Speakify

An innovative platform for interactive
Sri Lankan language learning

Team Members

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Our Design Poster

SPEAKIFY

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Purpose

Novice Features

- **Gamified Learning:** Boost engagement with interactive features.
- **Consistency Streaks:** Stay motivated with streak tracking.
- **Learn Anywhere, Anytime:** Flexible, on-the-go learning.

Intermediate Features

- **AI-Powered Lessons:** Tailored learning experiences through AI.

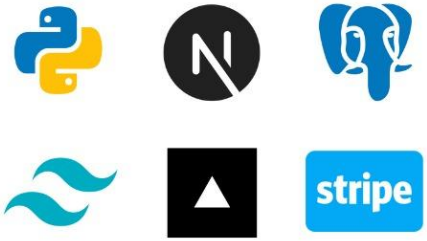
Business Module

- **Advertisements:** Monetize through in-app ads.
- **In-App Shop:** Heart Re-fill and unlimited hearts.
- **Premium Memberships:** Offer subscriptions for advanced features and ad-free experiences.

Unique Features

- **Sinhala & Tamil Language Support:** Learn in your preferred local language.
- **Gamified Learning:** Engage with fun and interactive lessons.
- **AI Chatbot in Sinhala:** Practice conversations with a smart, language-aware chatbot.

Tech Stack



Introduction: The Problem

What is the background?

- Most existing language-learning platforms focus on globally dominant languages, neglecting regional languages like **Sinhala and Tamil**.

Why does it matter? (The "Pain Point")

- Individuals who want to learn these languages face a **lack of structured, engaging, and interactive resources**.
- Traditional methods often rely on rote memorization, which fails to provide learners with real-world conversational skills.

Introduction: The Problem

What is the current situation?

- **Lack of Engaging Content:** Existing resources are often outdated and text-heavy.
- **Absence of Personalized Learning:** Most platforms use a generic, one-size-fits-all approach.
- **Limited Conversational Practice:** Many apps focus on vocabulary memorization rather than speaking exercises.
- **Insufficient AI-Driven Feedback:** Learners struggle with pronunciation and grammar due to a lack of instant feedback

The Solution: Your Project's Purpose

What is our project?

- Speakify is an **innovative, AI-powered language learning platform** specifically designed for Sinhala and Tamil learners.

What is the main goal or vision?

- The aim is to develop an interactive, AI-driven platform that makes learning Sinhala and Tamil **engaging, personalized, and effective.**

The Solution: Our Project's Purpose

What are the benefits?

- It bridges the gap between traditional methods and modern technology, making language acquisition more **accessible and enjoyable**.
- It integrates **AI-powered feedback**, **gamification techniques**, and **adaptive learning paths**.
- It provides users with **real-time pronunciation feedback** and **real-life conversation practice.**

