



CEN 308 SOFTWARE ENGINEERING

PROJECT DOCUMENTATION

Teach Me

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Proposed to:
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1. Introduction

1.1. About the Project

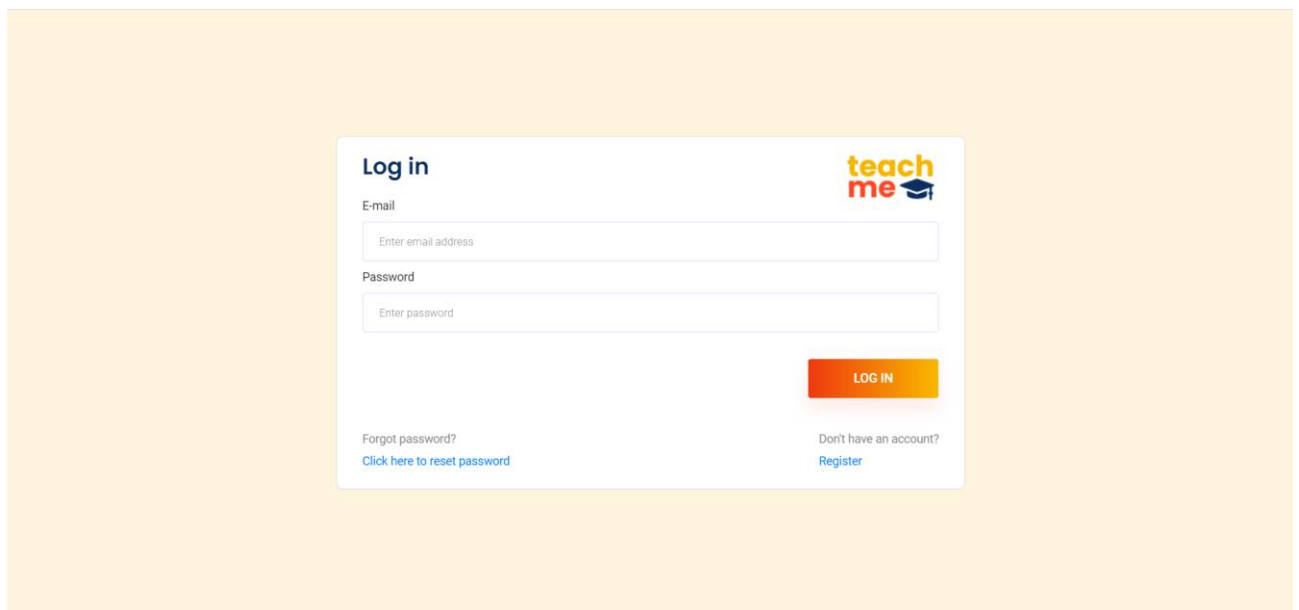
Online learning and examination system to allow everyone a chance to learn efficiently. Online examination service will make it easier for professors to create exams, grade their students and to provide the best experience possible.

