DBMS MINI PROJECT

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Daigaku: A Japanese Language Learning Application

Daigaku is a comprehensive application for Japanese language acquisition, developed using Python and PyQt5. It features a Spaced Repetition System (SRS) for effective flashcard review, alongside tools for tracking immersion learning materials.

Project Features Overview

1. Flashcard Review System

A powerful and adaptive system for vocabulary acquisition:

- **SRS Algorithm:** Utilizes an intelligent Spaced Repetition System for scientifically optimized learning schedules.
- **Structured Organization:** Manage learning with **Multiple Decks** organized by topic or difficulty.
- **Rich Content:** Flashcards include Japanese expressions complete with definitions, detailed example sentences, and English translations.
- **Progress Tracking:** Comprehensive monitoring of your learning journey and review history.

2. Immersion Material Tracking

A feature to manage and log your passive language exposure:

- **Content Library:** Track a wide range of immersion materials, including books, movies, TV shows, and podcasts.
- **Personal History:** Maintain a log of all materials you have consumed.
- **Difficulty Ratings:** Easily filter materials using a 1-5 star difficulty rating system.
- **Admin Tools:** Dedicated functionality for adding, editing, and deleting materials (restricted to **root** users).

3. User Authentication & Access

A secure login system supporting different access levels:

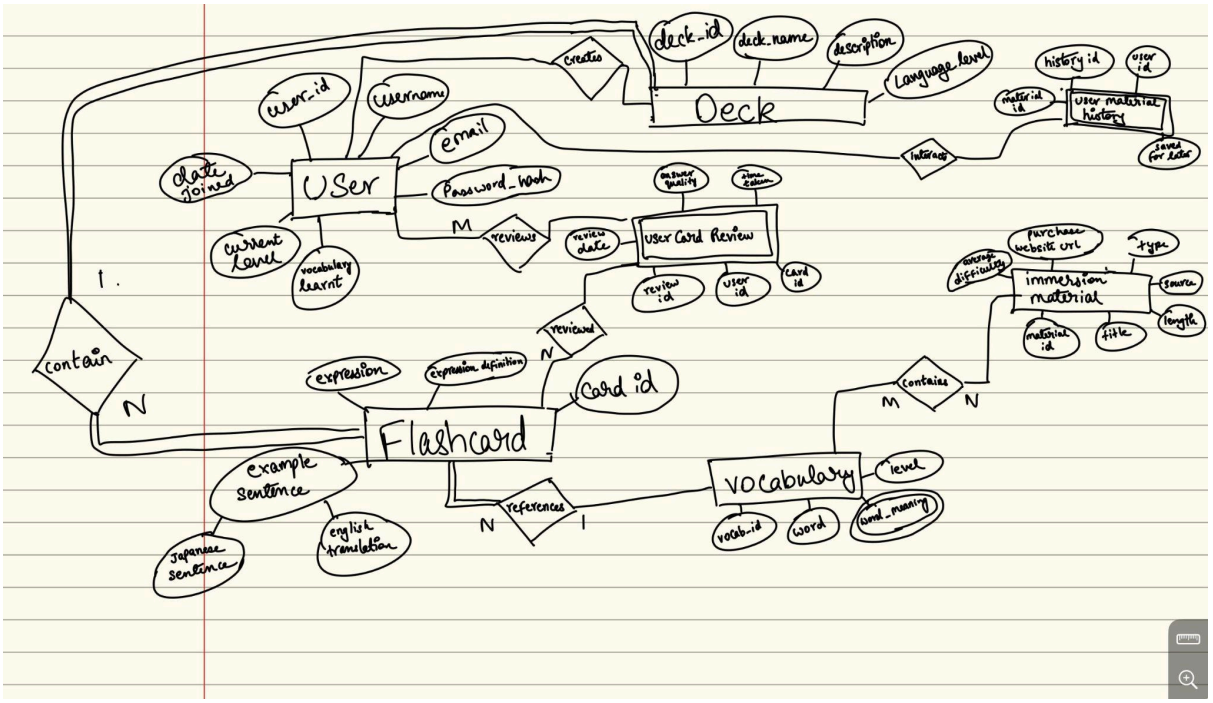
- **Secure Login:** Robust user authentication ensures data security.
- **User Types:**
    - **root:** Possesses full administrative rights, including material management (add/delete).
    - **customer:** Standard user with access to all learning and tracking features.

