LingoQuest – Language learning Website.

Presented by: Edtech2 Team.

LingoQuest

[redacted]

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Project Overview.

Why Use LingoQuest?

LingoQuest offers an engaging, flexible and AI-supported way to learn foreign languages effectively.

What is LingoQuest?

LingoQuest is a web-based foreign language learning platform designed to make acquiring new languages engaging, accessible, and effective. It addresses the challenge of limited language learning tools in Nigeria.

Why was LingoQuest Built? and The Problem it Solves.

LingoQuest was built to provide Nigerian learners with an engaging and accessible way to acquire foreign language skills for academic, professional and global opportunities. There is a gap between how languages are taught and how they are used in real-world situations, leaving many Nigerian learners unprepared in multicultural environments, LingoQuest aims to breach that gap.

Target Audience

Who is the Platform for?

- **Primary users:** Nigerian secondary and tertiary students.
- **Secondary users:** Professionals seeking foreign language proficiency.
- **Tertiary users:** Tutors and educational content creators.

Learner Levels.

Beginner

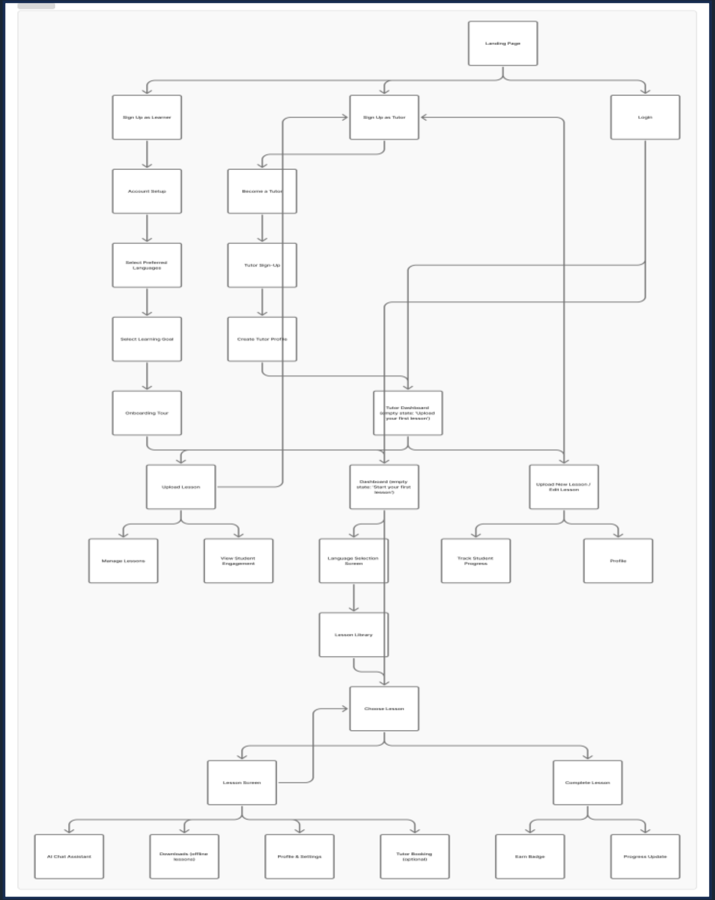
Intermediate

Advanced

Learning Goal of LingoQuest.

To enable foreign learners to develop practical, real-world foreign language skills through interactive, self-paced, and AI-supported

How the Website works & Feautures.



1. **User Onboarding**

   Users sign up, choose their preferred language, and set learning goals.

2. **Personalized Dashboard**

   Learners access lessons, track progress, and view achievements in one place.

3. **Interactive Learning**

   Users complete video lessons, exercises, quizzes, and flashcards designed for real-world language use.

4. **AI-Powered Practice**

   Learners practice conversations with LingoAI, receiving instant feedback on grammar, pronunciation, and usage.

5. **Progress Tracking**

   Learning progress, streaks and performance insights are recorded to support continuous improvement.

UI/UX Research & Planning.

User Research

User research combined competitor analysis, app review analysis, and usability evaluation to understand how learners use language-learning platforms (ie Duolingo, Babbel, Busuu, Memrise etc). Findings showed that many learners struggle with unnatural sentences, limited cultural context and poor explanations during learning. These insights guided LingoQuest's design to focus on clear explanations, real-world language use and supportive AI-assisted learning.

Personnas

- ○ Ms. Aisha Chen (Age: 35)- a second year university student whose goal is to learn French for academic requirements and her career.
- ○ Mr David Okonkwo (Age: 32) – a marketing manager whose goal is to learn Spanish for business in Latin America.
- ○ Ms Maria Rodriguez (Age: 28)- a Spanish teacher & freelance tutor whose goal is to share her insight and authentic content easily.