Project URL: <https://admirsahman.software/>

1.2. Project Functionalities and Screenshots

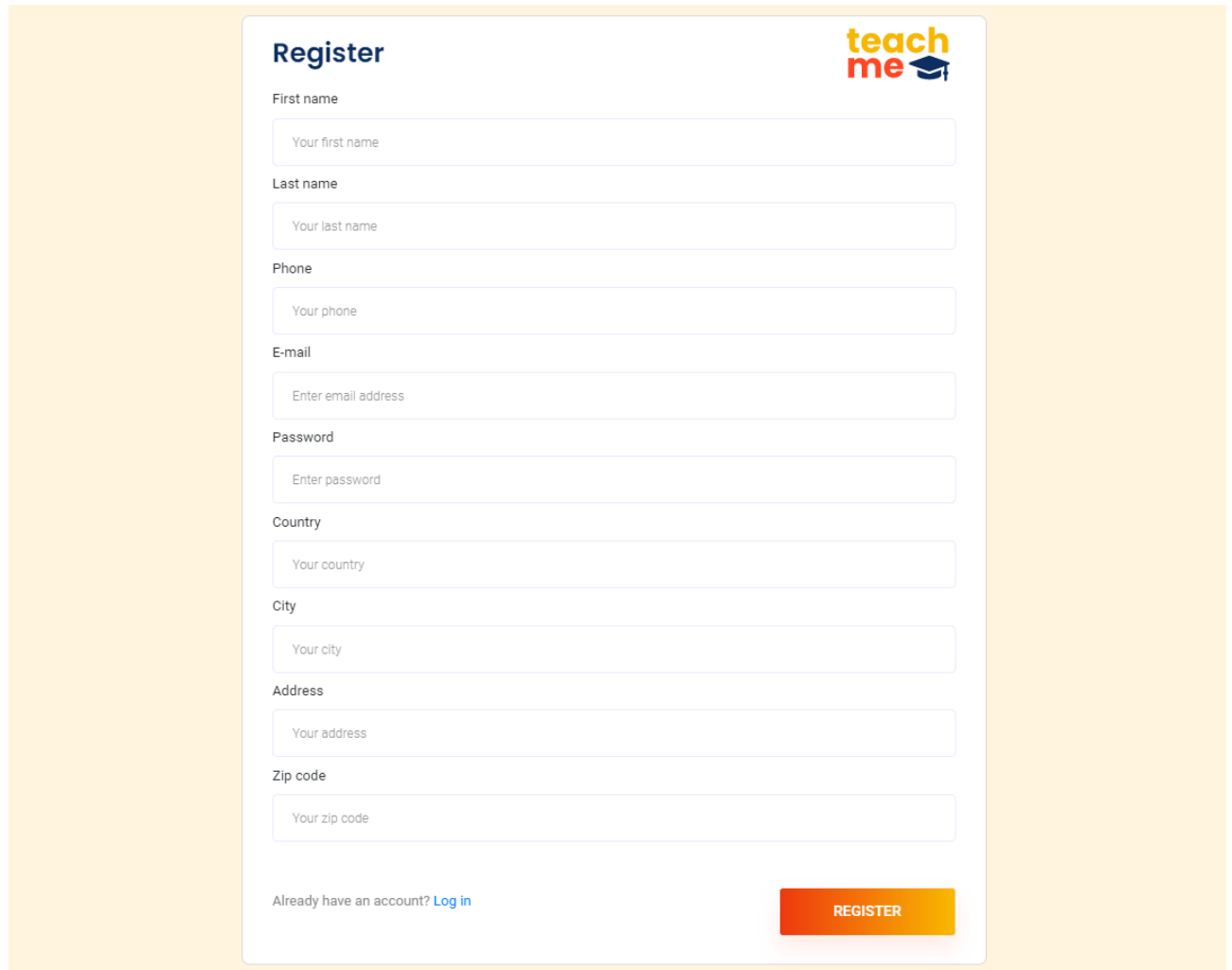
- **Login**

Login functionality to allow the user to login in order to view the content of the site. On successful login the user role gets encoded in the JWT together with the JWT duration.



- **Register**

In order for the user to be able to login, the user must first register on the site. After registering the user will be asked to confirm their account through email. For localhost SMTP I am using gmail smtp and for production environment sendinblue smtp is used instead.



The image shows a 'Register' form for a website called 'teachme'. The form is set against a light orange background. It contains several input fields for user registration: First name, Last name, Phone, E-mail, Password, Country, City, Address, and Zip code. Each field has a placeholder text. At the bottom left, there is a link 'Log in' for users who already have an account. At the bottom right, there is a prominent orange 'REGISTER' button.

Register

teach
me

First name

Your first name

Last name

Your last name

Phone

Your phone

E-mail

Enter email address

Password

Enter password

Country

Your country

City

Your city

Address

Your address

Zip code


Your zip code

Already have an account? [Log in](#)

REGISTER

On successful registration toaster success message will be displayed to the user and an email confirmation will be sent to the user.

Register



First name

Admirs

Last name

Sahmans

Phone

225883

E-mail

admirsahman2+1@gmail.com

Password

.....

Country

Bosnia & Herzegovina

City

Sarajevo

Address

Podigmanska 4

Zip code

71210

Already have an account? [Log in](#)

REGISTER

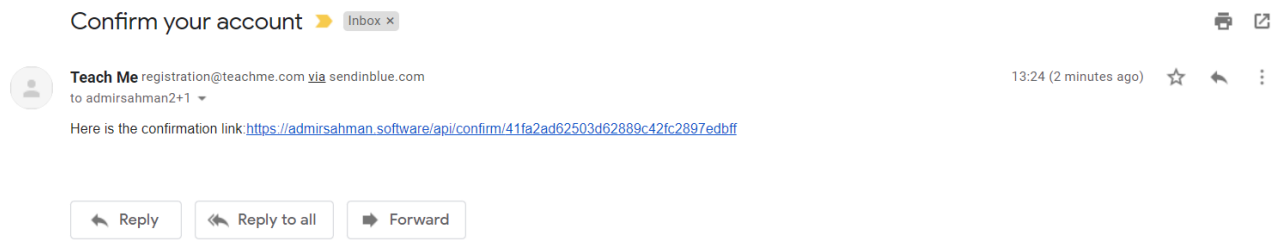
Success

✓

Your account has been successfully created!