4. Database Backend

The foundation of the application:

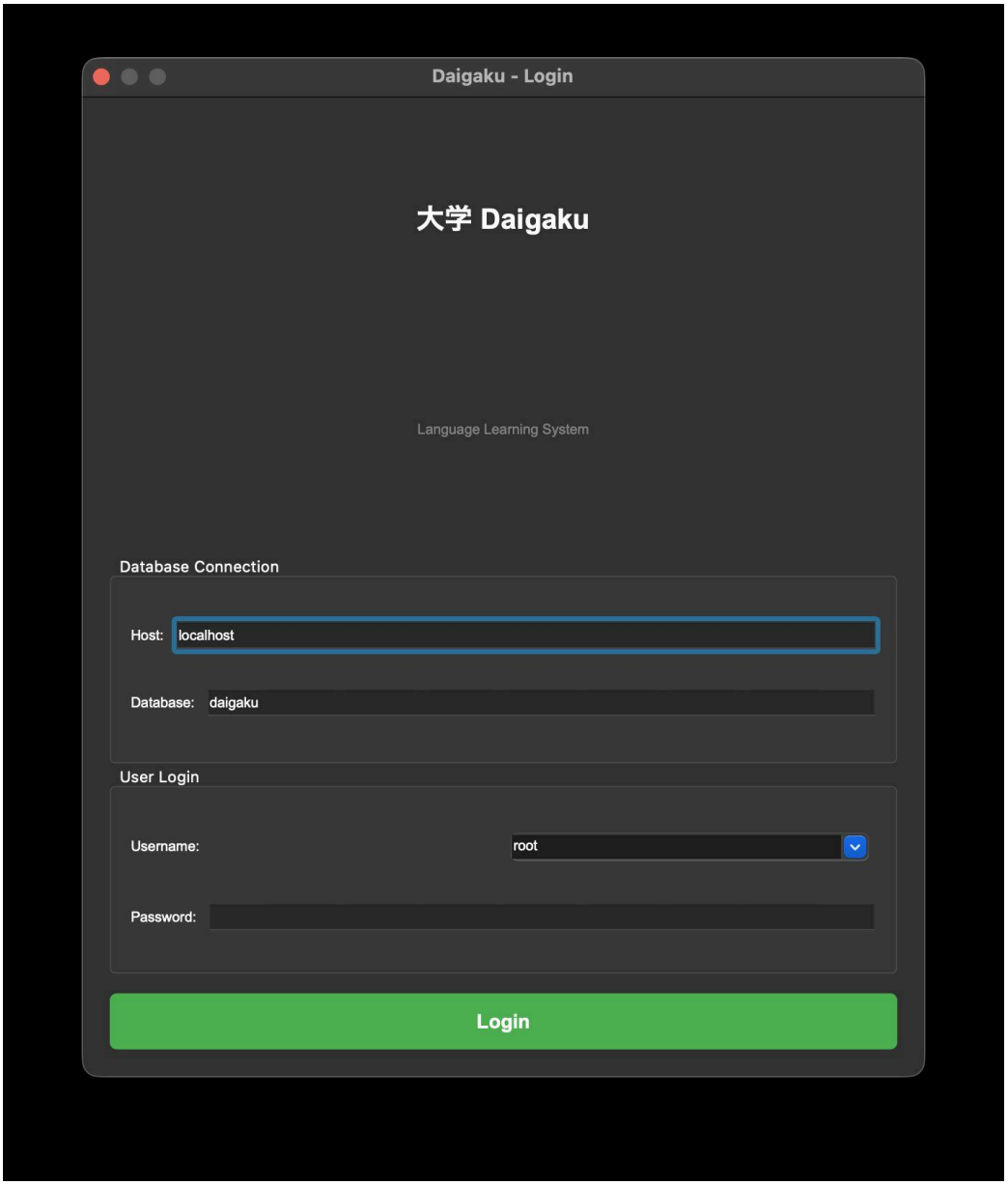
- **MySQL Database:** Utilizes a comprehensive MySQL schema.
- **Data Management:** Tracks and stores all critical information, including user progress, review history, and material consumption records.
- **Scalability:** Designed to efficiently support multiple users and flashcard decks.

