

Project Pitch

<TEAM 112>

Team

| Name | Student number | Email |
|-------------------|-----------------------|-----------------------------|
| Jing Chen | 2801366 | jingc4853@gmail.com |
| Yitong Tang | 2798775 | yttangfdu@gmail.com |
| Menghan Zhang | 2807975 | menghan.zhang2023@gmail.com |
| Kota Sree Pragnya | 2788696 | pragnya3399@gmail.com |

Overview

The system is designed to be intuitive, flexible, and highly customizable, catering to the unique needs of each user. Whether for self-study or classroom use, the system's features are geared towards maximizing learning efficiency, motivation, and accessibility. By bridging traditional learning methods with innovative technological solutions, we aim to create a dynamic and engaging language learning environment for all users.

The system ignites people's passion by using flashcards and give badges while learning. Using our system to learn will make you feel that mastering a new language is an enjoyable and exciting adventure.

Main types of users

Our innovative language learning system is meticulously designed to cater to the diverse needs of two primary user groups: self-learners and language educators.

Self-Learners:

Use the system to learn language and record learning progress, get badges while learning. The system provides them with entry-level flashcards to help build a foundational language framework and vocabulary.

Language Educators:

Use the system to teach students, create and manage different levels of flashcards, record students' result and give feedback. The system helps educators to teach students efficiently.

Project Track

Main function:

Flashcard Management

Level Management

Persistence

GUI

Intelligent Learning function:

Semi-Automatic Flashcard
Generation

Learning Mode

Sound Module Integration

Achievement and Progress Tracking:

Achievement Badges

Printable Learning Results Document

Inputting Material Document

Feature 1

Name: Flashcard Management

Description:

Users can create,delete, update flashcards by providing the front and back sides of the card.

Upon creation, users can optionally assign tags to the flashcard.

The created flashcards are stored in the system for later use in learning modes.

Champion: Jing Chen

Feature 2

Name: Level Management

Description:

Users can manage levels by creating, updating, and deleting them.

Each level consists of an ordered set of flashcards.

Users can add or remove flashcards from any level at any time.

Champion: Menghan

Feature 3

Name: Persistence

Description:

levels and flashcards are persisted as JSON files,
and can be imported/exported from/into a predefined folder

Champion: Yitong

Feature 4

Name: Learning Mode

Description:

In learning mode, users progress across flashcards on a step-by-step basis.

Users can start a level and interact with flashcards, flipping between front and back sides.

Gamification elements are included to motivate users.

Champion: Yitong

Feature 5

Name: Achievement Badges

Description:

The system provides an overview of achievement badges based on users' learning activities.

Badges are awarded for completing levels, mastering certain numbers of flashcards, or achieving specific learning milestones.

Users can view their badges as a visual representation of their progress and accomplishments.

Champion: Sree

Feature 6

Name: Semi-Automatic Flashcard Generation

Description:

An engine is integrated into the system for the semi-automatic generation of new flashcards for a given language.

The engine leverages language learning resources and algorithms to suggest new flashcards based on the user's proficiency level and learning goals.

Users can review and approve suggested flashcards before adding them to their learning trajectory.

Champion: Sree

Feature 7

Name: Sound Module Integration

Description:

A sound module is integrated into the system to allow users to train their listening and speaking skills.

Users can listen to audio recordings of words or phrases associated with flashcards.

Additionally, users can record and playback their own voice to practice pronunciation and speaking exercises.

Integrate pronunciation API or service to allow users to listen to the correct pronunciation of words.

Improve users' listening skills and pronunciation accuracy by providing audio support.

Champion: Jing Chen

Feature 8

Name: Printable Learning Results Document

Description:

The system generates a printable document containing all the results obtained by the user while learning a certain language.

The document includes statistics such as the number of flashcards mastered, levels completed, and overall progress.

Users can print this document for personal reference or to share their learning achievements with others.

Champion: Menghan

Feature 9

Name: Inputting Material Document

Description:

Inputting words list: Users can import the letters they want to learn collectively by uploading files.

By this function, users can also share the learned words with their classmates.

Champion:Jing,Yitong,Sree,Menghan

Feature 10

Name: GUI (Graphical User Interface)

Description:

Using JavaFX provides an interactive visual platform for users to interact with the application.

We designed several pages for our application:

- Home Page: introduction to the application's functions and features; a menu for all features
- Level Management Page: display all available levels; options to add, edit, delete levels; clicking on a level shows its associated flashcards and allows for editing
- Flashcard Management Page: options to add, edit, and delete flashcards
- Learning Mode Page: display the current flashcard; options for navigating to the next and previous flashcards; display user progress
- Import/Export Page: allow the user to import levels and flashcards from a predefined folder; allow the user to export levels and flashcards to a predefined folder
- Achievements Page: display the achievement badges earned by the user based on learning activities

Champion: Jing,Sree,Menghan,Yitong

Time log

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|-------------------|----------------------------|-------------|-------|--|
| Team number | | 15 | | |
| Member | Activity | Week number | Hours | |
| Jing Chen | Define functional features | 1 | 2 | |
| Jing Chen | Intellij setup | 1 | 2 | |
| Jing Chen | Work on code | 1 | 2 | |
| Yitong Tang | Define functional features | 1 | 1 | |
| Yitong Tang | Intellij setup | 1 | 2 | |
| Yitong Tang | Work on code | 1 | 2 | |
| Menghan Zhang | Define functional features | 1 | 1 | |
| Menghan Zhang | Intellij setup | 1 | 2 | |
| Menghan Zhang | Work on code | 1 | 2 | |
| Kota Sree Pragnya | Define functional features | 1 | 1 | |
| Kota Sree Pragnya | Intellij setup | 1 | 2 | |
| Kota Sree Pragnya | Work on code | 1 | 2 | |
| Jing Chen | function modeling | 2 | 2 | |
| Jing Chen | Work on code | 2 | 2 | |
| Yitong Tang | function modeling | 2 | 2 | |
| Yitong Tang | Work on code | 2 | 2 | |
| Menghan Zhang | function modeling | 2 | 2 | |
| Menghan Zhang | Work on code | 2 | 2 | |
| Kota Sree Pragnya | function modeling | 2 | 2 | |
| Kota Sree Pragnya | Work on code | 2 | 2 | |
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| | | TOTAL | 37 | |

Signed contract

<Here is the link of our [Team Contract](#) in PDF>

Link:

<https://drive.google.com/file/d/1bPc3MuyZHqgp6lYMIkFvvZyphzmirNsx/view?usp=sharing>