User Needs & Pain Points

Users Needs: User needs included: Clear explanations of how phrases are used in real conversations, Short and focused lessons that fit busy schedules, Opportunities to ask questions and get instant clarification.

Pain Points

- Lack of cultural and contextual explanations.
- No easy way to ask "why" during learning.
- Confusion between dialects and phrases often sound unnatural or unclear.

Design Goals

- Reduce cognitive load through clear, simple navigation.
- Present language in real-world and cultural context.
- Support quick, focused learning sessions and provide instant explanations through AI assistance.
- Design an intuitive platform for both learners and tutors.

UI/UX Execution.

Color Palette

#2EA148

#FFFDF7 #1A2634

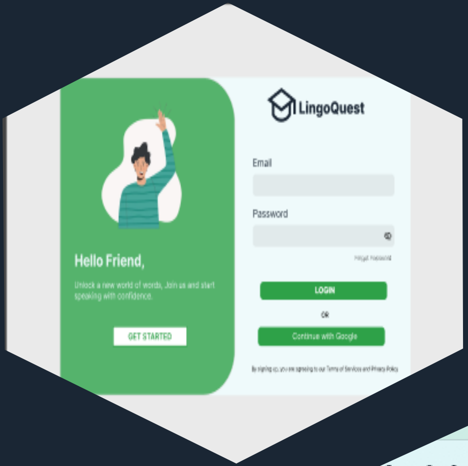
#FFD632 #FF9FA2

Typography:

Inter Bold;30pt
Poppins Bold; 24pt
Poppins SemiBold; 20pt
Nunito Regular; 16pt
Nunito Light; 12pt

Accesibility Considerations :

- Readable typography and high contrast.
- Simple, intuitive navigation.
- Low-data and offline friendly design.
- Multi-modal learning (text, audio, video)


LingoQuest

Hello Friend,

Unlock a new world of words, Join us and start speaking with confidence.

GET STARTED

Email

Password

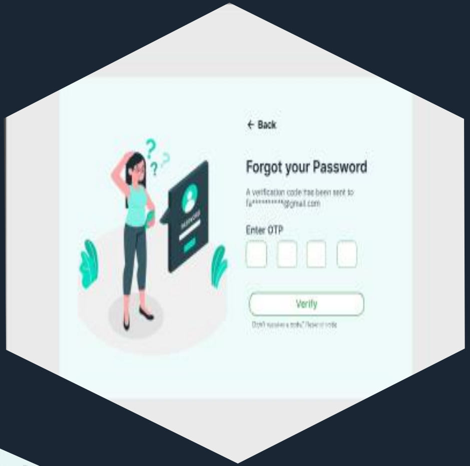
Forgot Password

LOGIN

OR

Continue with Google

By signing up, you are agreeing to our Terms of Services and Privacy Policy


← Back

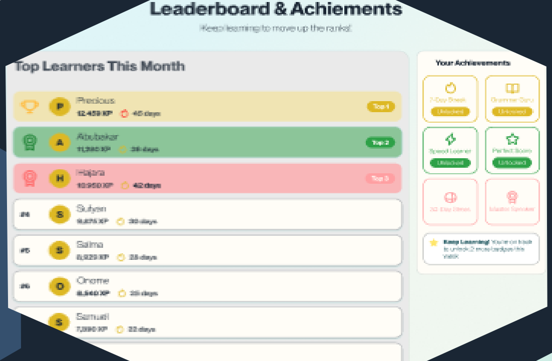
Forgot your Password

A verification code has been sent to fa**********@gmail.com

Enter OTP

Verify

Didn't receive a code? Resend code


Leaderboard & Achiements

Keep learning to move up the ranks!

Top Learners This Month

	P	Precious 12,459 XP 45 days	Top 1
	A	Abubakar 11,280 XP 38 days	Top 2
	H	Hajara 10,950 XP 42 days	Top 3
#4	S	Sufyan 9,875 XP 30 days	
#5	S	Salma 8,920 XP 28 days	
#6	O	Onome 8,540 XP 25 days	
	S	Samuel 7,890 XP 22 days	

