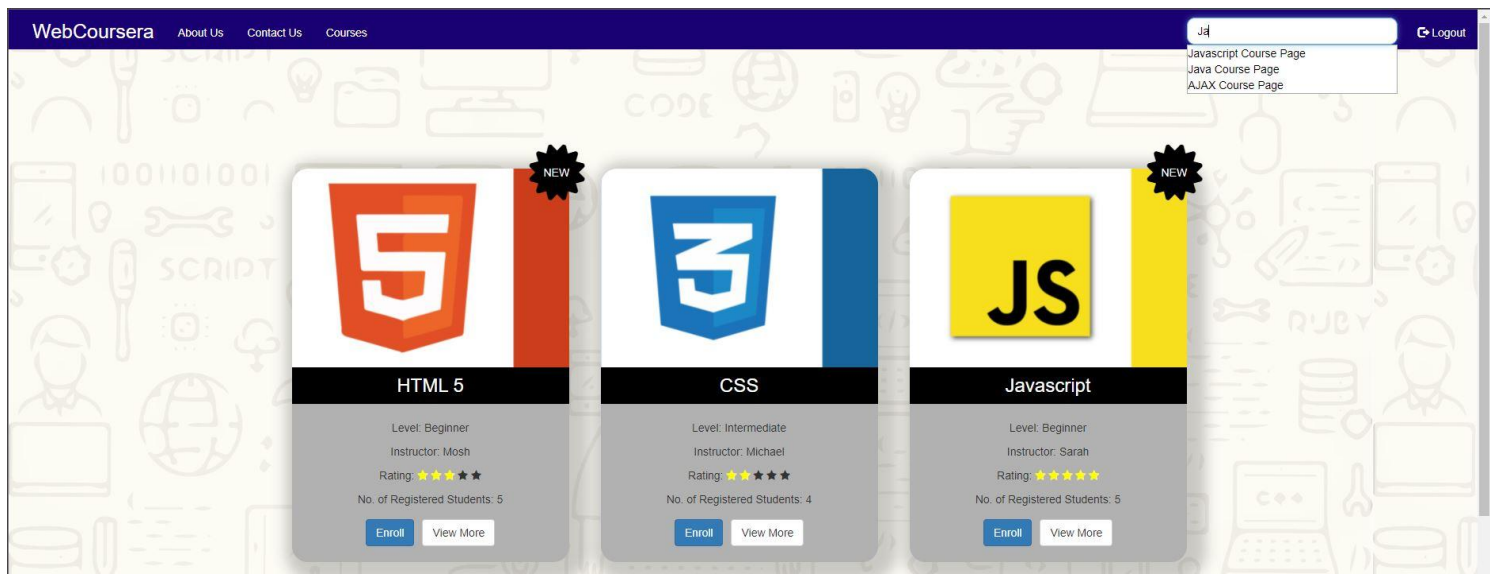


Once the student logs into the platform and visits the all courses page, instead of scrolling down to see all the courses, we have also made a search bar on the top of the page for all the courses which use AJAX. The reason we chose AJAX is because it has the ability to send HTTP Requests in the background and the user will not feel any delay and they can search for any course on the platform.

## Q6. Run the website on http server.
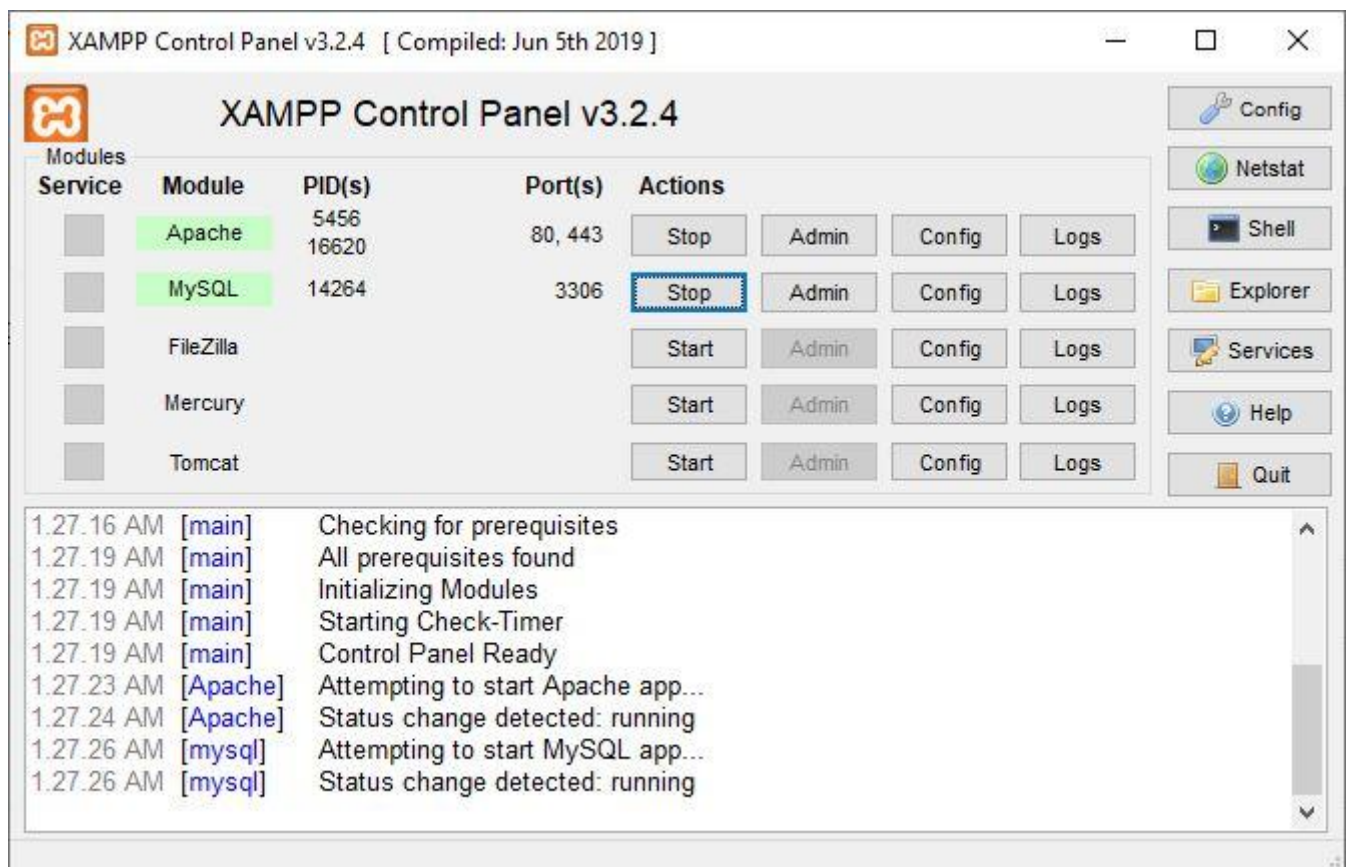
The WebCoursera platform is hosted on a HTTP Server. We have made use of the application called XAMPP for the same. The website is run on Apache HTTP Server and the database on MySQL server.