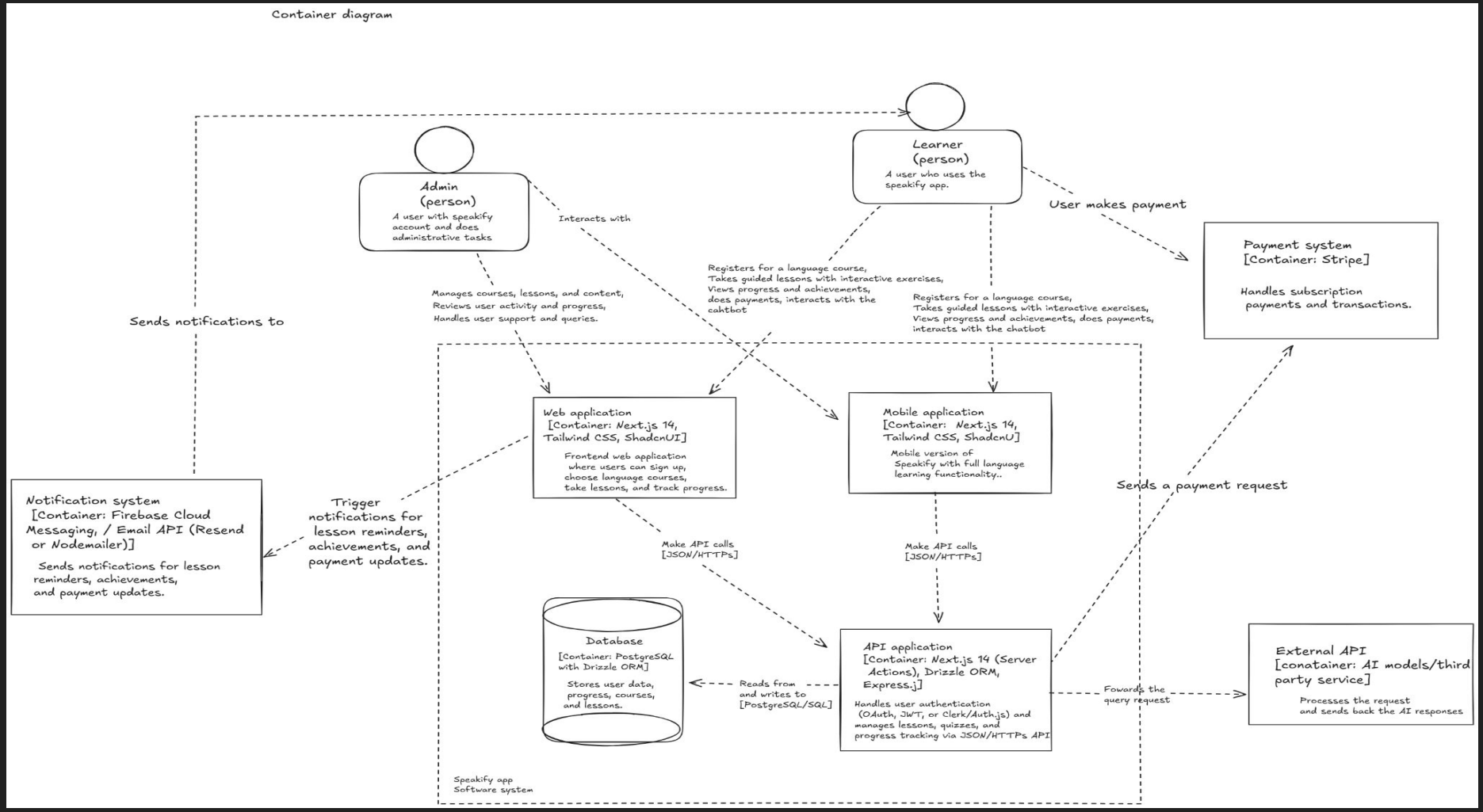
Key Features & Functionality

This is what Speakify does:

- **Novice Features**
  - **Gamified Learning:** Boost engagement with interactive features.
  - **Consistency Streaks:** Stay motivated with streak tracking.
  - **Learn Anywhere, Anytime:** Flexible, on-the-go learning.
- **Intermediate Features**
  - **AI-Powered Lessons:** Tailored learning experiences through AI.
- **Unique Features**
  - **Sinhala & Tamil Language Support:** Learn in your preferred local language.
  - **AI Chatbot in Sinhala:** Practice conversations with a smart, language-aware chatbot.
- **Business Module**
  - **Advertisements:** Monetize through in-app ads.
  - **In-App Shop:** Purchase "Heart Refill" and "unlimited hearts."
  - **Premium Memberships:** Offer subscriptions for advanced features and ad-free experiences.