Your Achievements

7-Day Streak Unlocked

Grammar Guru Unlocked

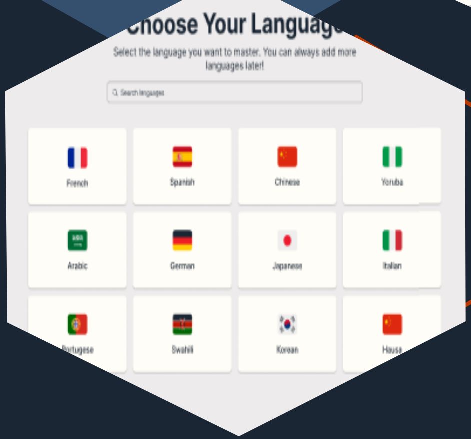
Speed Learner Unlocked

Perfect Score Unlocked

30-Day Streak

Master Speaker

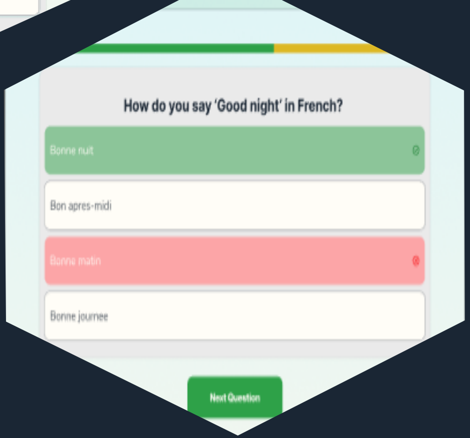
Keep Learning! You're on track to unlock 2 more badges this week.


Choose Your Language

Select the language you want to master. You can always add more languages later!

Search languages

French	Spanish	Chinese	Yoruba
Arabic	German	Japanese	Italian
Portugese	Swahili	Korean	Hausa


How do you say 'Good night' in French?

Bonne nuit

Bon apres-midi

Bonne matin

Bonne journee

Next Question

Front-End Overview

Technologies Used

- **React 19** - UI Library
- **React Router** - Navigation
- **Tailwind CSS** - Styling
- **React Query** - Data fetching
- **Framer Motion** - Animations
- **Vite** - Build tool

How UI Designs were Translated into Code

The UI designs were translated into code by breaking each screen into reusable components and implementing them using structured HTML and responsive CSS. Design elements such as colors, typography, spacing, and layout patterns were carefully matched to the design system to ensure visual consistency across the platform.

JavaScript was then used to add interactivity to key elements such as navigation menus, buttons, forms, and user feedback states. The interface was tested across different screen sizes and devices to ensure responsiveness, usability, and alignment with the original UI designs.

Component Based Structure

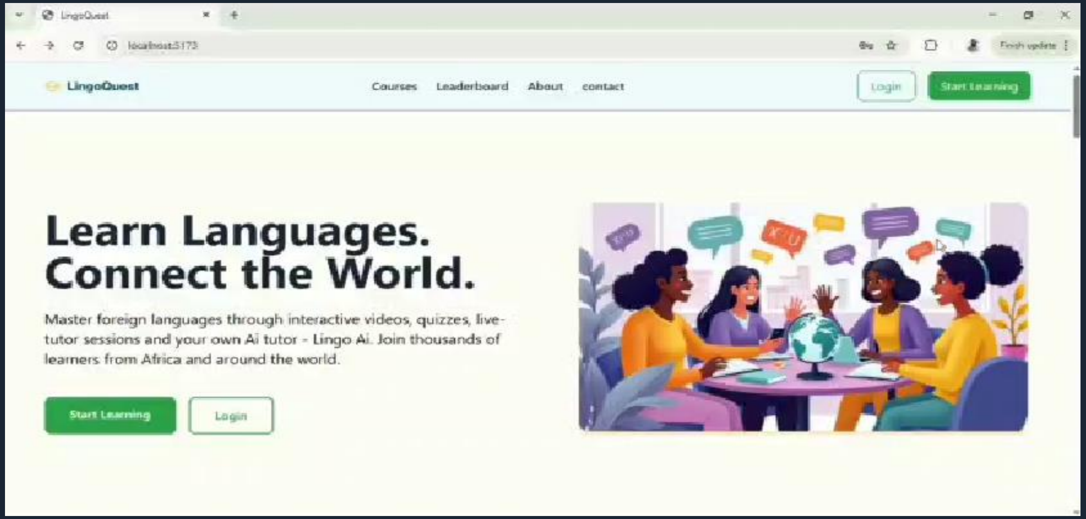
- Navigation Bar
- Buttons and form inputs
- Lesson Cards
- Quiz Pages.
- Progress Indicators
- Chat Interface

Front-End Functionality

The front-end of the project was developed using React and Tailwind CSS, creating a modern and responsive user interface that aligns closely with the design team's specifications. Pages were structured to ensure consistency and ease of navigation, with React Router 6 providing smooth transitions between different sections of the application. React context was used to handle onboarding and authentication, allowing the platform to personalize the courses each user sees after signing up, enhancing the overall user experience.