An email confirmation has been sent to your email address.

The confirmation email will have the confirmation link which will confirm user account and activate the account in order for the user to be able to log in



When the user clicks on the link, the account confirmed page will be rendered to the user to let the user know that their account has been confirmed.

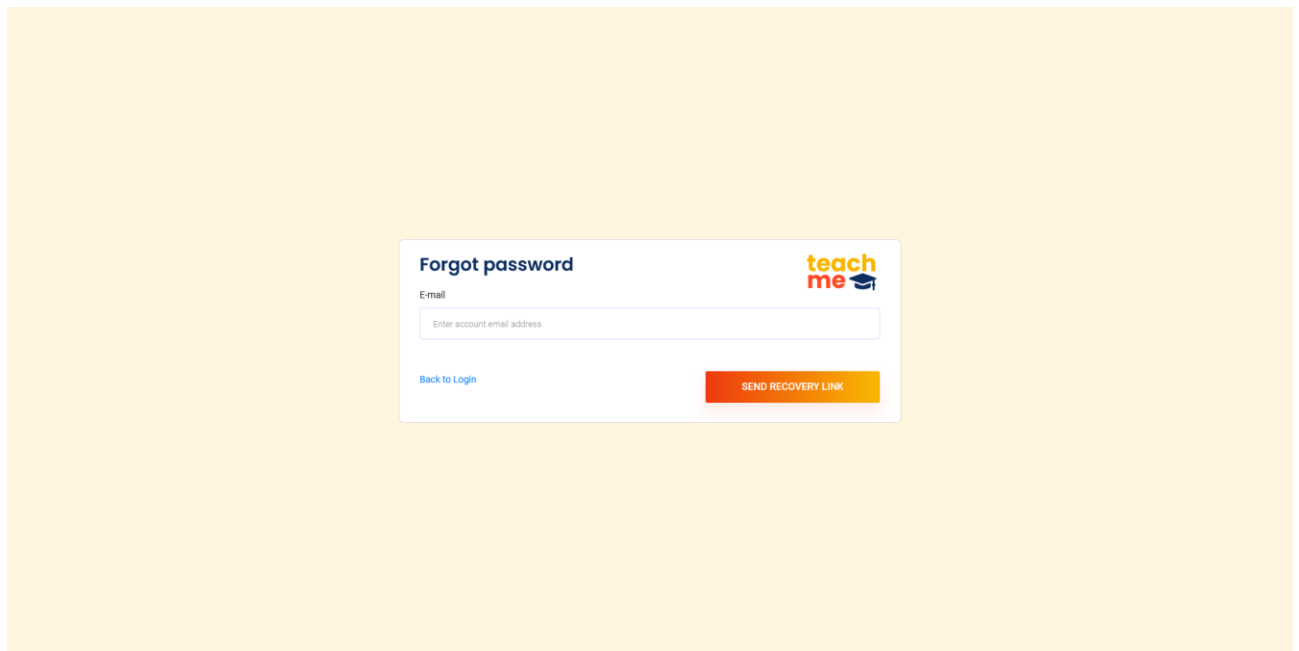
YOUR ACCOUNT HAS BEEN CONFIRMED



We are looking forward to meeting you in class!
[Homepage](#)