Software Architecture

Container diagram

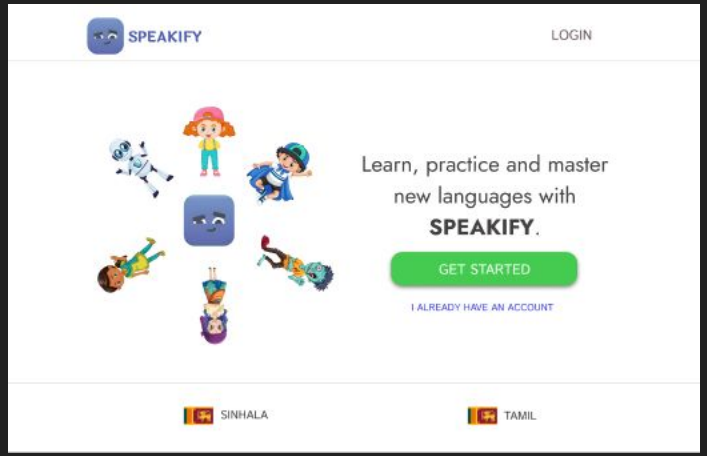


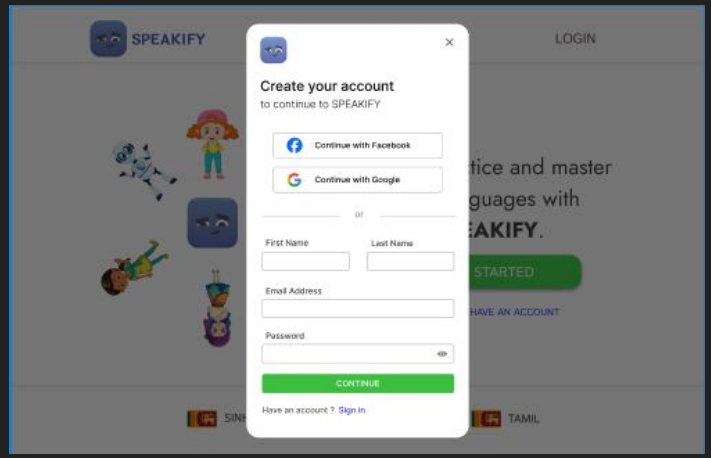
Key Features & Functionality

Main Components (based on Container Diagram)

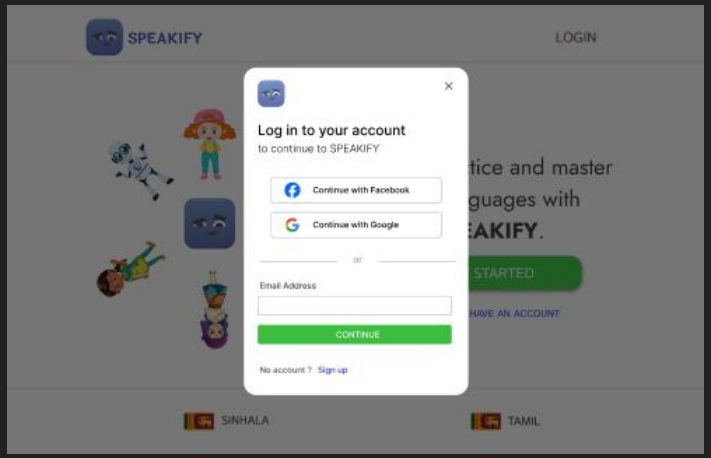
- **Web Application:** The frontend for users, built with Next.js, Tailwind CSS, and ShadcnUI.
- **Mobile Application:** The mobile version, also built with Next.js and Tailwind CSS.
- **API Application:** The backend, built using Next.js Server Actions, Drizzle ORM, and Express, handling user authentication and progress tracking.
- **Database:** A **PostgreSQL** database to store user data, progress, and courses.
- **External APIs:**
    - **Payment System:** Uses **Stripe** to handle subscriptions and payments.
    - **Notification System:** Uses **Firebase Cloud Messaging** or an Email API for reminders and updates.
    - **AI Models:** Integrates with third-party AI models for speech synthesis and chat functions.