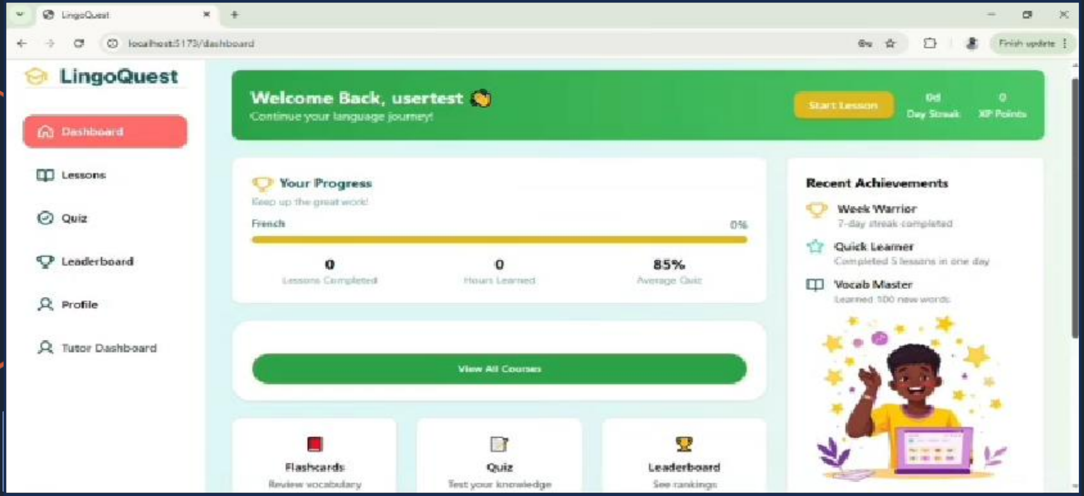
Data integration was handled efficiently through Axios and React Query, enabling the front-end to fetch, cache, and synchronize data from the backend in real-time. This ensured that client-specific needs were met promptly while maintaining high performance and interactivity across the application. Additionally, Tailwind CSS allowed for rapid implementation of responsive and visually appealing designs, while React's component-based architecture ensured maintainable, reusable, and dynamic code. Overall, the front-end combined functionality, performance, and aesthetics to deliver a seamless, user-friendly platform.

Pages were built to adapt seamlessly across different screen sizes and devices. The layouts and components followed the design team's UI specifications.



Learn Languages. Connect the World.

Master foreign languages through interactive videos, quizzes, live-tutor sessions and your own Ai tutor - Lingo Ai. Join thousands of learners from Africa and around the world.



Welcome Back, usertest

Continue your language journey!

Your Progress

Keep up the great work!

French 0%

0 Lessons Completed · 0 Hours Learned · 85% Average Quiz

Recent Achievements

Week Warrior – 7-day streak completed

Quick Learner – Completed 5 lessons in one day

Vocab Master – Learned 100 new words

Back-End Architecture

Server Setup

The server was set up using Node.js and Express, with Node.js serving as the runtime environment and Express providing a lightweight and efficient web framework. This setup allowed the backend to handle requests, manage routing, and serve data to the front-end effectively, ensuring smooth communication between the client and server.

Authentication Logic

For authentication, the project implements JWT (JSON Web Tokens), which securely verifies user identities and manages session data. Bcrypt is used for password hashing, ensuring that user passwords are stored in a secure, encrypted form, protecting sensitive information from unauthorized access.

Database

The project uses MongoDB as its database, providing a flexible, document-oriented storage system that allows for efficient handling of large amounts of structured and unstructured data. MongoDB's scalable nature makes it well-suited for applications where data grows rapidly or needs to be queried in various ways.

APIs

The project integrates several APIs to enhance its functionality, including the Grok API and DeepGram API. These APIs allow the application to process data and perform specific tasks efficiently. While not all APIs used are known, they collectively support the platform's core features and user interactions.

