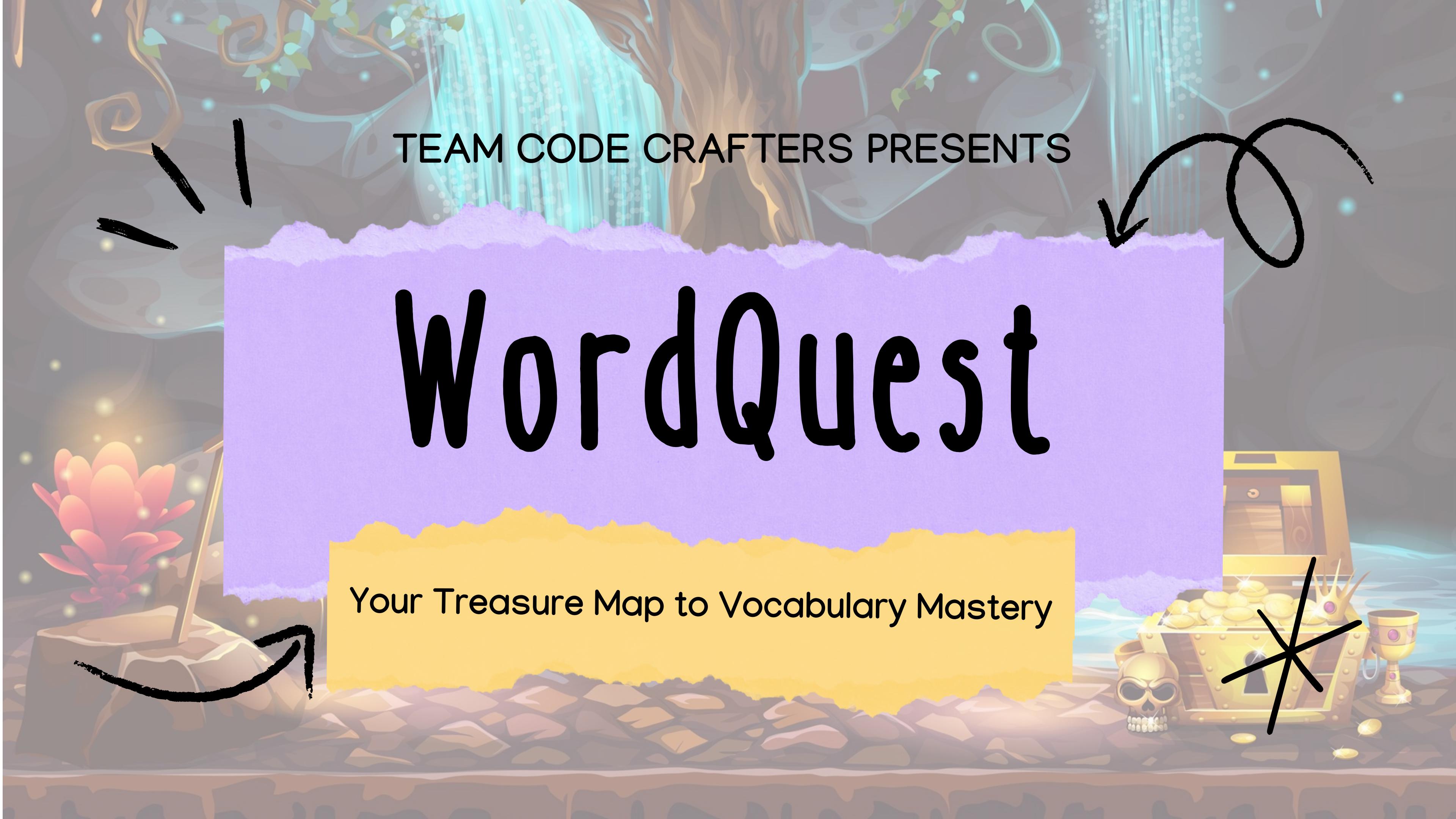


TEAM CODE CRAFTERS PRESENTS

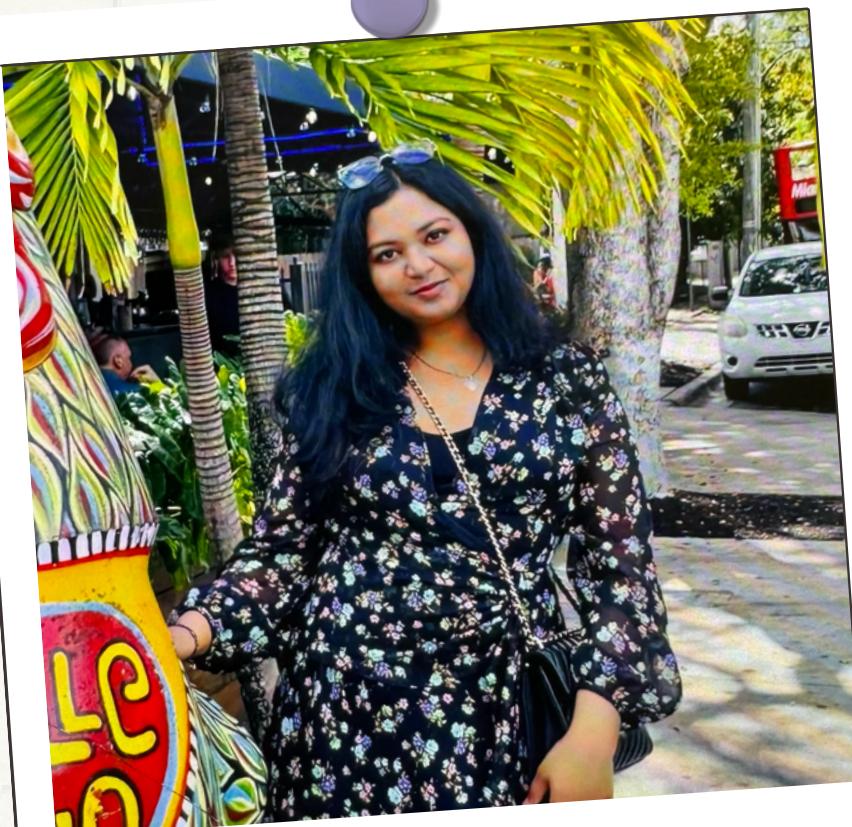
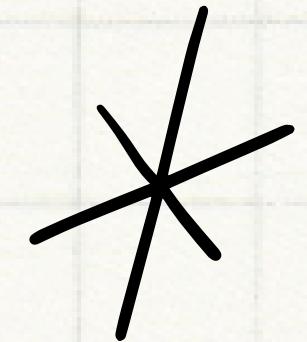
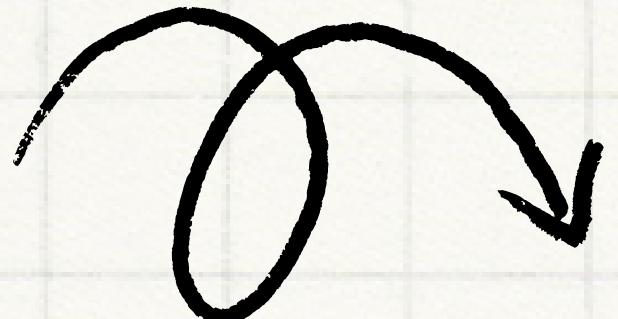
# WordQuest

Your Treasure Map to Vocabulary Mastery



