

Flash-a-card: An Interactive Flashcard Quiz Website for Student Review

Problem Statement:

Ever had that feeling where you need to review your notes but can't seem to understand anything or don't even know how to start? This often leads to lower test scores and stress. Our system will provide an interactive quiz using flashcards that shows questions, gives explanations after each answer, and helps students focus on the areas they get wrong.

Project Objectives:

- Provide an interactive quiz using flashcards.
- Show explanations for every question.
- Sort questions into correct and wrong piles to focus on review.
- Allow users to retry questions they got wrong.
- Help students improve knowledge efficiently through repeated practice.

Planned Features:

- Display questions in flashcard format.
- Show explanations immediately after answering.
- Track correct and incorrect answers in separate piles.
- Option to retry wrong answers for additional practice.
- Categorize questions by subject and then by topic.
- Shuffle questions for variety.
- Show progress summary at the end of a quiz session.

Planned Inputs and Outputs:

A. Inputs

- Select subject
- Select topic
- Answer a question (multiple choice or short response)
- Mark question as complete
- Request next question
- Retry wrong questions
- Shuffle questions

B. Outputs

- Display list of topics for the selected subject
- Load quiz questions for selected topic
- Show correct/incorrect feedback + explanation
- Update correct/wrong pile
- Show next flashcard/question
- Display all questions answered incorrectly
- Show questions in random order

Logic Plan (Pseudocode)

Start Program

Display list of subjects

User selects a subject

Display list of topics within that subject

User selects a topic

Load quiz questions for the selected topic

Initialize empty piles: CorrectPile, WrongPile

Repeat for each question:

 Display question

 Wait for user answer

 If answer is correct:

 Show explanation

 Add question to CorrectPile

 Else:

 Show explanation

 Add question to WrongPile

 Ask if user wants next question

End Repeat

Display summary:

 Number of correct answers

 Number of wrong answers

 Option to retry WrongPile questions

End Program