Name: BrainBolt

Idea

A simple quiz app for making and reading flashcards and creating tests based on user inputs

Abstract

We are creating a quizing and flashcard generation app similar to Quizlet. This app is to be a personalized study app geared towards students that allows them to create flashcards and quizzes. We are employing various design principles, diagrams, and architectures to guide our development. BrainBolt will be a web application that includes account creation and user input into a database. The account will store sets of data which can be made into flashcards and quizzes, this makes our app scalable to a larger population and users who have many classes and topics they want to study for.

Database

We will implement and integrate an SQLite database that will store and produce user data. Points of data will be connected/keyed to a user account. We will use a key-value pair data structure for questions and answers.

Modules (5)

User authentication

- **Purpose:** This module allows user to create and use a personal account that saves their specific data
- **Functions:** Should be able to create/edit/delete account, sign in with account, and retrieve the correct data according to the account.
- **Design Considerations:** Error handling if account can't be found

User question/answer input

- **Purpose:** This module allows users to enter and upload questions/answers tied to their account in the database
- **Functions:** User should be able to type inside text boxes, add more question/answer items, and save their inputs
- **Design Considerations:** Make sure adding items is dynamic

Question/Answer set Dashboard

- **Purpose:** Show user their current sets that can be made into flashcards and quizzes
- **Functions:** User can create, edit, and delete sets. They can format them into flashcard or quiz displays
- **Design Considerations:** How many sets should be on one page? Should it be a list?

Flashcard display

- **Purpose:** This module formats user input into flashcards
- **Functions:** User can see the flashcards, flip them, shuffle them, and move forward or back through the list
- **Design Considerations:** Animations add complexity, may be outside of scope. Make sure shuffling is random.

Quiz display

- **Purpose:** This module formats user input into a quiz
- **Functions:** Questions can be set to be multiple choice or fill in. There should be a submit button, and a grade report after submission.
- **Design Considerations:** Make sure user error is communicated to avoid frustration