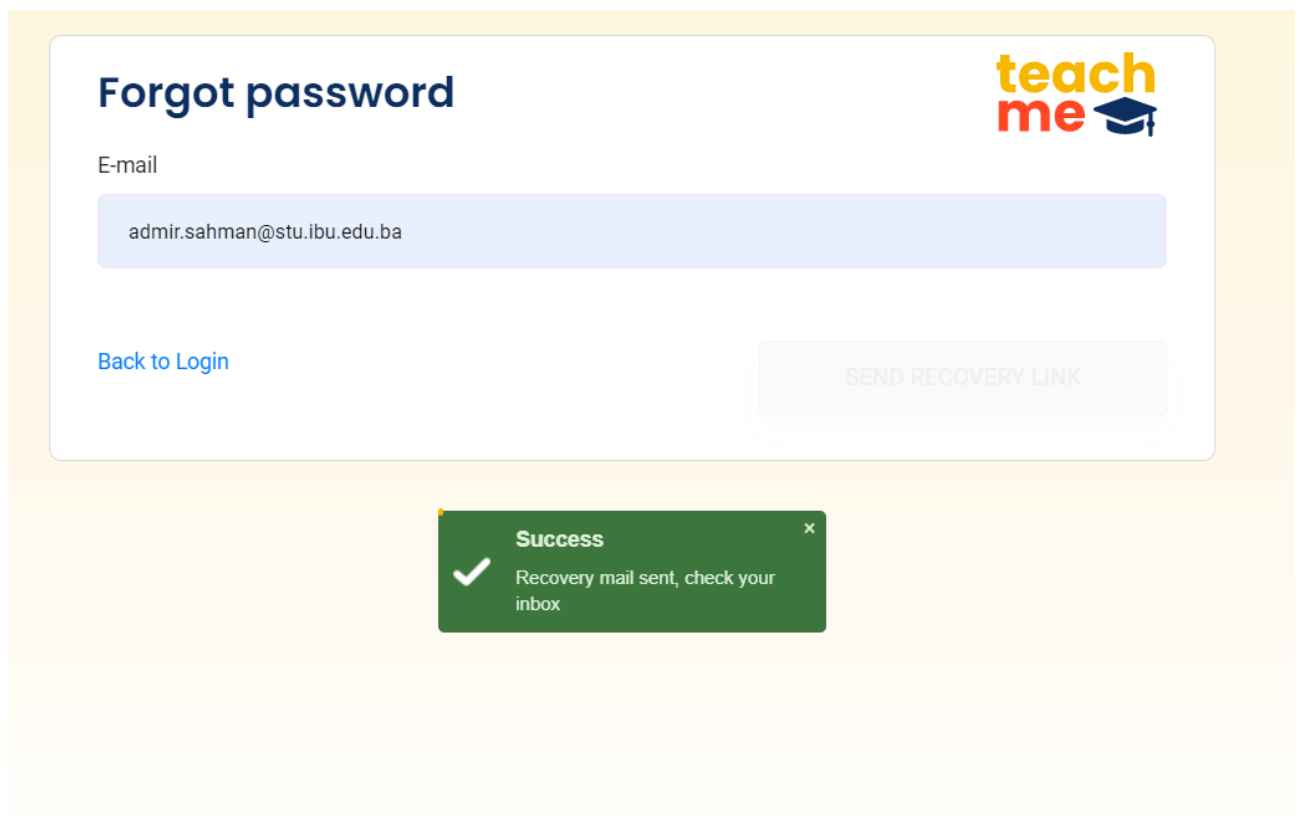
- **Forgot password**

Functionality if the user forgets their password



The screenshot shows a 'Forgot password' form on a light yellow background. The form is a white card with the 'teach me' logo in the top right corner. It contains an 'E-mail' label, a text input field with the placeholder 'Enter account email address', a 'Back to Login' link, and a red 'SEND RECOVERY LINK' button.

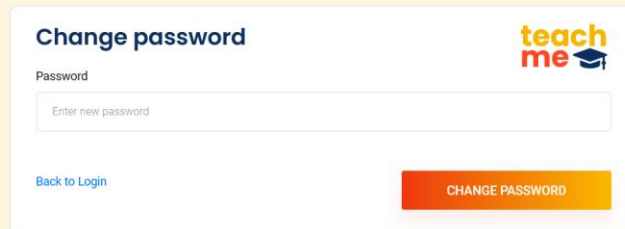
Once the user enters their email in the forgot password form on success the toaster success message will be displayed and an email will be sent to user's email address



This screenshot shows the 'Forgot password' form after a successful submission. The email field now contains 'admir.sahman@stu.ibu.edu.ba' and the 'SEND RECOVERY LINK' button is disabled (greyed out). A green success toast message is displayed at the bottom, stating 'Success' with a checkmark icon and the text 'Recovery mail sent, check your inbox'.

- **Change password**

When the user opens up the recovery link from the received recovery email sent through sendinblue smtp, the user will be presented with change password form. On entering the new password and submitting the form, a toaster success message will be displayed to the user and the user will be able to log in with the new password after that.




The screenshot shows a web form titled "Change password" for a service called "teach me". The form is set against a light orange background. It includes a "Password" label, a text input field with the placeholder "Enter new password", a "Back to Login" link, and a prominent orange "CHANGE PASSWORD" button. The "teach me" logo, featuring a graduation cap, is in the top right corner of the form.


- **Profile**

Once the user logs in to the site successfully, the user will be presented with profile page which contains all the user info from database, as well as the role of the user. User will be able to change their profile picture by pressing the button on the top right corner of the profile picture. On successfully uploading a new image for the profile picture an ajax call happens and the profile picture is changed asynchronously.

