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SoftDev

PO2: Makers Makin' It, Act I

2025-01-07

Time Spent: 2

TARGET SHIP DATE: 2025-01-17

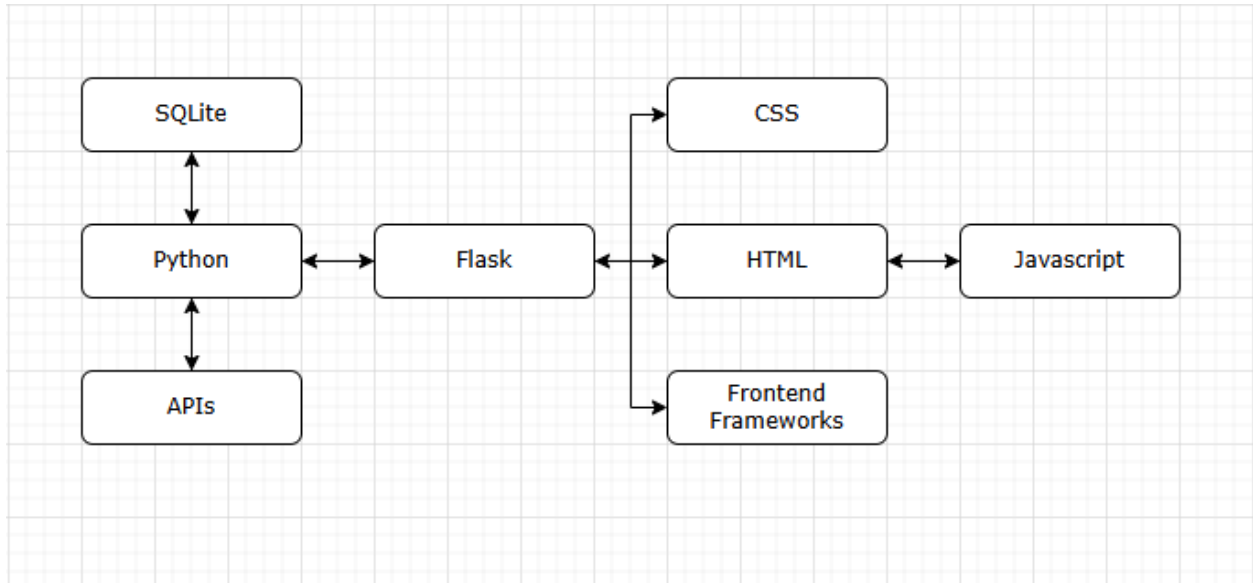
DESIGN DOCUMENT (Version 2)

I. Description

This project is a website that contains various activities- typing tests, memory match, word guessing, etc. - to entertain the user and test their cognitive abilities. Users (without having to be logged in) can navigate through a list of said activities on the homepage. If the user is logged in, they will also be able to see the statistics of past times they've completed various challenges (eg: time, percentage accuracy, points earned, etc).

