

An-Najah National University College of Engineering and Information Technology

Web Development
Project report

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Linguify

Web programming class project, academic year 2022 /2023

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| Instructor | |

| <u>Topic</u> | <u>Mark</u> |
|---------------------------------------|-------------|
| Project Idea | |
| Project Complexity | |
| Project Tools | |
| Project Requirements and Modeling | |
| Project Discussion | |
| Project Completeness | |
| Project Output Results or reporting | |
| Project Administration and Management | |
| Project Report | |
| Team work | |

Abstract:

Linguify is an innovative web platform specifically designed to cater to the needs of language teachers and students. The platform offers a dynamic and interactive learning experience, allowing teachers to create engaging language courses enriched with multimedia resources like text, audio, and video materials. By organizing course content into modules, Linguify ensures a seamless learning journey for students, who can enroll in courses and access a wide range of educational materials.

With its advanced technological features, Linguify aims to transform traditional language classrooms into vibrant virtual spaces of exploration and growth. Teachers can create interactive lessons that incorporate various multimedia elements, catering to the diverse learning styles of their students. Moreover, Linguify provides students with the flexibility to access course materials and actively participate in discussions and assignments, irrespective of their location or time constraints. The platform also includes adaptive learning features that personalize language learning pathways, allowing students to monitor their progress and receive valuable feedback from their teachers. Real-time communication tools further enhance the sense of community among language learners.

Table of contents:

| Abstract: | 2 |
|----------------------------|----|
| Introduction: | 4 |
| Project Requirements: | 5 |
| Tools Used in the Project: | 7 |
| Project Database EER: | 9 |
| UI Discussion: | 10 |
| Conclusion: | 18 |
| References: | 19 |

Introduction:

Welcome to Linguify, a cutting-edge online platform that aims to revolutionize the way language courses are created, shared, and accessed. Our mission is to cater to the diverse needs of language learners by connecting them with a network of experienced teachers who offer a wide range of language courses tailored to individual preferences and learning styles. With Linguify, we strive to enhance the language learning experience and foster cultural exchange.

At Linguify, we believe that language learning goes beyond traditional textbooks and classroom settings. Our platform provides a dynamic and interactive environment where students can engage with teachers from different backgrounds and cultures. By connecting students with teachers who possess expertise in specific languages and cultures, Linguify promotes a deeper understanding of global diversity and encourages learners to explore various language styles, dialects, and regional nuances.

With a vast repository of language courses and study materials, Linguify offers students access to comprehensive courses that cover essential language skills such as listening, speaking, reading, and writing. Whether you're a beginner taking your first steps or an advanced learner seeking to refine your language proficiency, our platform ensures flexibility in choosing courses aligned with your goals and interests.

Linguify's user-friendly interface simplifies navigation and course management. Students can easily browse through available courses, access detailed information about teachers, and interact with them for personalized feedback. This interactive learning experience fosters a supportive community of language enthusiasts, encouraging collaboration and mutual growth.

We provide a platform for teachers to showcase their expertise and share their passion for language instruction. Linguify empowers teachers by offering tools and resources necessary to deliver high-quality language education. As part of our commitment to quality, we curate the courses available on our platform to maintain excellence and meet the evolving needs of language learners.

Join us on this exciting journey of linguistic exploration and cultural enrichment. Whether you're embarking on a language learning adventure or seeking to share your language expertise, Linguify is here to unlock your full language learning potential. Let's bridge language barriers, embrace diversity, and celebrate the beauty of languages together. Welcome to Linguify, where language learning knows no bounds.

Project requirement:

We are building a website for teachers to give all and out of their knowledge and experience to students

here is the requirements we worked on and what we finished up with:

- 1- Design a friendly interface that gives the looks and feel of a simplicity and practicality
- 2- Homepage: the main/home page contains a welcome screen, an about section, a services section and finally a contact us section, all designed within smooth animations to serve the comfort of our targeted audience.
- 3-Sign in/up: these 2 pages can be accessed from the the main page, each equipped with Ajax to process if the the entered email already exists, or if the password and repeatPassword do match or not
- 4- We have 3 types of users, a teacher, a student and an admin. The teacher and student can be signed up normally, but the admin is assigned by the

headAdmin from the existing users. all users have their common data stored in the database, with the teachers having a bit more data as shown in the UML. However, there is a twist, a student can sign up then he receives an OTP in his email to confirm the sign up, after a successful confirmation the student can sign in normally, the process works similarly with the teacher user, but he cant sign in normally after the confirmation, the admin must review his request of creating an account and validate the data entered of university, degree etc.. then the teacher will receive an email informing him that his account has been approved of, and now we will begin explaining the capabilities of each user:

A. The teacher: The teacher has 3 interfaces; the profile which can be viewed by the student and the teacher can edit his description the profile displays also how many students enrolled in this teacher's courses and how many students gave him a thumbs-up. Next, we have the courses menu which view the current courses of the teacher and then can view the material of each course, next the teacher can add a course, entering the course info and then entering the material in the shape of a video or files.