Digital Ocean spaces is used to store the profile images of users and the service used for cloud object data storing is Amazon S3.



CoursesStudentsProfileLOG OUT

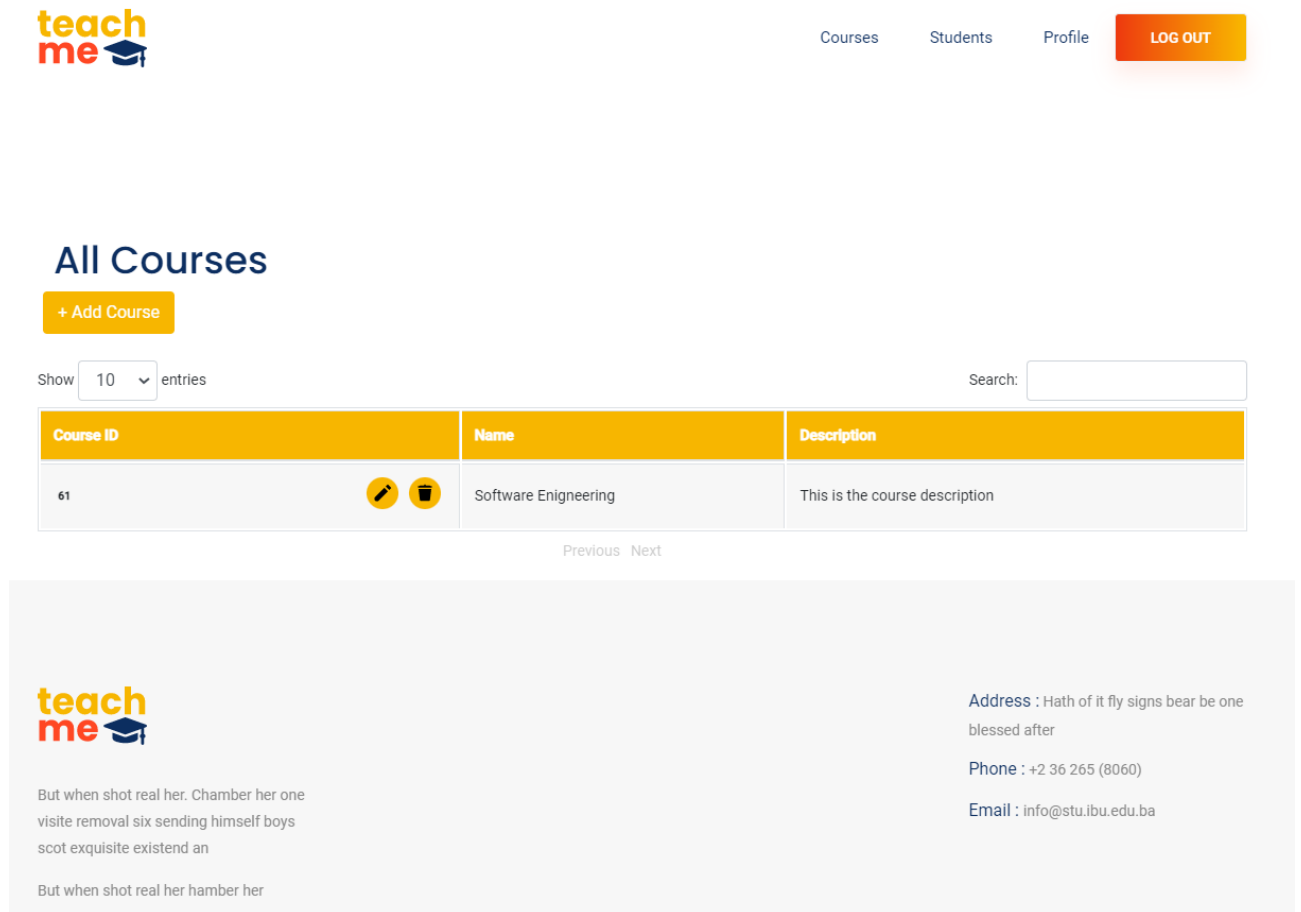


Admir Šahman
admin
Podigmanska 4

| | |
|------------|-----------------------------|
| ID | 158 |
| First Name | Admir |
| Last Name | Šahman |
| Email | admir.sahman@stu.ibu.edu.ba |
| Phone | +38762616940 |
| Country | BiH |
| City | Sarajevo |
| Zip code | 71210 |
| Address | Podigmanska 4 |

- **Courses(admin view)**

In courses admin view the user with the role of admin will be able to add, edit and delete the courses.