User Interfaces



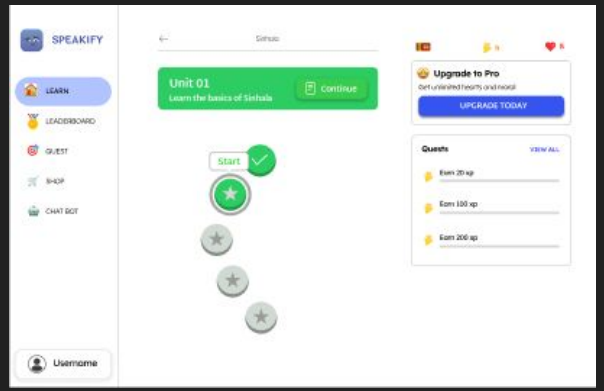


Sign up page

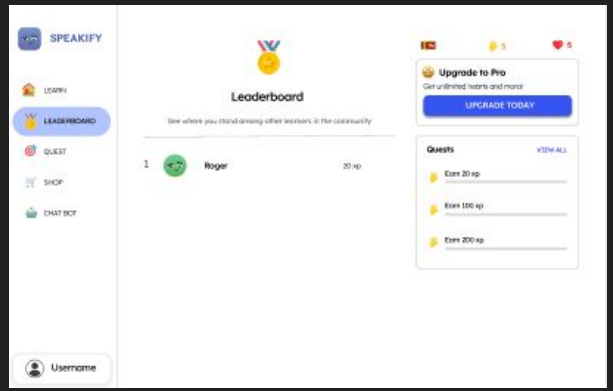


Login page

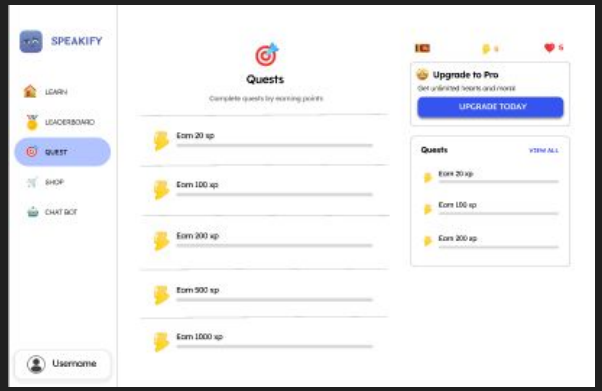
Home page



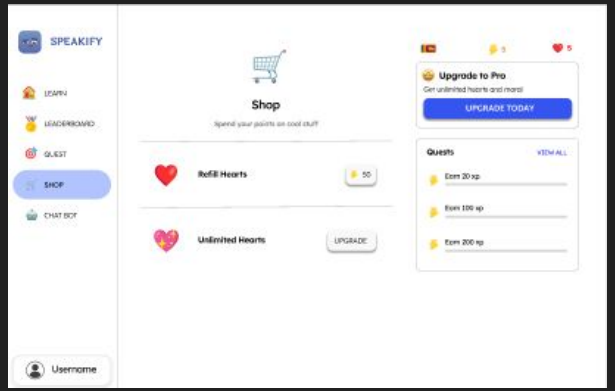
Learn page



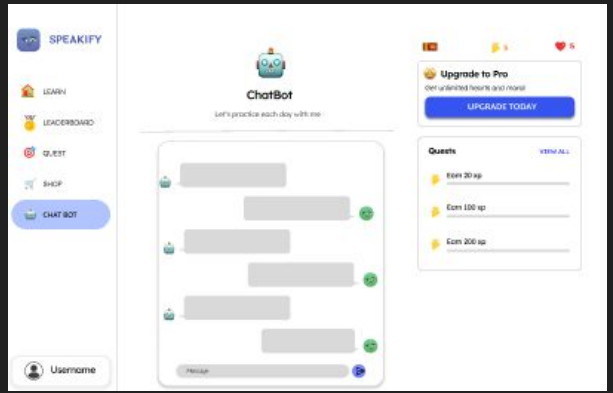
Leaderboard



Quest page



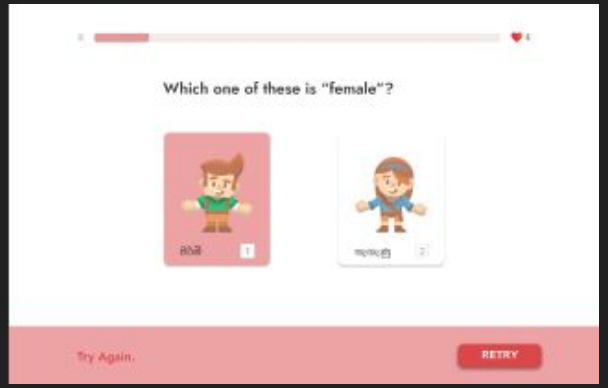