It is worthy to mention that when the teacher adds the course a request gets sent to the admin and the course is not deployed until the admin approves upon it and reviews the material.

B. The student: the student is much simpler that the teacher, the student can view all the available courses and can not view the material unless he is enrolled, then he can view the courses in another page, another action the student can perform is view the profile of the teacher and give a thumbs-up to the teacher.

*Friendly note: the teacher and student can send a support ticket and the admin receives it via email and handles it properly.

C. The admin: the admin has many privileges, which are deleting users, promoting users to admins, handling support tickets, and review teacher sign-ups and course-creating processes

This is a summary of the project requirement, it may differ ever so slightly from the final product but the idea stays the same.

Tools used:

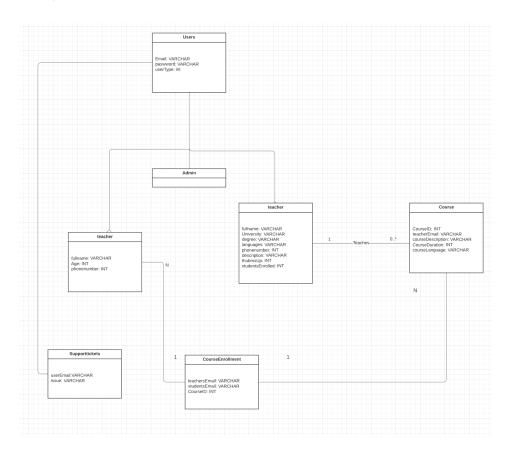
In the development of the Linguify platform, we have utilized a range of powerful tools and libraries to ensure a seamless and feature-rich experience for our users. Here are some of the key tools and libraries employed in this project:

- 1. HTML5, CSS3 and JavaScript: The foundation of our web-based platform is built using the latest HTML5 markup language and CSS3 styling standards
- 2. PHP: We rely on PHP, a server-side scripting language, to handle various server-side operations, interact with databases, and process user inputs. PHP enables us to create dynamic web pages and implement robust backend functionality.
- 3. MySQL (MariaDB): As the chosen database management system, MySQL enables efficient storage and retrieval of data related to user profiles, courses, materials, and other relevant information. It ensures reliable data management and supports fast query processing, as mentioned in the lectures, XAMPP uses MariaDB which is basically MySQL.
- 4. Bootstrap: We leverage the power of Bootstrap, a popular CSS framework, to ensure a responsive and mobile-friendly design for Linguity.

Bootstrap provides a grid system, pre-designed components, and responsive utilities that contribute to a consistent and visually appealing user interface.

- 5. jQuery: jQuery, a fast and lightweight JavaScript library, simplifies many common tasks in web development. It facilitates DOM manipulation, event handling, AJAX interactions, and animations. jQuery enhances the interactivity and user experience of Linguify.
- 6. Version control: Git, a distributed version control system, is utilized to manage the source code, enable collaboration, and track changes made by multiple developers. It ensures code integrity, allows for easy branching and merging, and simplifies project management.
- 7. Spline: Spline is a powerful tool used for creating interactive and visually appealing 3D graphics and animations. It enables us to enhance the user interface with engaging visual elements, such as animated charts, graphs, and dynamic visualizations.
- 8. PHP Mailer: PHP Mailer is a widely-used library that simplifies the process of sending email notifications and messages through PHP. It provides a convenient and secure way to integrate email functionality into Linguify, allowing us to send notifications, course updates, and communication between users.
- 9. Chart.js: Chart.js is a versatile JavaScript library that allows us to create interactive and customizable charts and graphs. By utilizing Chart.js, we can present data in a visually appealing manner, enabling users to visualize their progress, course statistics, and other relevant information.
- 10. AJAX (Asynchronous JavaScript and XML): AJAX is a powerful technique that enables seamless data exchange between the web browser and the server without requiring a page refresh. With AJAX, we enhanced the user experience by implementing dynamic content loading, real-time updates, and interactive features, such as live chat and instant search.