# The Team

# CODE CRAFTERS



Sri Poojitha Mandali  
001560891



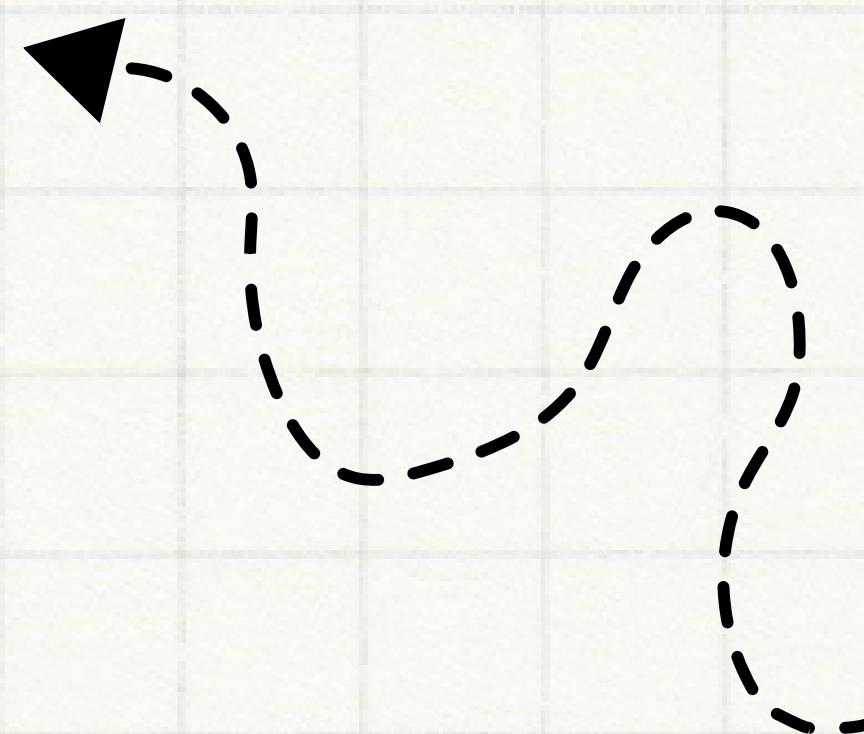
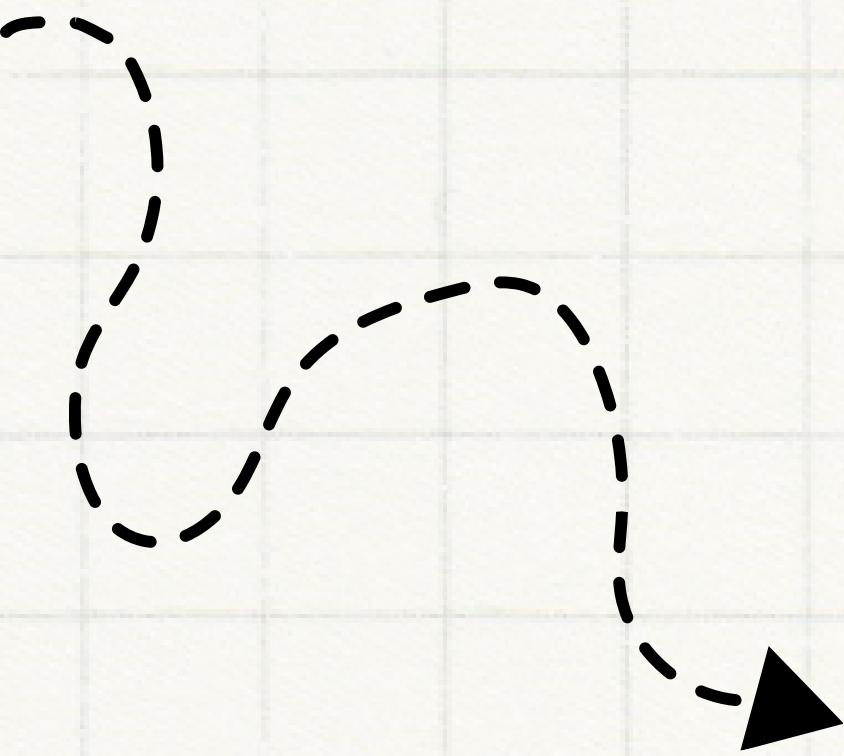
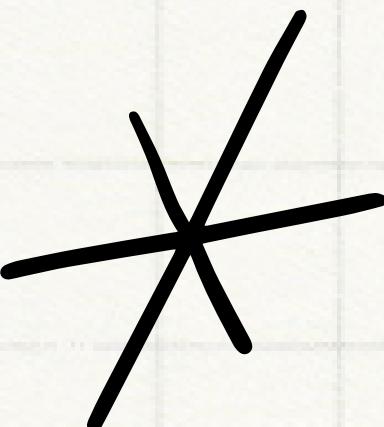
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# Introduction