Shop page



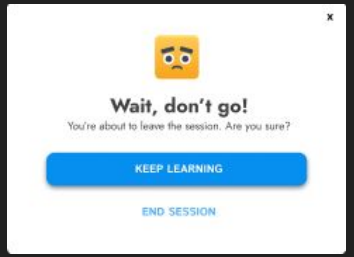
ChatBot page

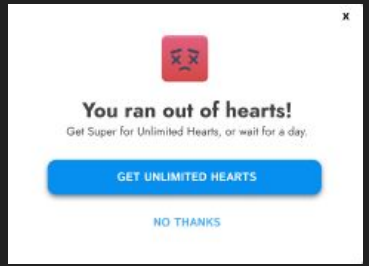
Activity

Activity win



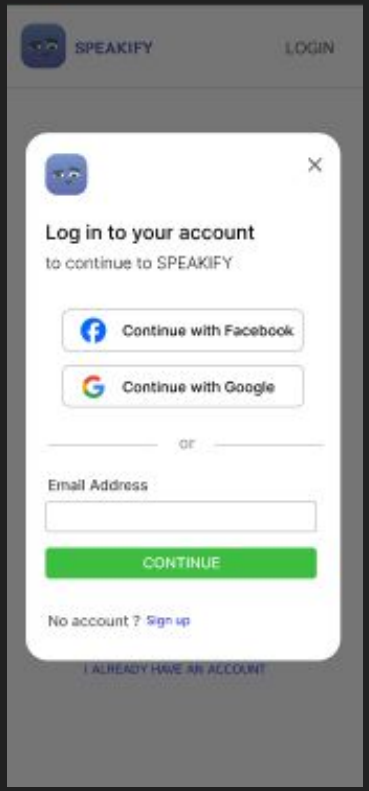
Activity loss





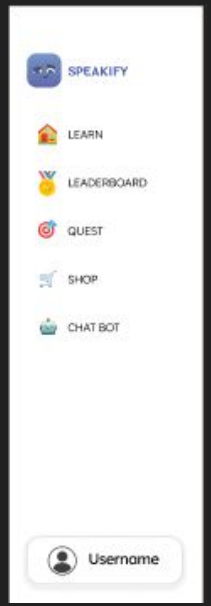
Popup activity notifications

Sign up page



Login page

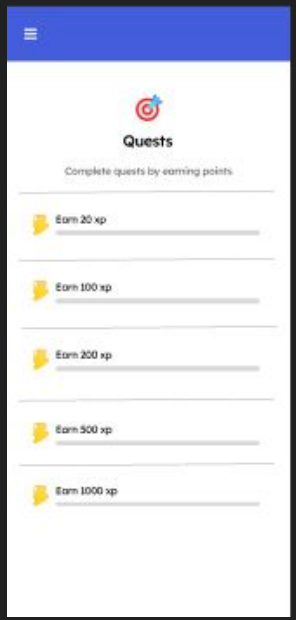
