CS157A Database Project

A Web Application for Study Materials

Team 29

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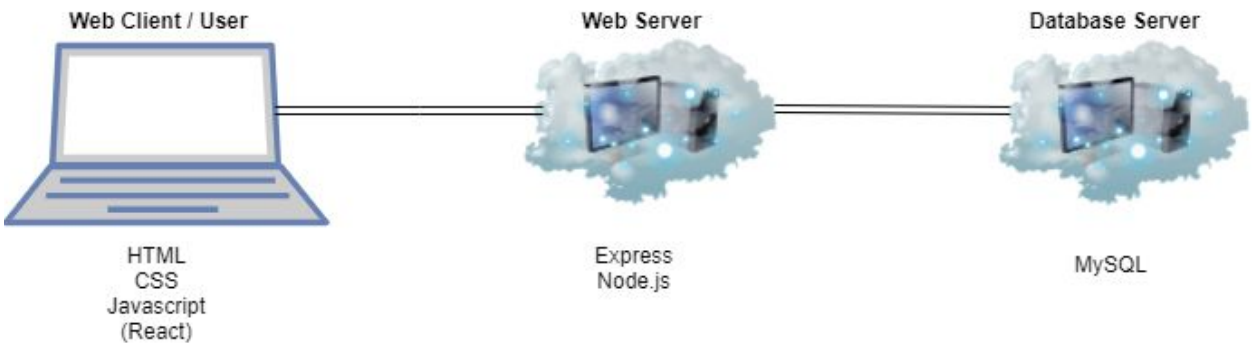
1. Project Overview
    1. Description - For our project we will be making a web application that allows users to easily create, use and organize study materials.
    2. Stakeholders - The stakeholders of this project will primarily comprise of students across all levels of education who are looking for different methods to study.
    3. Significance - The impact of this project is centralized around leveraging databases to provide easy access to organized study materials and user interfaces to create new and engaging methods to review content.
2. System Environment
    1. The program is meant to run within a client's browser. The GUI interface will thus be made using HTML, CSS, JS. This will then connect to a web server made using Express and Node.js. This server will provide the client with the gui, as well as connecting it with the database server. The database will be managed using MySQL. This can all be seen in the following diagram.



3. Functional Requirements
    1. User access - Users will be able to access our system from their browser. As users, they will have access to CRUD functionality to the MySQL database for their respective information.
    2. Functionality/Features - The main features for the application will be allowing users to create flashcards, practice quizzes and diagrams. The users will be able to interact with the GUI to input in key terms, questions and definitions onto flash cards. Users will also have access to a quiz feature that will automatically generate a quiz from their respective flash cards. Lastly, users will be able to create meaningful diagrams in which they can organize and collate their content.
4. Non-functional Issues
    1. GUI - The Graphical User Interface will be hosted on a web application using ReactJS that the user will be able to directly interact

with, including editing and viewing the terms/definitions in different forms to enhance the learning experience. Diagram labeling will make use interactive image JavaScript libraries.

2. Access Control - View access to the flashcard set will be available publicly regardless if a user is logged in or not. Data manipulation will be limited to the author of the flashcard set using login credentials.

Team member contributions:

Jan Rodriguez - Project overview, Functional Requirements

Aaron Smith - System Environment description and diagram

Rabia Mohiuddin - Non-functional Requirements and editing