teach me

Courses Students Profile LOG OUT

All Courses

+ Add Course

Show 10 entries Search:

| Course ID | Name | Description |
|-----------|----------------------|--------------------------------|
| 61 | Software Engineering | This is the course description |

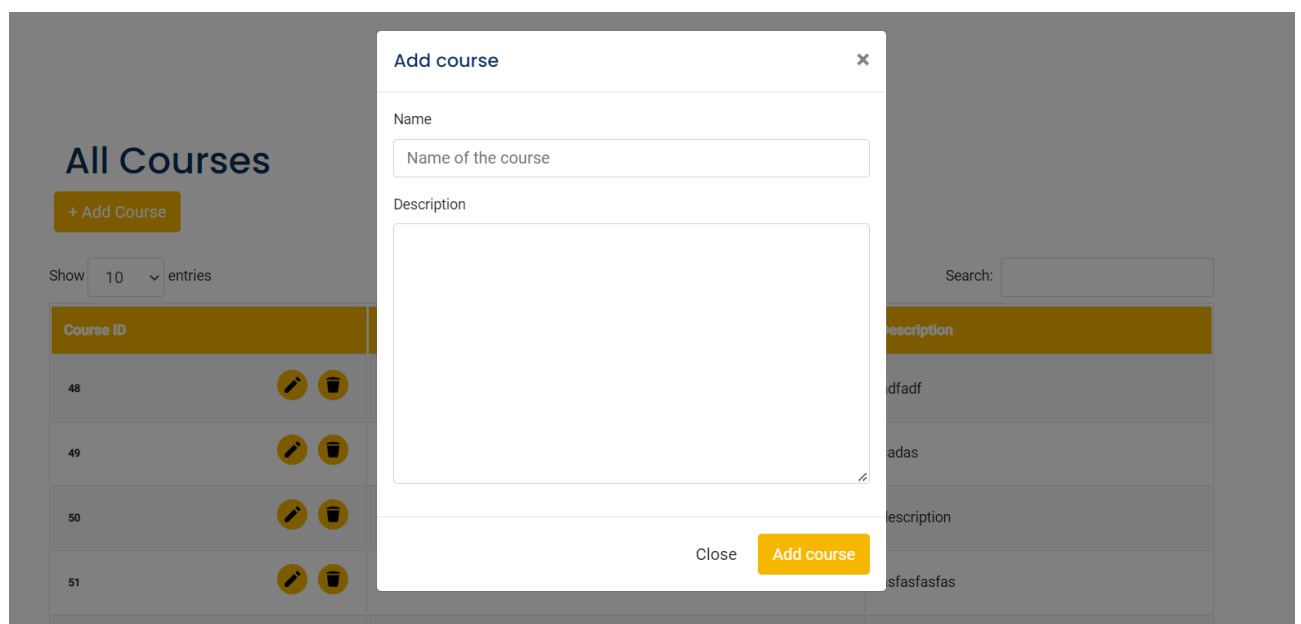
Previous Next

teach me

But when shot real her. Chamber her one
visite removal six sending himself boys
scot exquisite existend an
But when shot real her hamber her

Address : Hath of it fly signs bear be one
blessed after
Phone : +2 36 265 (8060)
Email : info@stu.ibu.edu.ba

On add course button click, a modal form pops up with course name and course description inputs.



All Courses

+ Add Course

Show 10 entries Search:

| Course ID | Name | Description |
|-----------|------|-------------|
| 48 | | |
| 49 | | |
| 50 | | |
| 51 | | |