Home page



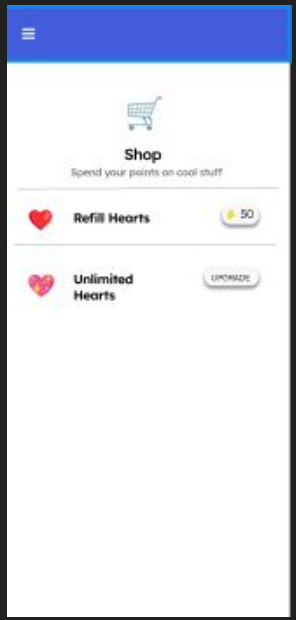
Sidebar

Learn page

Leaderboard

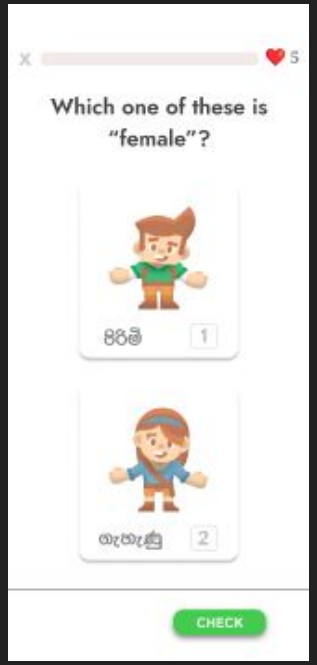


Quests



Shop

Chatbot



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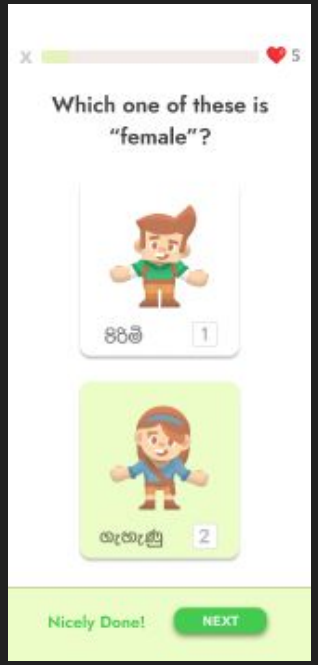
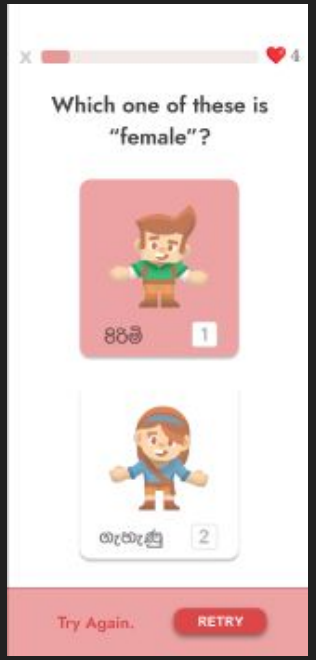
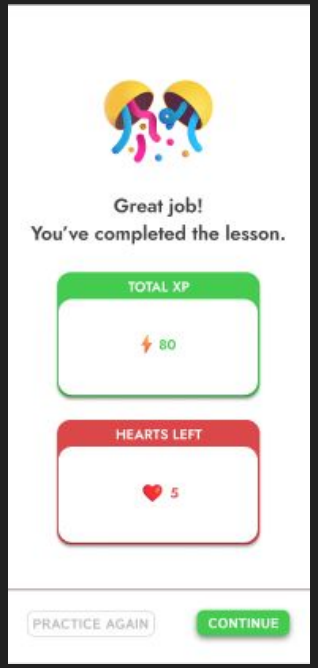