WordQuest is a groundbreaking educational platform designed to enhance vocabulary through an engaging, treasure hunt-inspired experience. Aimed at self-learners, the application uses advanced programming in Java and JavaFX to create a dynamic and interactive learning environment.

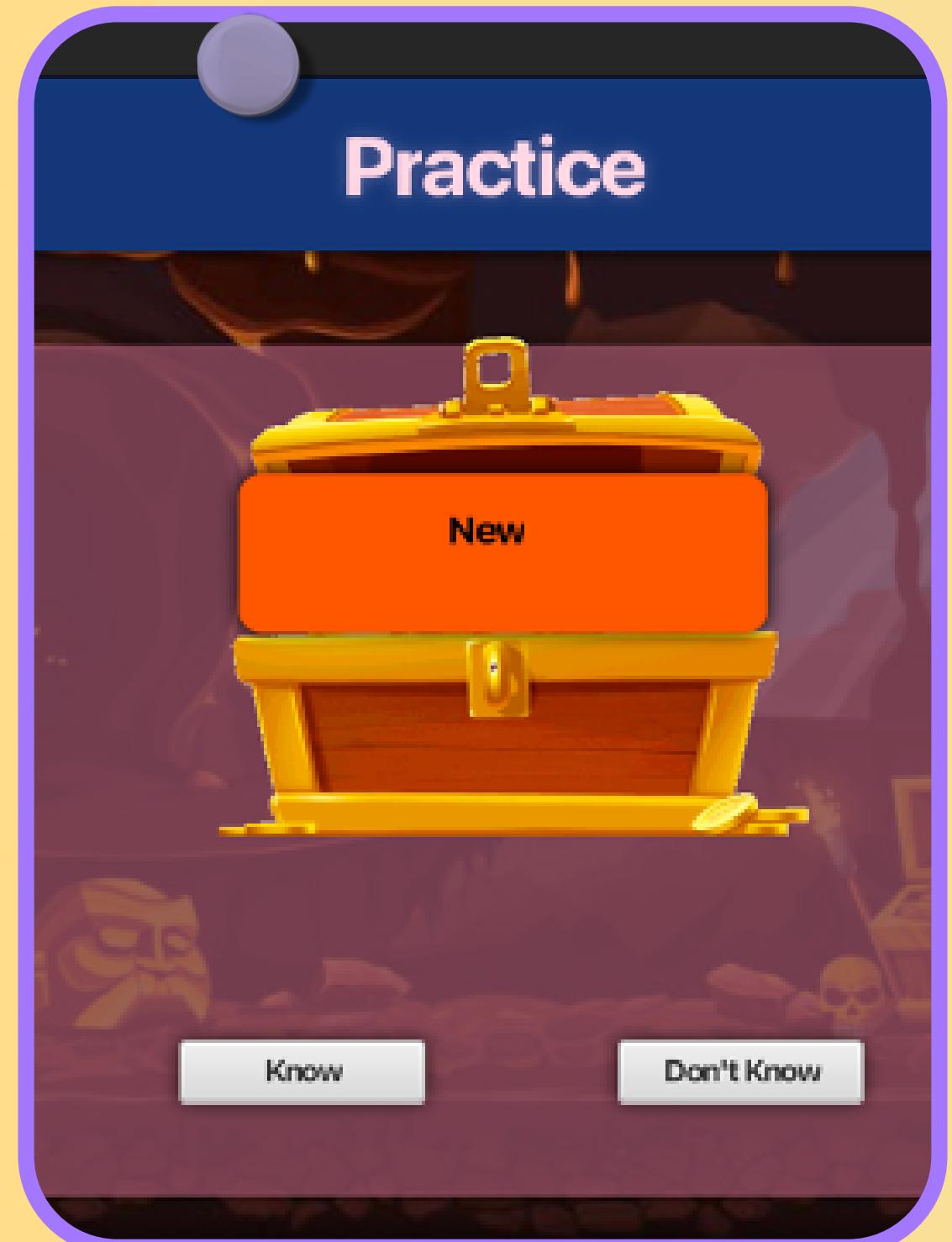


# Problem Description

**Challenges in English Vocabulary Mastery:** Essential for global communication and success, yet many learners find effective vocabulary building challenging.

