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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

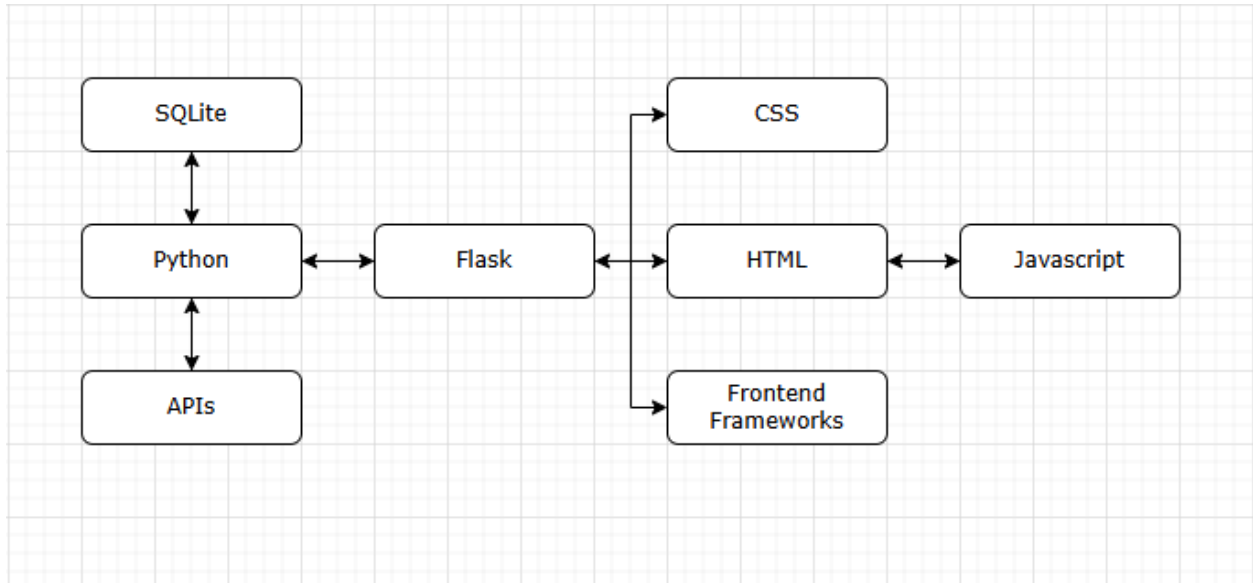
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## I. Description

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).

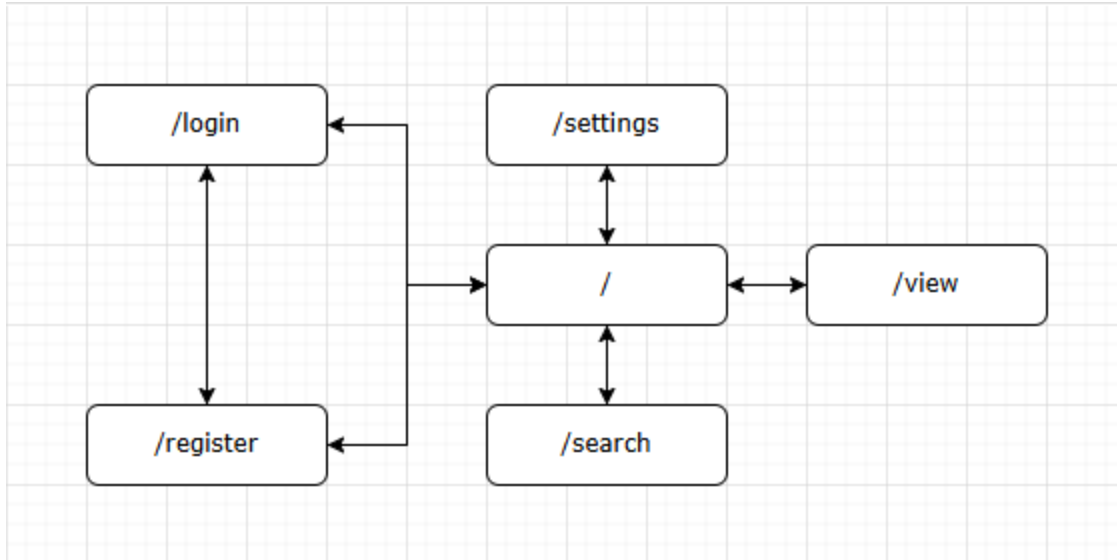
### A. Program Components

- 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.
- 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]

Dua Baig -

- Database Engineer
- Backend

Colyi Chen -

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

Danny Mok -

- Javascript
- Flask Middleware

Jacob Lukose -

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