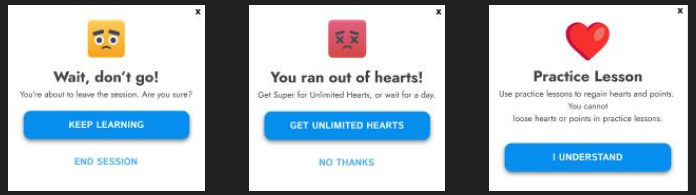
Activity win



Activity loss



Activity all win

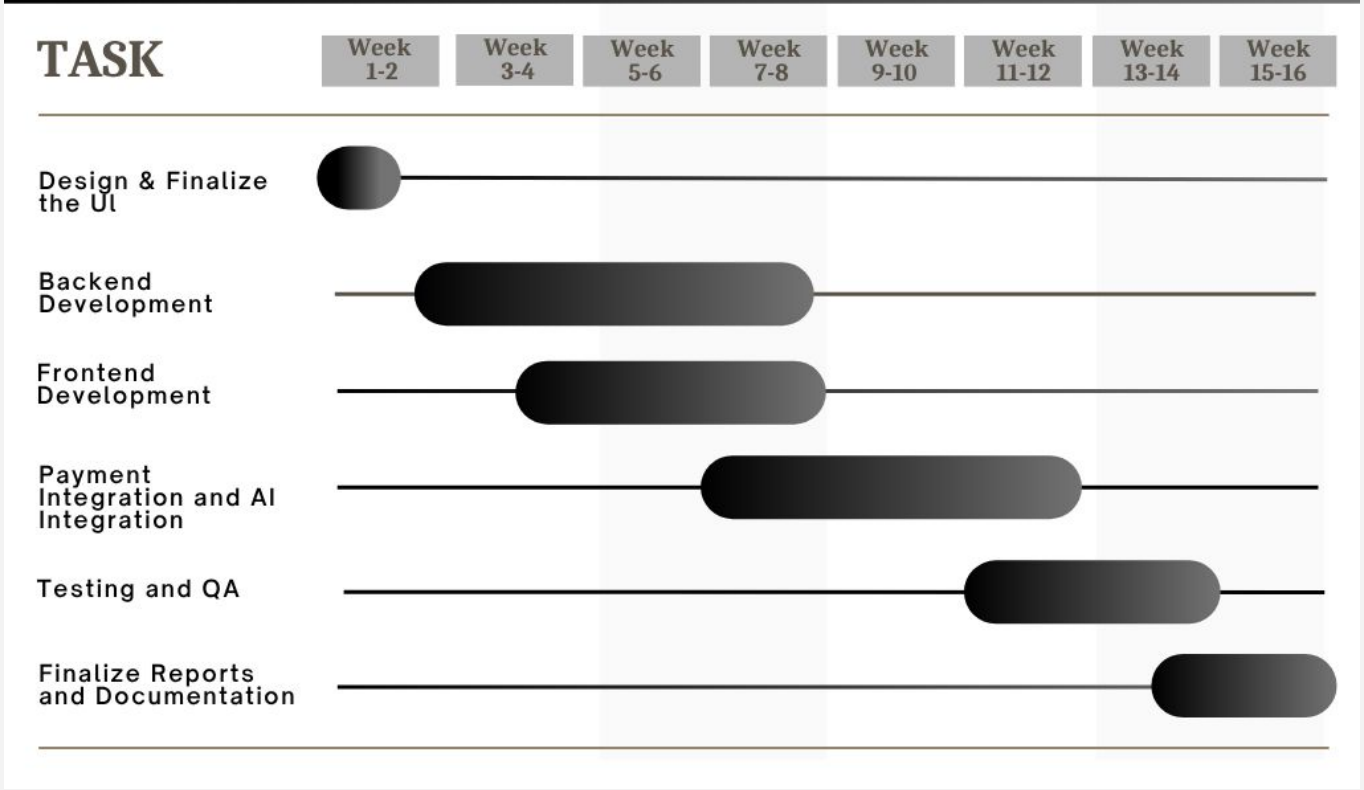


Popup activity notifications

Gantt Chart

GANTT CHART

Speakify



Performance And Security Concerns

Performance:

- The system should respond to user interactions within a maximum delay of 3 seconds.
- The platform should consume minimal device resources.

Security:

- The system should support multi-factor authentication.
- Role-based access control should restrict administrative features.
- User data must be encrypted both in transit and at rest.

Thank You