- **Vocabulary Importance:** Crucial for educational achievements and professional interactions.
- **Existing Tool Limitations:** Most lack engagement and adaptability to individual learning preferences.
- **Need for Better Solutions:** Traditional and digital methods often don't keep learners engaged or adapt to their specific needs.

**WordQuest's Solution:** Merges the excitement of a treasure hunt with effective vocabulary strategies, offering a personalized and enjoyable learning experience.



# features

## Innovative Learning Model

Combines the thrill of a treasure hunt with the educational process of vocabulary building, motivating users to discover new words.

## Interactive User Experience

Employs Scene Builder and FXML for a visually appealing and intuitive interface, with each screen managed by dedicated controller classes for smooth navigation.

## Tailored Learning Journeys

Features scalable architecture that categorizes words by difficulty, enabling personalized learning paths.

## Persistent Progress Tracking

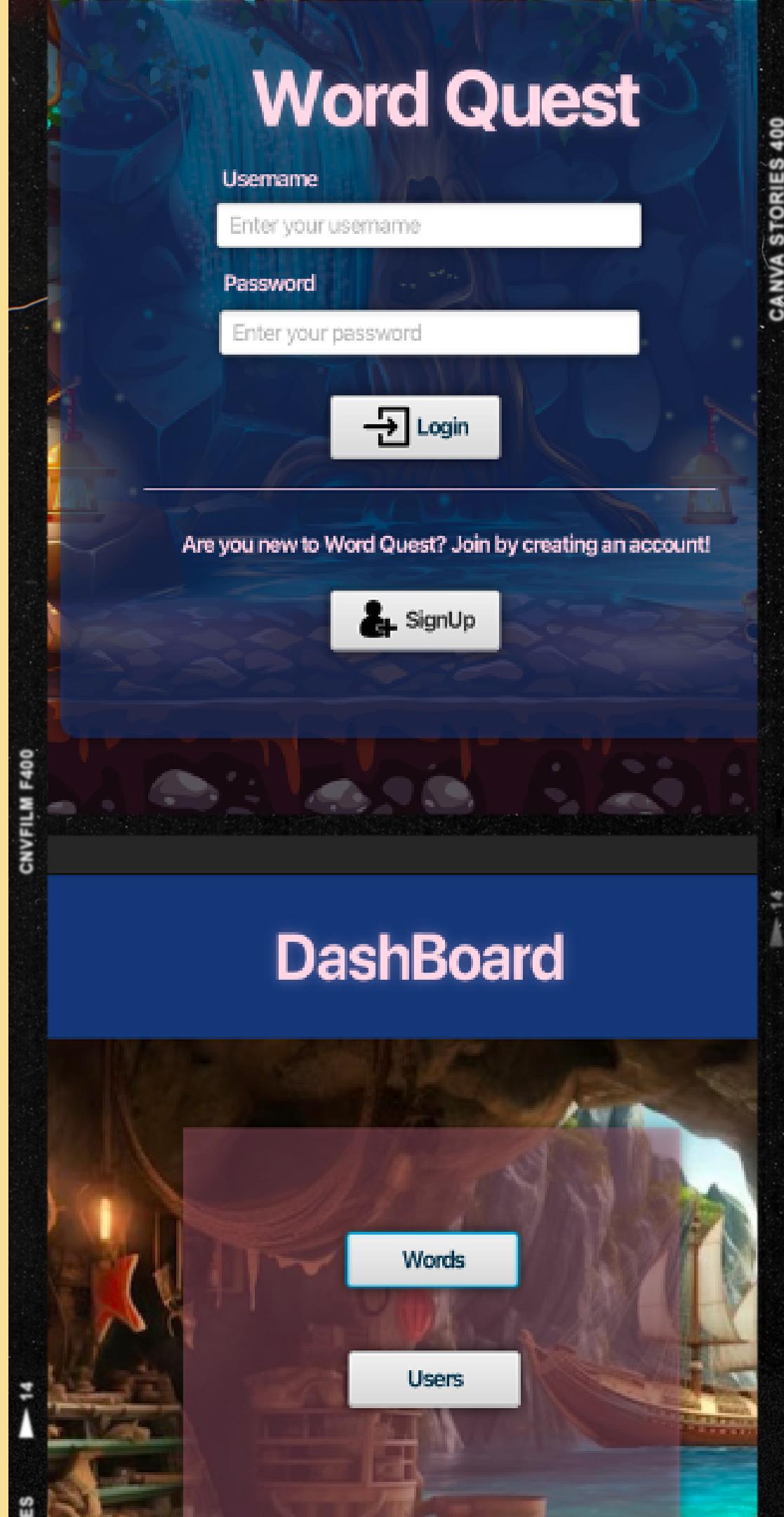
Utilizes the Gson library to save users' progress across sessions, facilitating continuous learning.

## Administrative and User features

Provides robust CRUD functionalities for administrators and diverse learning modules for learners, making it a comprehensive tool for vocabulary enhancement.

# System Design

- **Central Data Handling:** The Program class acts as the central repository for all application data, containing detailed information about words and users.
- **Vocabulary Storage:** Words are organized in a dictionary with difficulty levels as keys and lists of words as values. This structure facilitates the management and retrieval of vocabulary based on user proficiency.
- **User Data Storage:** Users are stored directly as lists within the program. Each new user receives a copy of all existing words, allowing for individual tracking of vocabulary knowledge and learning progress.
- **Progress Tracking:** Each user's word list is used to monitor and update their learning progress. As users interact with the vocabulary, their proficiency for each word is adjusted accordingly within their personalized list.
- **Administrative Functions:** System administrators have the capability to perform CRUD (Create, Read, Update, Delete) operations on the data stored in the Program class, ensuring the system remains up-to-date and accurate.
- **User Permissions:** Users are empowered to perform CRUD operations on their personal data, allowing them to update their profiles and settings independently.