Back-End Functionality

Technology Stack

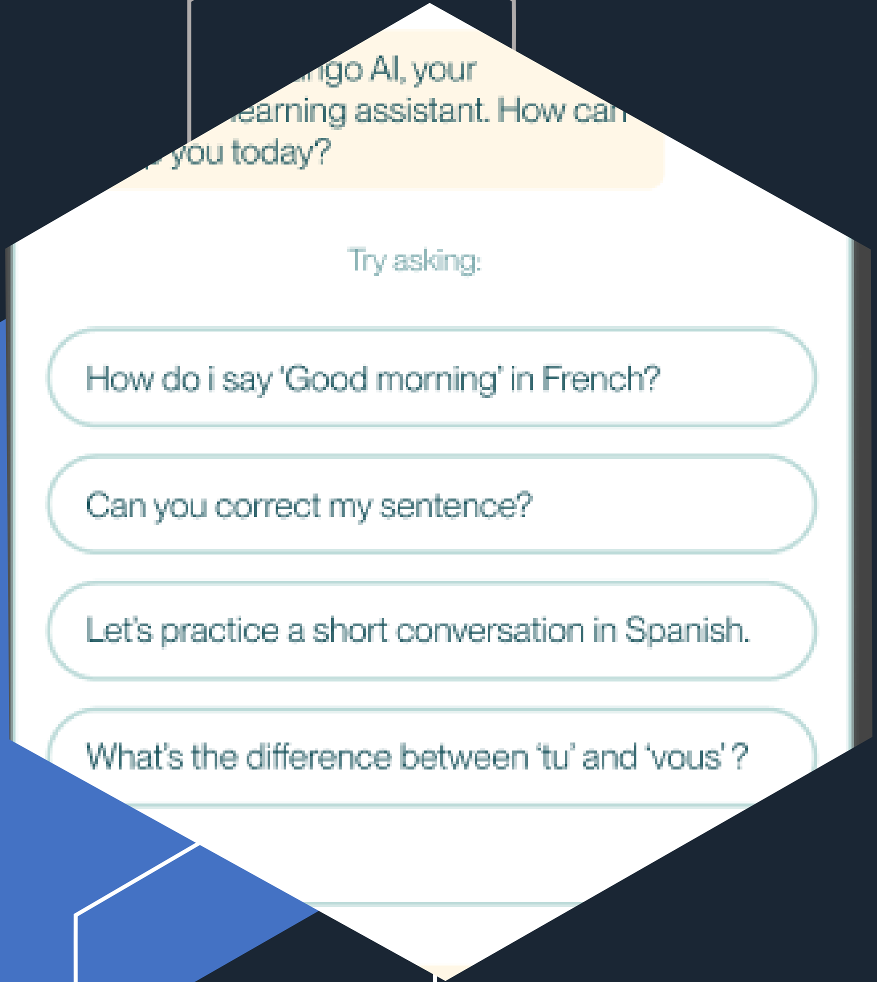
- **Node.js** - Runtime
- **Express.js** - Web framework
- **MongoDB** - Database
- **Mongoose** - ODM
- **JWT** - Authentication
- **BCrypt** - Password hashing

User Handling

Mongoose is used to manage user data within MongoDB, allowing the application to define schemas, perform queries, and interact with the database efficiently. This includes handling personal user data, tracking progress, and managing license periods. Mongoose provides a structured way to store and retrieve information, making user data management streamlined and reliable.

Security Measures

Beyond authentication, the project employs additional security measures to protect user data and maintain application integrity. Passwords are hashed using Bcrypt, sensitive endpoints are protected, and data is securely transmitted between the client and server, reducing the risk of unauthorized access or breaches.



ngo AI, your
earning assistant. How can
you today?

Try asking:

How do i say 'Good morning' in French?

Can you correct my sentence?

Let's practice a short conversation in Spanish.

What's the difference between 'tu' and 'vous' ?

AI Chat Box Integration.

LingoAI: Your 24/7 Language Companion.

What is LingoAI? and its Purpose?

LingoAI is an intelligent, always-available AI language tutor designed to support learners anytime and anywhere. Its purposes include:

- To provide learners with 24/7 conversation practice.
- To support grammar, pronunciation, and fluency improvement.

How Users Interact With LingoAI

- Engage in text-based conversations to practice writing.
- Use voice interactions for pronunciation and listening practice.
- Receive real-time corrections and feedback.
- Progress trough conversations that adapt to their skill level.

Impacts & Benefits

- Personalized learning experiences for every user.
- Increased engagement and lesson completion.
- Improved learner confidence through continuous practice.
- No dependency on human tutor availability.

Conclusion

LingoQuest is a modern and interactive language learning platform that combines sleek design, responsive functionality, and secure data handling. The front-end, built with React and Tailwind CSS, brings the designs to life, creating a visually appealing and easy-to-navigate experience. The platform also features an AI-powered chat box, making learning more interactive and personalized for users.

On the backend, Node.js, Express, and MongoDB manage user data, track progress, and handle license periods efficiently. APIs like Grok and DeepGram enhance functionality, while JWT and Bcrypt ensure secure authentication and data protection. Overall, LingoQuest delivers a seamless, engaging, and safe learning experience that balances design, technology, and interactivity to make language learning enjoyable and effective.

Thank you

From: EdTech2