Add course

Name

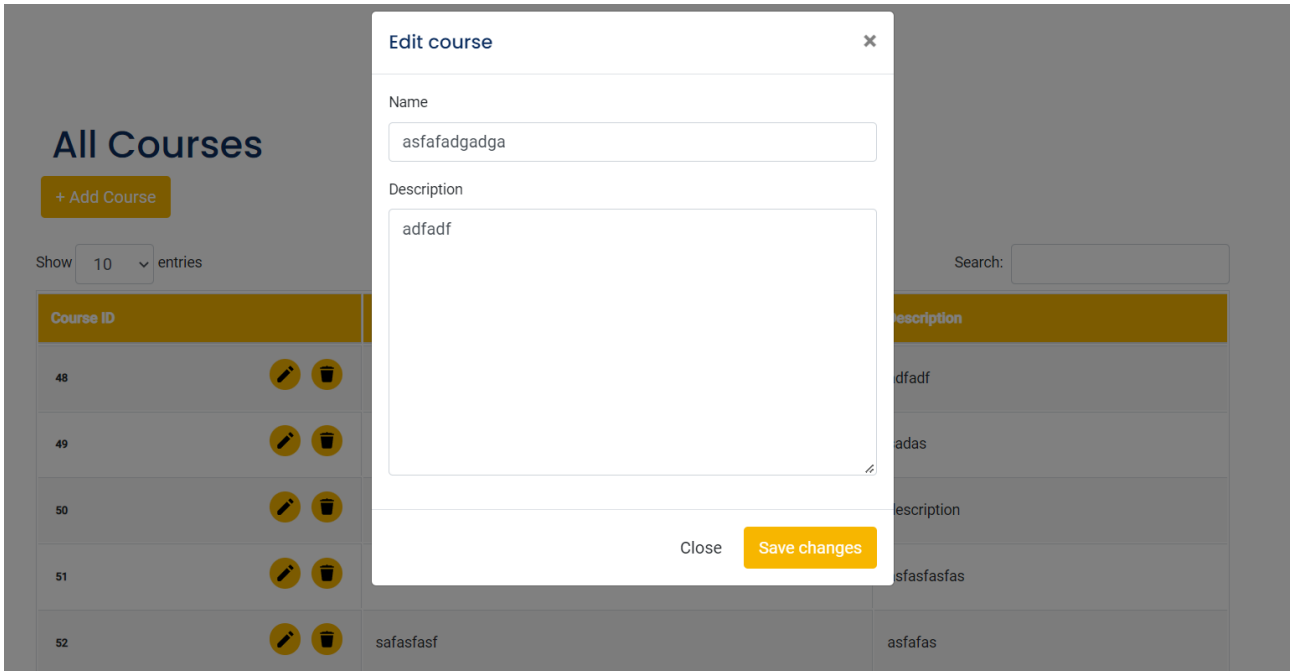
Name of the course

Description

Close Add course

On success the course will be added asynchronously to the all courses datatable.

On pressing edit course button (pencil icon), user will be presented with the edit course modal which will be prefilled with course name and description.



On clicking the delete course button (thrash bin icon), user will delete the course from the database. And a toaster success message will be displayed on success.

- **Courses(student view)**

If the user role is student, the user will be presented with two data tables Available courses and My courses. In the Available courses data table only courses that the user has not been enrolled to will be visible. And in my courses the courses that the user has enrolled to will be visible.

On pressing enroll me button the course will go from Available courses data table for the user, to My courses data table.

[Courses](#)[Students](#)[Profile](#)[LOG OUT](#)

Available Courses

Show entriesSearch:

| Course ID | | Name | Description |
|-----------|---------------------------|----------------------|--------------------------------|
| 61 | <button>Enrol me</button> | Software Enigneering | This is the course description |

[Previous](#) [Next](#)

My Courses

Show entriesSearch:

| Course ID | Name | Description |
|-----------------------|------|-------------|
| Nothing found - sorry | | |

[Previous](#) [Next](#)

Available Courses

Show entries

Search:

| Course ID | Name | Description |
|-----------------------|------|-------------|
| Nothing found - sorry | | |

[Previous](#) [Next](#)

My Courses

Show entries

Search:

| Course ID | Name | Description |
|-----------|----------------------|--------------------------------|
| 61 | Software Engineering | This is the course description |

[✕ Unenrol me](#)

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- **Students(admin only)**

The students page is exclusive to site admins, they will be able to see all the users inside the students data table.


[Courses](#)
[Students](#)
[Profile](#)
[LOG OUT](#)

All Students

Show 10 entries

Search:

| Student ID | First name | Last name | Email | Phone | Country | City | Zip code | Address |
|------------|-----------------|-----------|--------------------------------|--------------|---------|----------|----------|----------------------|
| 159 | First Last name | | myemail2@gmail.com | +387999999 | BiH | Sarajevo | 71200 | Francuske revolucije |
| 160 | sdasdas | | admir.sahman+1@stu.ibu.edu.ba | | | | | |
| 161 | 1fasfa update | | admir.sahman+5@stu.ibu.edu.ba | +38762616940 | BiH | Sarajevo | 71210 | podigmanska 4 |
| 162 | test | testic | admir.sahman+33@stu.ibu.edu.ba | +38762616940 | BiH | Sarajevo | 71210 | podigmanska 4 |

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2. Project Structure

2.1. Technologies

Our project was developed in WAMP stack. For backend we used PHP and on frontend we used PHP along with HTML and CSS. For database we used MySQL.