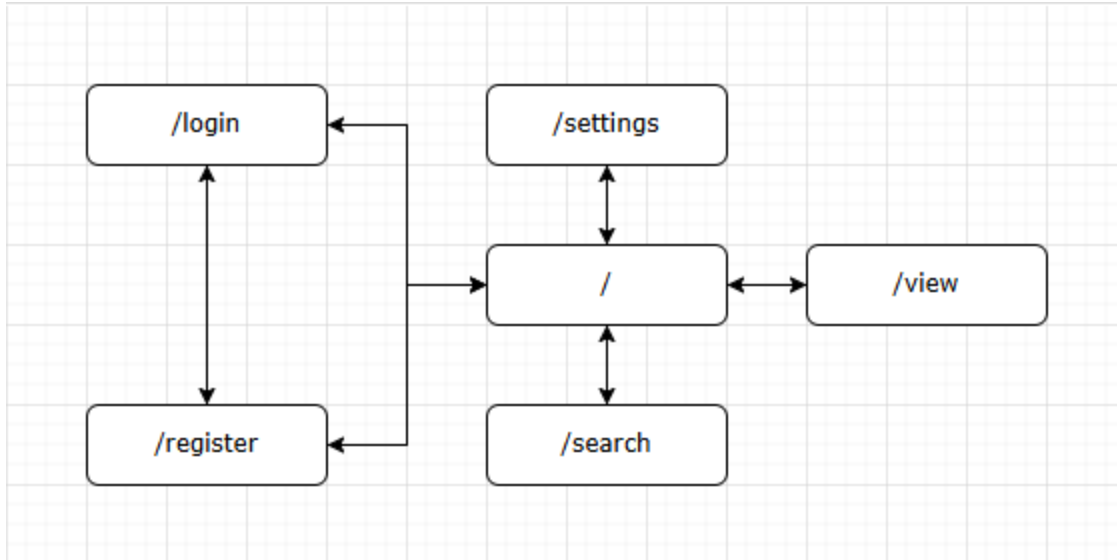
A. Program Components

- a. User Accounts:
 - i. Creation of accounts and login/logout functionality
 - ii. Sessions
- b. Routes to different pages of the website using Flask and Python
- c. APIs:
 - i. NYT API: Pulls articles/written information from NYT to be used as material for typing tests.
 - ii. Merriam-Webster API: Pulls words and definitions from the dictionary to be used in the word guessing game.
 - iii. Giphy API: Generates gifs for celebration screens (eg: new high score).
- d. SQLite3 Database: Stores data of the user and history/various stats of challenges completed previously (eg: time spent, average stats, points earned)
- e. Jinja Templates:
 - i. User dashboard:
 - 1. Logged-In State: Contains a profile image, a logout button, a challenge history, favorited challenges, etc.
 - 2. Logged Out State: Contains a login button and links back to the homepage of challenges.
 - ii. User Settings: Allows the user to edit their username, and password
- f. JavaScript Components: Used to make elements of each game interactable for the users.



B. Site Map + Descriptions

- I. Landing page/home (/): Dashboard - depicts the list of games for the user to pick from, also provides a short description of the site.
2. Settings page (/settings): Allows user to change username, password, and profile picture
3. Login (/login): Allows the user to sign in to an account
4. Registration Page (/register): Allows the user to register for an account and logs the user in upon successful account creation
5. Game Viewer (/view): Is where the user gets to play games they click on.
 - Typing Tester
 - Word Guesser
 - Reaction Time
 - Number memory
 - Possibly more.
6. Search result page (/search): Shows the result of a game search by a user
 - a. Search parameters (as dropdowns and text): challenge type, name



C. Database Organization

I. User Table

id	username	password	favorites
INTEGER PRIMARY KEY AUTOINCREMENT	TEXT UNIQUE NOT NULL	TEXT NOT NULL	TEXT NOT NULL

2. Game(properties) Table

id	GameName	Text
INTEGER PRIMARY KEY AUTOINCREMENT	TEXT UNIQUE NOT NULL	TEXT NOT NULL

D. APIS

NYT API

- 500 calls / day
- Randomly select an article as text for typing test

Merriam-Webster API

- 1000 calls / day
- Used for words, synonyms, definitions in guessing game.

Giphy API

- 100 calls / hour
- Used for getting random gifs for variety

E. Frontend Framework

[SUBJECT TO CHANGE]

Bootstrap

Bootstrap is convenient to use and easy to implement. We seek to optimize our speed of development with Bootstrap for this reason.

F. Task Breakdown

[ROLES CURRENTLY SUBJECT TO CHANGE - temporary placeholders]

Colyi Chen -

- Project Manager
- Frontend Framework
- HTML + CSS + Jinja

Dua Baig -

- Database Engineer
- Backend

Danny Mok -

- Javascript
- Flask Middleware

Jacob Lukose -

- API Handling
- Creating the pages for at least 2 games