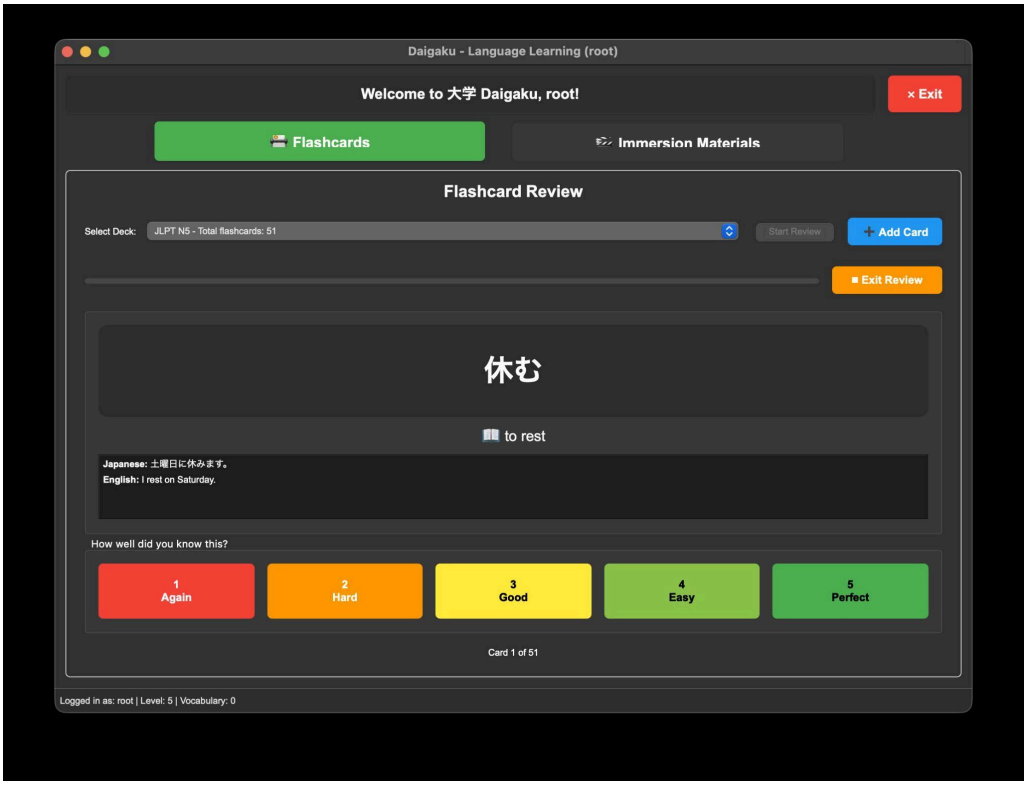
ER diagram :