# Implementation

## Initial Setup and User Authentication:

- **Data Initialization:** On launch, WordQuest reads JSON files to populate the Program class with vocabulary and user information, establishing a central data repository.
- **Login Verification:** The system checks login credentials against stored data to authenticate users and administrators, directing them to the appropriate interfaces based on their roles.

## User Interface and Navigation:

- **User Home Page:** After login, the system updates the user's vocabulary list from the Program class's master copy to ensure all users have the most current data.

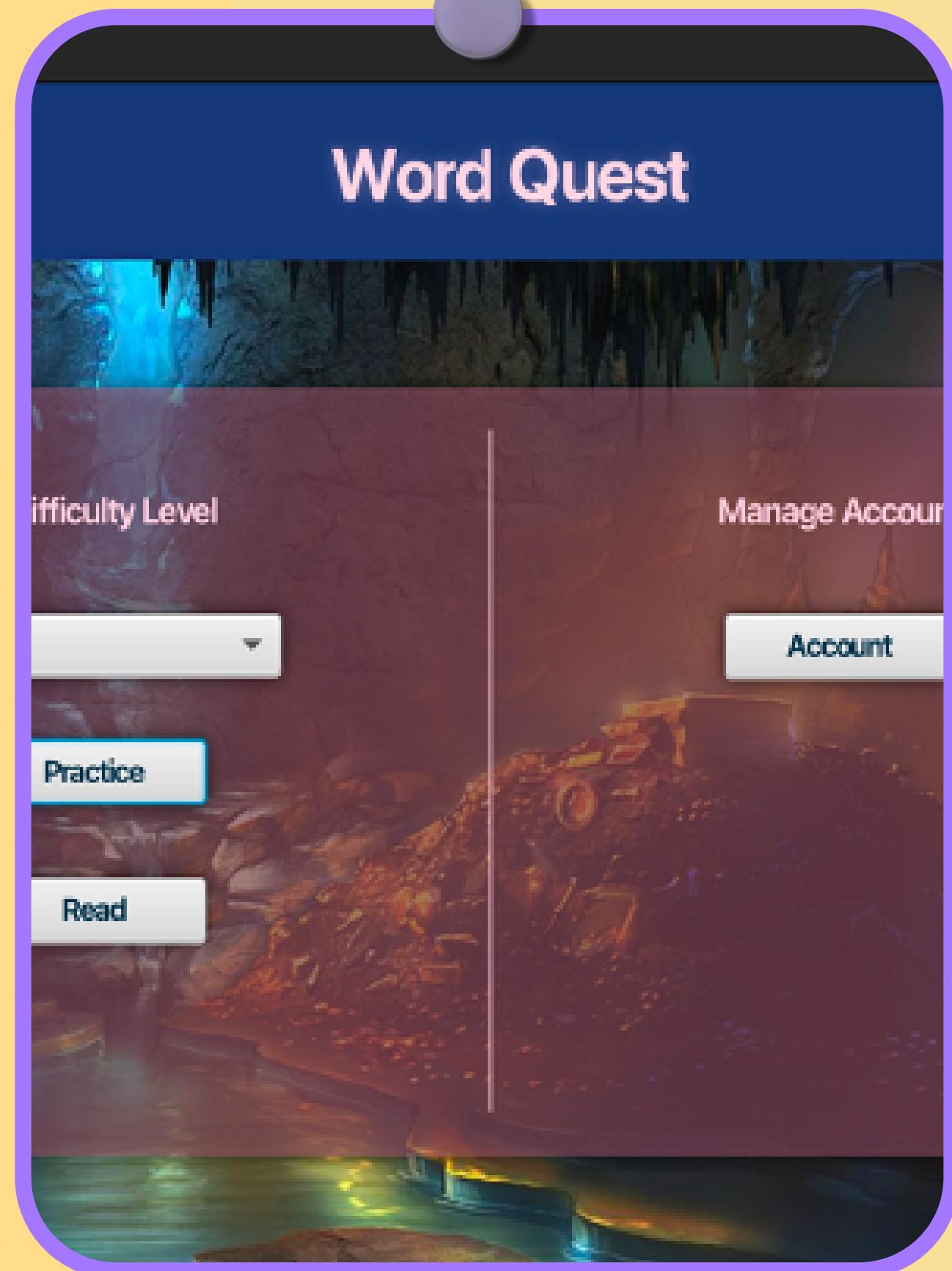
# Implementation

**Navigation Options:** From the home page, users have several options:

- **Practice:** Engages users with a randomized selection of vocabulary words to assess and enhance proficiency.
- **Read:** Allows users to browse the full list of vocabulary sorted by chosen difficulty, presented in a TableView for easy reading.
- **Account Management:** Users can update their personal details and reset their vocabulary progress, which re-syncs their list with the master copy.

## Functional Features for Users:

- **Account Page:** Users can perform Create, Read, Update, and Delete (CRUD) operations on their personal data. They can also reset their learning progress to match the updated master vocabulary list.