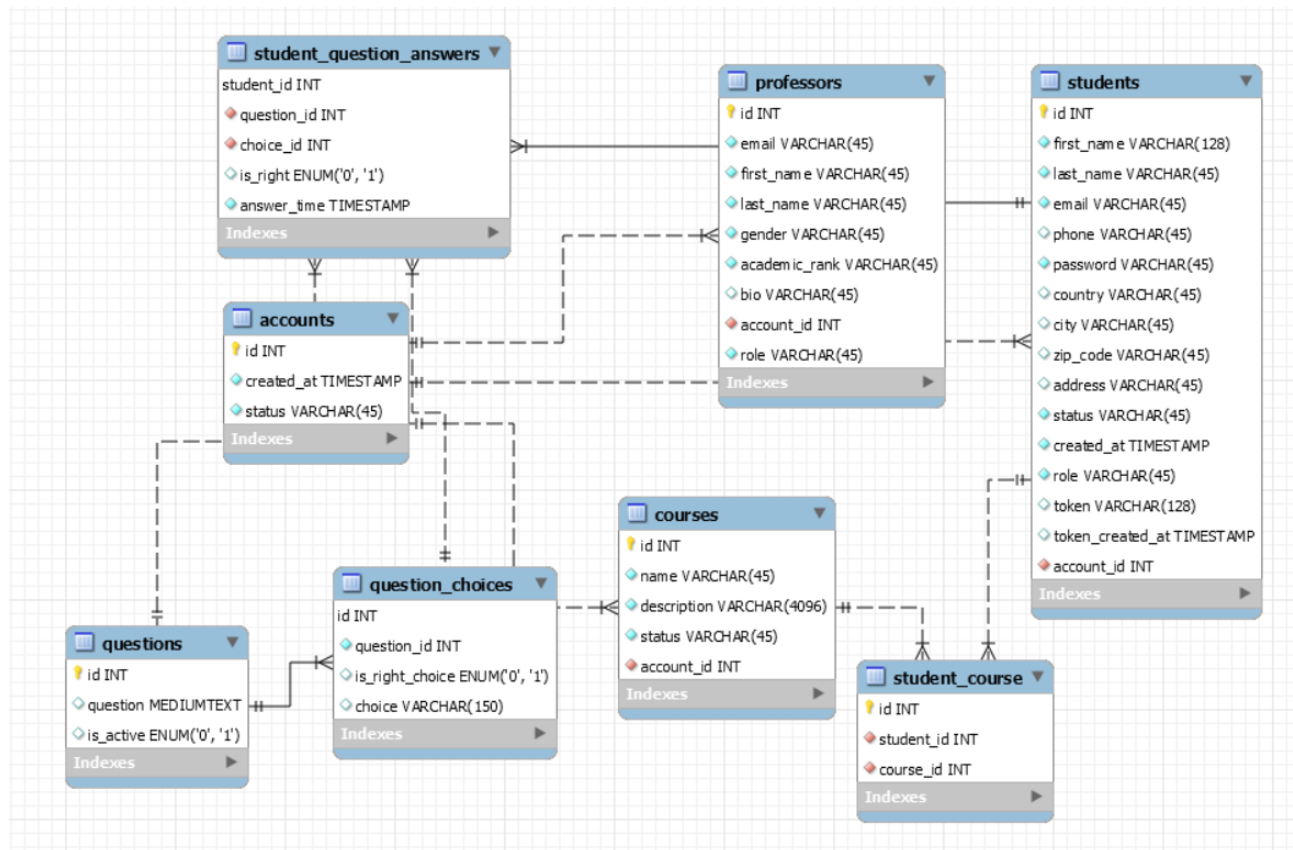
Coding standard – PSR-1

The project is hosted on Digital Ocean and uses a Name.com domain.

2.2. Database Entities

- accounts
- courses
- student_course
- students
- professors
- questions
- question_choices
- student_question_answers

Database design:



2.3. Architectural Pattern

Since we are using WAMP stack we have Windows at the lowest level with layered architecture. After Windows we have Apache and MySQL. At the next stage comes PHP. The process begins with requests for webpages from a user's browser being submitted to the Apache webserver. Apache transfers the request into PHP to load the file and run the code stored in it, if the request is for a PHP file. PHP also interacts with MySQL to capture some data in the code. In order to build the HTML that browsers use to view web pages, PHP then uses code in a file and the database details.

2.4. Design Patterns

We used singleton design pattern for the purposes of this project. We used the singleton design pattern so that we can gain a global access point to our instances.

3. Conclusion

It was a challenging task to do, but overall it significantly improved our skills. It gave us an ability to apply our theoretical knowledge in practical work.