Project UML:



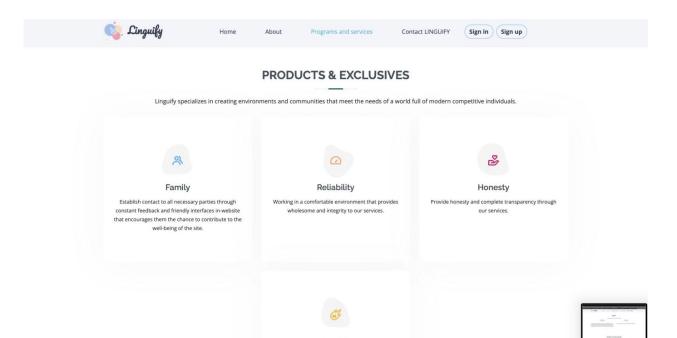
UI discussion:



Learn a new language!

let's start







student through LINGUIFY site.

ABOUT Here at LINGUIFY, all we care about is knowledge!

Satisfy student needs using LINGUIFY that connects students with different teachers that provide different styles and cultures. So it expands the knowledge spectrum of our students and therefore possibly more information about other regions, thus increasing knowledge gathered from various instructors each with his/her own field of expertise.

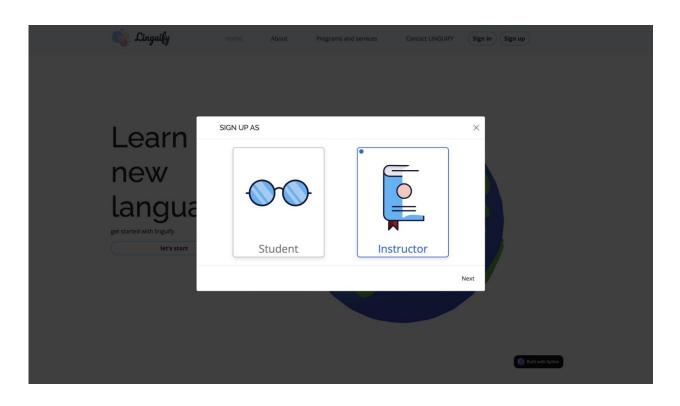
OUR MISSION

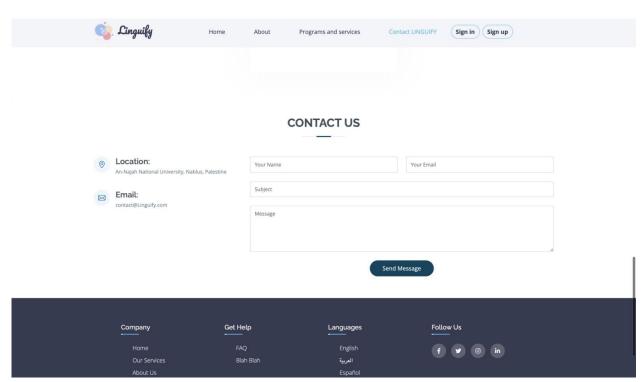
Connecting students with diverse teachers, expanding knowledge horizons.