# Implementation

- **Read Page:** This feature displays words from the selected difficulty level, enabling direct learning and review.
- **Practice Page:** Uses a random number generator to select words for practice, with user responses ('know' or 'don't know') adjusting the proficiency level of each word.
- 

## Administrator Capabilities:

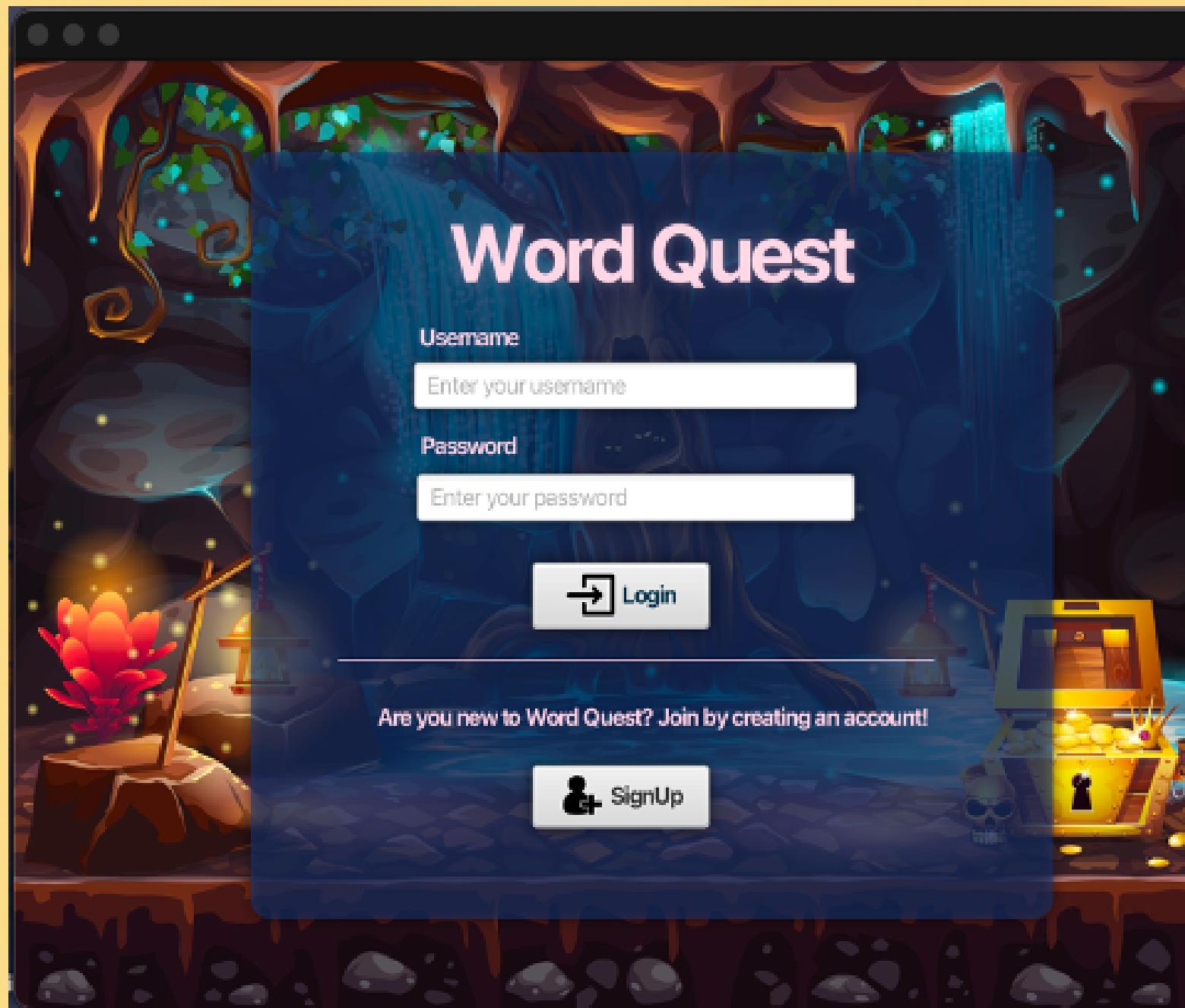
- **Admin Dashboard:** Admins log in through the same interface but are redirected to a dashboard where they can manage all master data.
- **CRUD Operations:** Administrators have extensive control to manage both user profiles and vocabulary data. They can view lists, edit entries directly within a TableView, and handle additions or deletions.
- **Data Consistency and Integrity:** Any modifications made by administrators are immediately written back to the JSON files, ensuring that data remains consistent and secure, even if the session ends unexpectedly.

The image shows a composite of two screenshots from a mobile application. The top screenshot is titled 'User Management' and displays a table with three rows of user data. The columns are 'Lastname' and 'Username'. The data is as follows:

Lastname	Username
mandali	sri
Nainala	maddy
Mandali	poojitha

The bottom screenshot shows a login interface with two text input fields. The first field is labeled 'Username:' and the second is labeled 'Password:', both with placeholder text.

# Login Page



The login page for Word Quest features a dark, atmospheric background with glowing blue and orange energy fields. In the foreground, there's a glowing red flower on the left and a golden treasure chest with a skull on the right. The title "Word Quest" is prominently displayed in white at the top. Below it are two input fields: "Username" and "Password", each with a placeholder text "Enter your username" and "Enter your password" respectively. A "Login" button with a right-pointing arrow is located below the password field. At the bottom, a link says "Are you new to Word Quest? Join by creating an account!" and a "SignUp" button with a user icon.

