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TP3 Update

Fix all of the TP2 things so that they work, and also enhance the personal statistics that were generated. Let users download their data. Also added the game made where definitions are falling, and then the user has to type it in a box before it reaches the bottom of the screen. All in all, TP3 was a major revamp to TP2 because it enhances everything that was started in TP2 and then packaged everything so that the game worked for new users as well.

TP2 Update

Everything in TP1 that was planned is still on track. There is no significant design changes, but here are some updates for TP2.

Stats page has mean of regular mode game, standard deviation of regular mode game times. Also has mean number of correct in test mode game, and mean time taken during test mode.

There is also a new version of the game called optimize that optimizes the flashcards by the time taken to answer. Harder questions go in the front, while easier questions go in the back.

The regular test mode displays stats like the time percentile (compared to all other users), current average time to answer card, and the crowd average on that particular question.

There is also a log-in feature implemented where users can store data they play during the game. If a new user tries to log-in, they can create a new user and password on the spot (if you are not in the system and try to log-in, the system will create that account for you). In the stats page, each user can download their own specific data they've been playing.

Design Proposal

Project Description: Waterfall Flashcards is a flashcard memorization tool that enables users to track their progress on which cards they are doing the worst and best on, and also suggests what cards users should be practicing. There will also be numerical summaries of the cards across all users, along with personalized summaries for each user in the system.

Competitive Analysis:
Quizlet is the first similar idea that may pop in mind. This project is geared towards to be pretty similar to quizlet, but this project intends to display more stats for the user related to the call (like the amount of time they took to answer the flashcards). The actual flashcard interface will also be more colorful and intuitive.

Anki is another tool that's similar, but this one is different in that the card can be used any time and there's no set periods that users must log-in. It's similar in how users answer they feel about certain flashcards, with Hard, Good, and Easy. The Good here is to reinforce the concepts.

Structural Plan: Log-in screen will tell the program which user information to branch off into; the home-page will essentially ask the user which deck of flashcards they want to study (there will also be a tool that enables them to add or delete flashcards); the flashcard page is the meat of the program and will have timers, definitions, level, etc. The plan is to split these three up into different files, or use if-statements to only call them at certain times in the redrawAll function.

Algorithmic Plan: The trickiest part of the program will be storing user log-in information as they pertain to the certain flashcards. The way to get around this is to have a finite number of users and flashcards. Adding a flashcard should not be that difficult, but pairing the information for that flashcard with specific users may be more difficult. The idea here is to append to lists information for users, or to append tuples that has information for that user and the specific number of the flashcard. So, for example, (4, 1) would correspond to user 1 taking 4 seconds to answer a flashcard.

Timeline Plan:

TP2 -- Have general log-in feature working (4/21); some storage of data for the users working (4/23); a reasonable and working flashcard interface (4/19)

TP3 -- Create a general dashboard for each user that displays their information (5/1); display and let users download all their information (4/29); compare different players like a leaderboard or implement a multi-player game (4/27)

Version Control Plan: I have downloaded Github Desktop and every time I update code, I simply push and commit the code to the Github. The link to my Github is https://github.com/pwu97 and the repository for the term project is available upon request.

Module List: The modules used is the Tkinter log-in system (not taught in standard 15-112 curriculum, but still in Tkinter documentation). I may also use 'import statistics' to analyze some of the data from the time each user takes on each flashcard (pending email asking term project mentor).