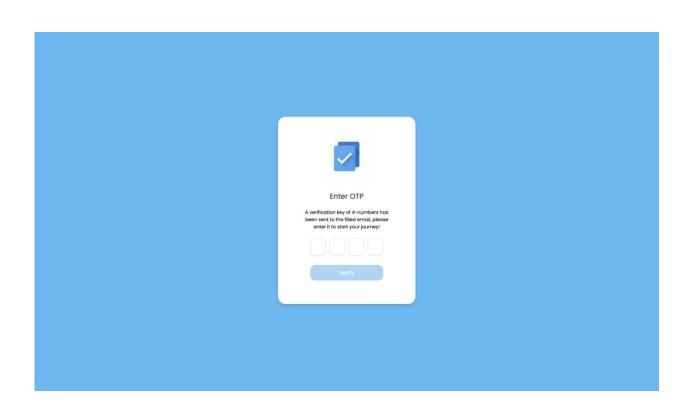
OUR VISION

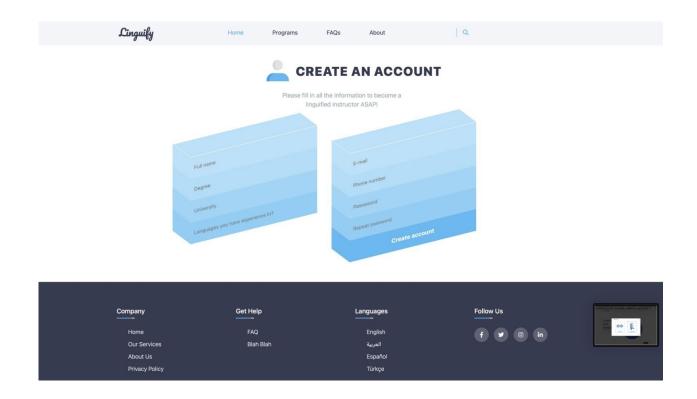
PRODUCTS & EXCLUSIVES

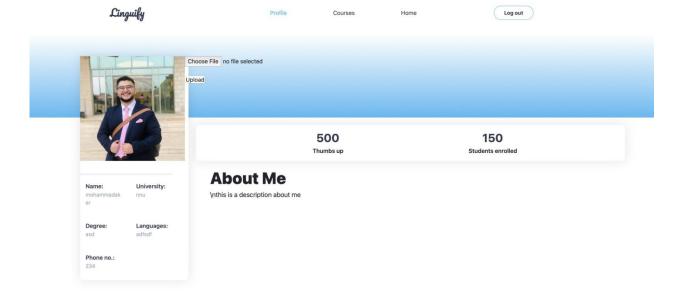
Linguify specializes in creating environments and communities that meet the needs of a world full of modern competitive individuals.