Word Quest

Username  
Enter your username

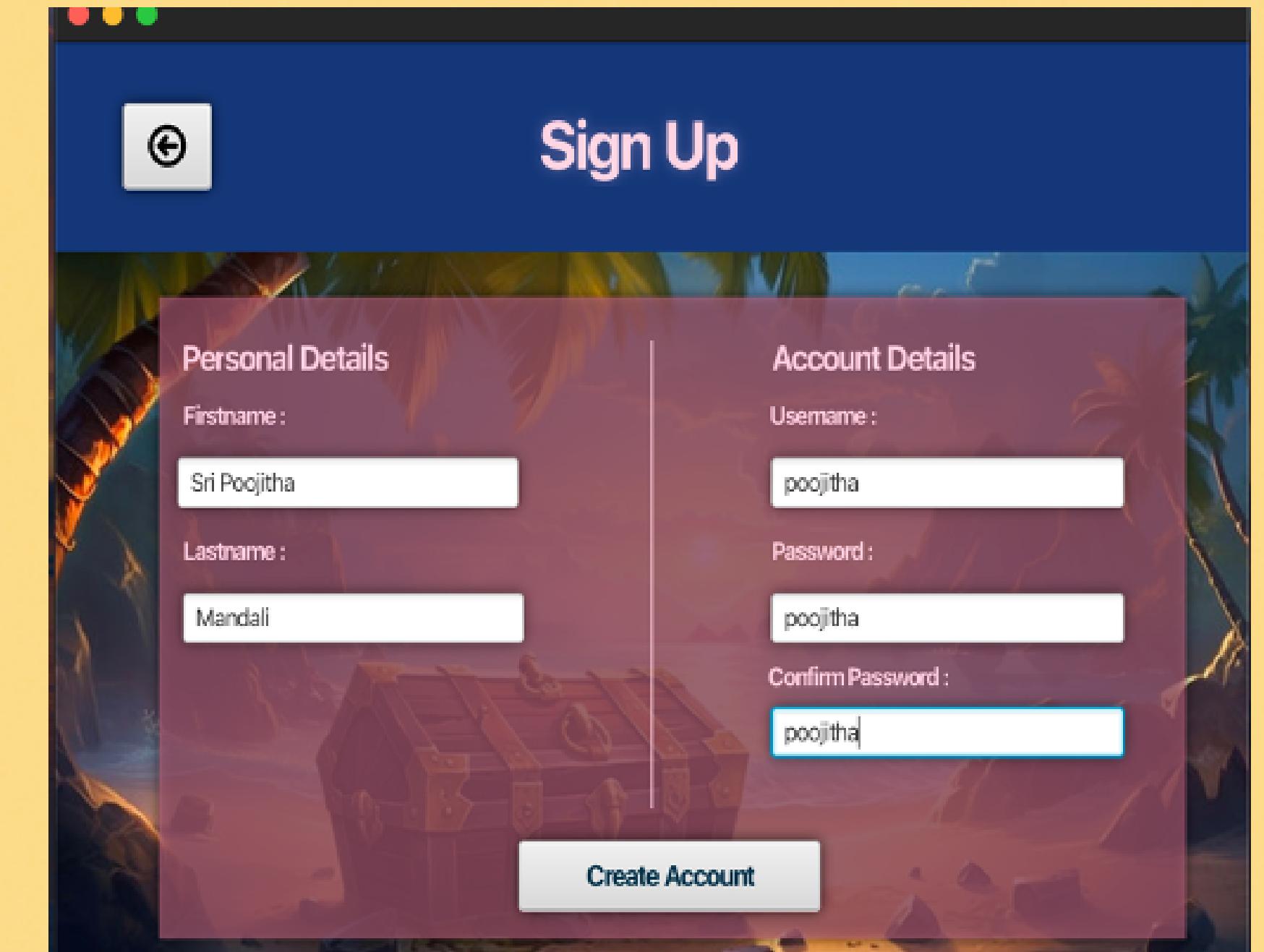
Password  
Enter your password

Login

Are you new to Word Quest? Join by creating an account!

SignUp

# SignUp Page



The sign-up page for Word Quest has a dark blue header with a back arrow and the text "Sign Up". The main area is divided into two sections: "Personal Details" on the left and "Account Details" on the right. Under "Personal Details", the "Firstname" field contains "Sri Poojitha" and the "Lastname" field contains "Mandali". Under "Account Details", the "Username" field contains "poojitha", the "Password" field contains "poojitha", and the "Confirm Password" field also contains "poojitha". A "Create Account" button is located at the bottom right of the form.

Sign Up

Personal Details

Firstname : Sri Poojitha

Lastname : Mandali

Account Details

Username : poojitha

Password : poojitha

Confirm Password : poojitha

Create Account

# Inside Word Quest

The screenshot shows the main interface of the Word Quest application. At the top, there is a dark blue header bar with the title "Word Quest" in white. On the right side of the header is a "Logout" button. Below the header, there is a large, semi-transparent purple overlay containing several interactive elements. On the left, a dropdown menu labeled "Difficulty Level" is set to "Easy". In the center, there is a "Manage Account" button and an "Account" button. On the right, there are two buttons: "Practice" (highlighted in blue) and "Read". The background of the interface features a dark, atmospheric illustration of a cave or dungeon with glowing blue and green energy sources.

The screenshot shows the "Practice" interface of the Word Quest application. At the top, there is a dark blue header bar with the title "Practice" in white. On the right side of the header is a "Logout" button. Below the header, there is a large, semi-transparent purple overlay containing a word card. The card features the word "New" in bold black text on an orange rectangular background. At the bottom of the card are two buttons: "Know" (white background) and "Don't Know" (white background). The background of the interface features a dark, atmospheric illustration of a cave or dungeon with glowing blue and green energy sources.