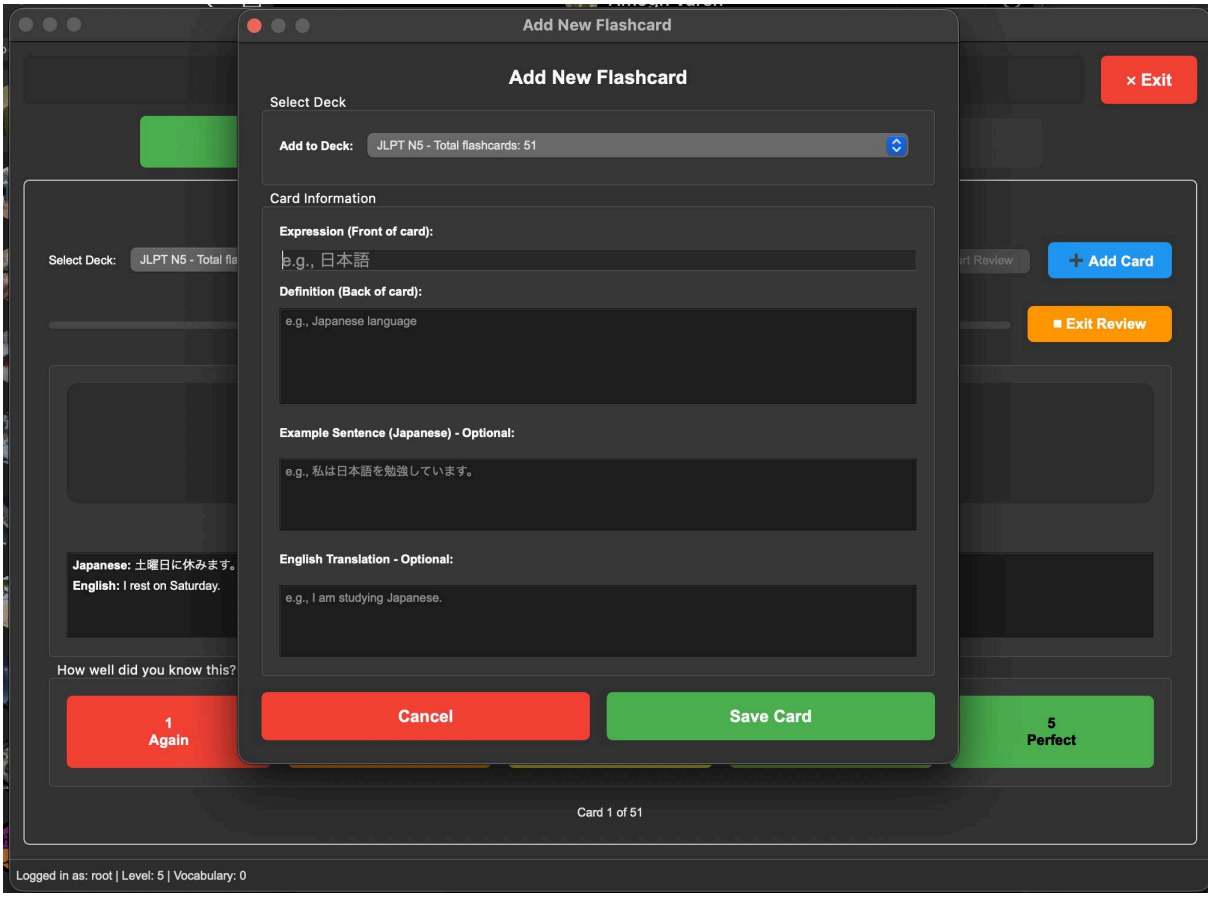


Schema Diagram:

Frontend Screenshots:


Daigaku - Login
大学 Daigaku
Language Learning System
Database Connection
Host:
localhost
Database:
daigaku
User Login
Username:
root
Password:
Login


Daigaku - Language Learning (root)
Welcome to 大学 Daigaku, root!
× Exit
Flashcards
Immersion Materials
Flashcard Review
Select Deck:
JLPT N5 - Total flashcards: 51
Start Review
Add Card
■ Exit Review
休む
to rest
Japanese: 土曜日に休みます。
English: I rest on Saturday.
How well did you know this?
1 Again
2 Hard
3 Good
4 Easy
5 Perfect
Card 1 of 51
Logged in as: root | Level: 5 | Vocabulary: 0


Add New Flashcard
Add New Flashcard
Select Deck
Add to Deck:
JLPT N5 - Total flashcards: 51
Card Information
Expression (Front of card):
e.g., 日本語
Definition (Back of card):
e.g., Japanese language
Example Sentence (Japanese) - Optional:
e.g., 私は日本語を勉強しています。
English Translation - Optional:
e.g., I am studying Japanese.
Cancel
Save Card
× Exit
Add Card
■ Exit Review
Japanese: 土曜日に休みます。
English: I rest on Saturday.
How well did you know this?
1 Again
5 Perfect
Card 1 of 51
Logged in as: root | Level: 5 | Vocabulary: 0