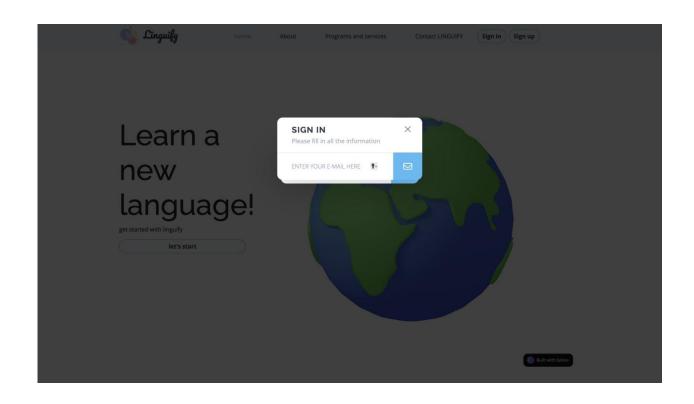




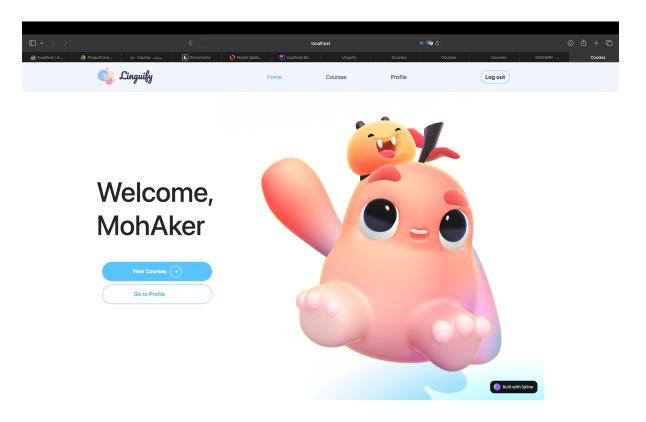


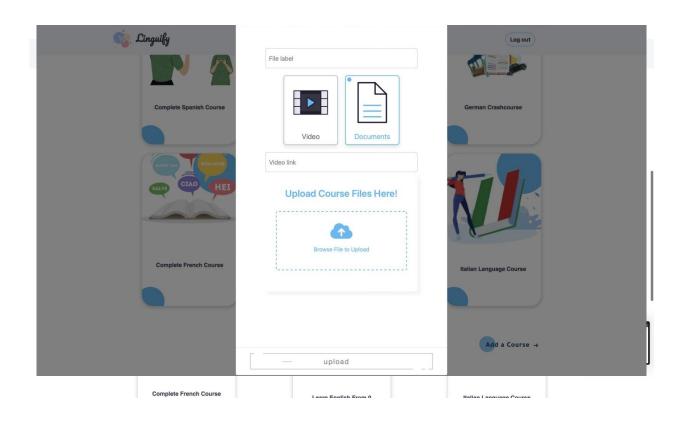


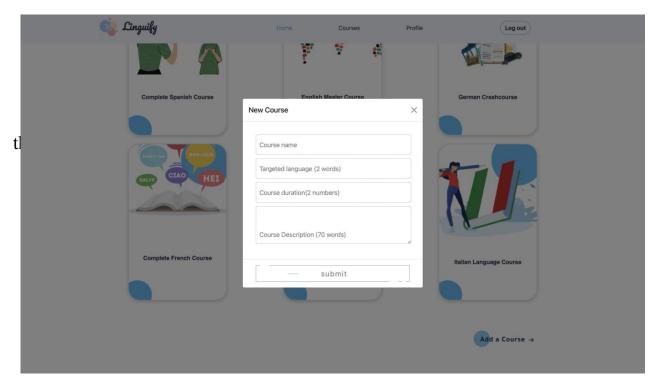




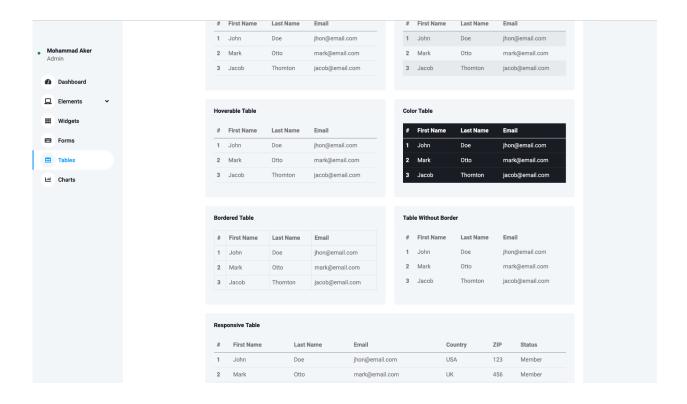
This Page represents the teacher's profile with the ability to edit the description and store it in the database.







The previous screenshots represent the teacher's profile and uploading mechanism of courses, whereas the courses display is currently facing technical issues due to storage capacity but we are currently solving it.



This screenshot represents a glimpse of the admin capabilities and the interfaces he has access to

Conclusion:

Throughout the project, we strived to create a user-centric platform that caters to the needs of language learners and teachers. By leveraging these tools and libraries, we were able to implement a range of features, including course creation, material uploads, student enrollment, progress tracking, and communication channels.

In conclusion, the development of the Linguify platform represents a successful collaboration, utilizing a diverse set of tools and libraries to create a comprehensive language learning environment. The project has provided valuable insights and hands-on experience in web development, highlighting the importance of effective utilization of tools and libraries to build robust and user-friendly applications.

References:

- 1. HTML5: The latest version of HTML, used as the foundation for structuring the web pages. Reference: https://html.spec.whatwg.org/
- 2. CSS3: The latest version of CSS, used for styling the web pages and creating visually appealing layouts. Reference: https://www.w3.org/Style/CSS/
- 3. JavaScript: A programming language used for creating interactive and dynamic elements on web pages. Reference: https://developer.mozilla.org/en-US/docs/Web/JavaScript/Guide
- 4. Bootstrap: A popular front-end framework that provides pre-built CSS and JavaScript components for responsive web design. Reference: https://getbootstrap.com/
- 5. jQuery: A fast and concise JavaScript library that simplifies HTML document traversal, event handling, and animation. Reference: https://jquery.com/

- 6. MySQL: A popular open-source relational database management system used for storing and managing data. Reference: https://dev.mysql.com/doc/
- 7. Spline: A tool for creating interactive and visually appealing 3D graphics and animations. Reference: https://spline.design/
- 8. PHP Mailer: A powerful library for sending emails using PHP, with support for attachments, SMTP authentication, and more. Reference: https://github.com/PHPMailer/PHPMailer
- 9. Chart.js: A JavaScript library for creating interactive and customizable charts and graphs. Reference: https://www.chartjs.org/
- 10. AJAX (Asynchronous JavaScript and XML): A technique for making asynchronous HTTP requests and updating parts of a web page without requiring a full page reload. Reference: https://developer.mozilla.org/en-US/docs/Web/Guide/AJAX
- 11. Jade/Pug: A high-performance template engine for Node.js and JavaScript, providing a concise and expressive syntax for generating HTML templates. Reference: https://pugjs.org/