# Practice

# User Dashboard

Account

Logout

Firstname : Pavan Madhav

Lastname : Nainala

Username : maddy

Password : maddy

Cancel Save

Delete Account Reset

Easy

Learning Curve

Learning New Mastered

This screenshot shows the User Dashboard. It features a dark blue header with the word "Account" in white. Below the header are four input fields for Firstname, Lastname, Username, and Password, each with a placeholder value. There are "Cancel" and "Save" buttons at the bottom left. A "Delete Account" button is at the bottom center. A "Reset" button is at the bottom right. To the right of the input fields is a pie chart titled "Learning Curve" with three segments: "New" (orange), "Learning" (yellow), and "Mastered" (green). The background of the dashboard is a dark, atmospheric scene of a shipwreck.

# Admin Dashboard

DashBoard

Logout

Words

Users

This screenshot shows the Admin Dashboard. It has a dark blue header with the word "DashBoard" in white. On the right side of the header is a "Logout" button. Below the header, there are two buttons: "Words" (highlighted in light blue) and "Users". The background of the dashboard is a vibrant, colorful scene of a tropical beach with a sailboat, palm trees, and a rocky shore.

# User Management

The screenshot shows a desktop application window titled "User Management". The title bar includes a back arrow icon, the main title, and a "Logout" button. Below the title bar is a table displaying user data:

Firstname	Lastname	Username	Password
srivarini	mandali	sri	sri
madhav	Nainala	maddy	maddy
Sri Poojitha	Mandali	poojitha	poojitha

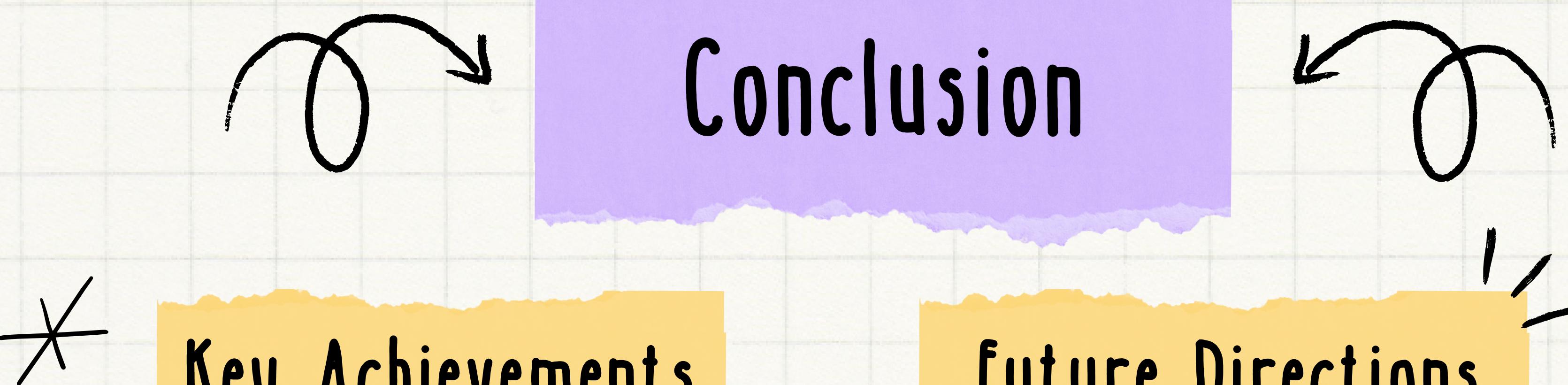
At the bottom of the window, there are four input fields labeled "Firstname:", "Lastname:", "Username:", and "Password:", each with a corresponding text input box. Below these fields are two buttons: "Add" and "Delete".

# Add New Words

The screenshot shows a desktop application window titled "Lexicon Editor". The title bar includes a back arrow icon, the main title, and a "Logout" button. Below the title bar is a table displaying word meanings:

Word	Meaning
Evident	Clearly apparent
Grant	Allow to have
Scale	Relative magnitude
Style	A manner of doing
Hello	A greeting
Lucid	Clearly expressed
Catalyst	Agent of change

At the bottom of the window, there are three input fields: "Select Difficulty:" (with a dropdown menu showing "Easy"), "Word:", and "Meaning:". Below these fields are two buttons: "Add" and "Delete".



# Conclusion

## Key Achievements

- Engaging Learning Tool: WordQuest successfully combines a treasure hunt theme with vocabulary building, creating an engaging and effective educational experience.
- Personalized Learning: The platform adapts to individual learning styles and speeds, enhancing vocabulary mastery among diverse users.

## future Directions

- Language Expansion: Plans include adding more languages to broaden user engagement.
- Advanced Features: Future updates may integrate AI for personalized learning paths and community features for collaborative learning.

# Job Assignment

- Sri Poojitha Mandali
  - UI/UX Design: Develop intuitive interfaces for user interactions.
  - Data Management: Oversee vocabulary data in words.json.
  - Quality Assurance: Conduct feature testing and aid in documentation.
- Pavan Madhav Manikanta Sai Nainala
  - Backend Development: Implement backend logic for word/user operations.
  - Application Flow: Manage session and data persistence via Gson.
  - Reporting: Assemble project report and craft presentation content.
- Srivarini Mandali
  - Feature Implementation: Handle account/practice page functionalities.
  - Admin Controls: Build admin-specific features and permissions.
  - UI/UX and Debugging: Enhance user interface and resolve bugs.





# Thank you!