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RACAMOJO
p01-RoH: Meme Randomization Website
2024-12-02
Time Spent: 3 hours
TARGET SHIP DATE: 2024-12-17

Website Description

Our website will allow logged-in users to generate a completely random image and use that image to create a meme. All users can view memes other users have generated, in the order they generated them.

Front-end Framework

- Tailwind
    - We decided to use Tailwind because it's easy to understand and consistent. We plan to make use of its button/box customization and dark mode feature to make the user experience a bit more fun. If able, we'd like to use its image invert feature on the meme images.

APIs

- Random Image API
    - Provides the randomly generated image of a set pixel size.
- Meme Generator API
    - Allows users to post an image with a description, to its global database. Memes are organized by ID.
- Font API
    - Gives users access to many google fonts to create their memes with.

Components

Templates

- register.html
    - Allows users to register an unused username and password to be added to the database.
- login.html

    - Allows the user to input a username and password
    - 2 users cannot have the same username or else an error message will appear.
- logout.html
    - Rendered once the user is successfully logged out.
    - Allows users to return to the homepage.
- create_meme.html
    - Users can generate a random image (Random Image API) and use that image to caption a meme and create its description (Meme Maker API) .
- homepage.html
    - Visible to all users.
    - Showcases all user-generated memes chronologically.
    - Upvote/downvote meme feature for users.
- error.html
    - It may be rendered when an error occurs (e.g. user tries to create an account with the same username as another user).

APP Folder

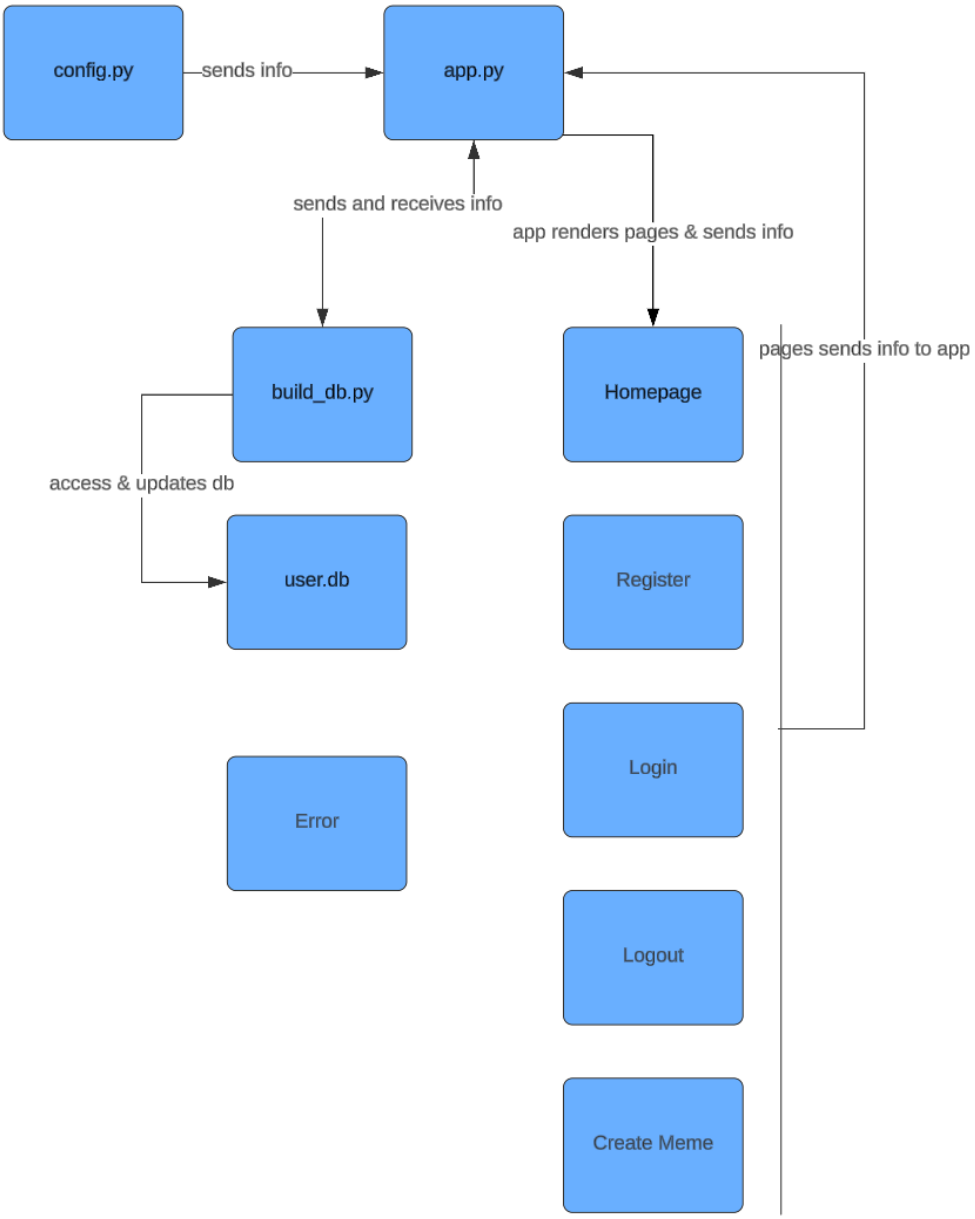
- build_db.py
    - Use sqlite3 to create a database of user information (username and password).
- __init__.py
    - Initializes the app.
- config.py
    - Checks that API keys exist and are stored in the right place.
- memes.csv
    - Stores Meme data (id, image link, creating user, etc)
- users.csv
    - Stores Users' username and password
- user.db
    - Stores the users and memes tables with respective information.
- keys folder
    - key_GoogleFonts.txt
    - key_RandomImage.txt

    - readme
        - Explains the state of API keys
- Templates Folder

Application Logic

- __init__.py
    - Flask Server, designating routes and connections between pages + their functionalities
- config.py
    - Securely loads API keys from their respective files. It makes sure the keys aren't hardcoded into the app.

Connection Between Components



Documentation and Assets

- design.pdf
    - This document. Devos should refer to and edit it often.
- flag.jpg
    - Our team's flag. Proudly portending greatness.

- README.md
    - Roles, description of website, how to, etc. Please read it.
- devlog.txt
    - Updated by each group member after they push to github and make changes. Maintained by PM. The most recent entry goes on the bottom detailing changes and bugs.
- requirements.txt
    - Lists flask and pip installs needed to run application.

Database Organization

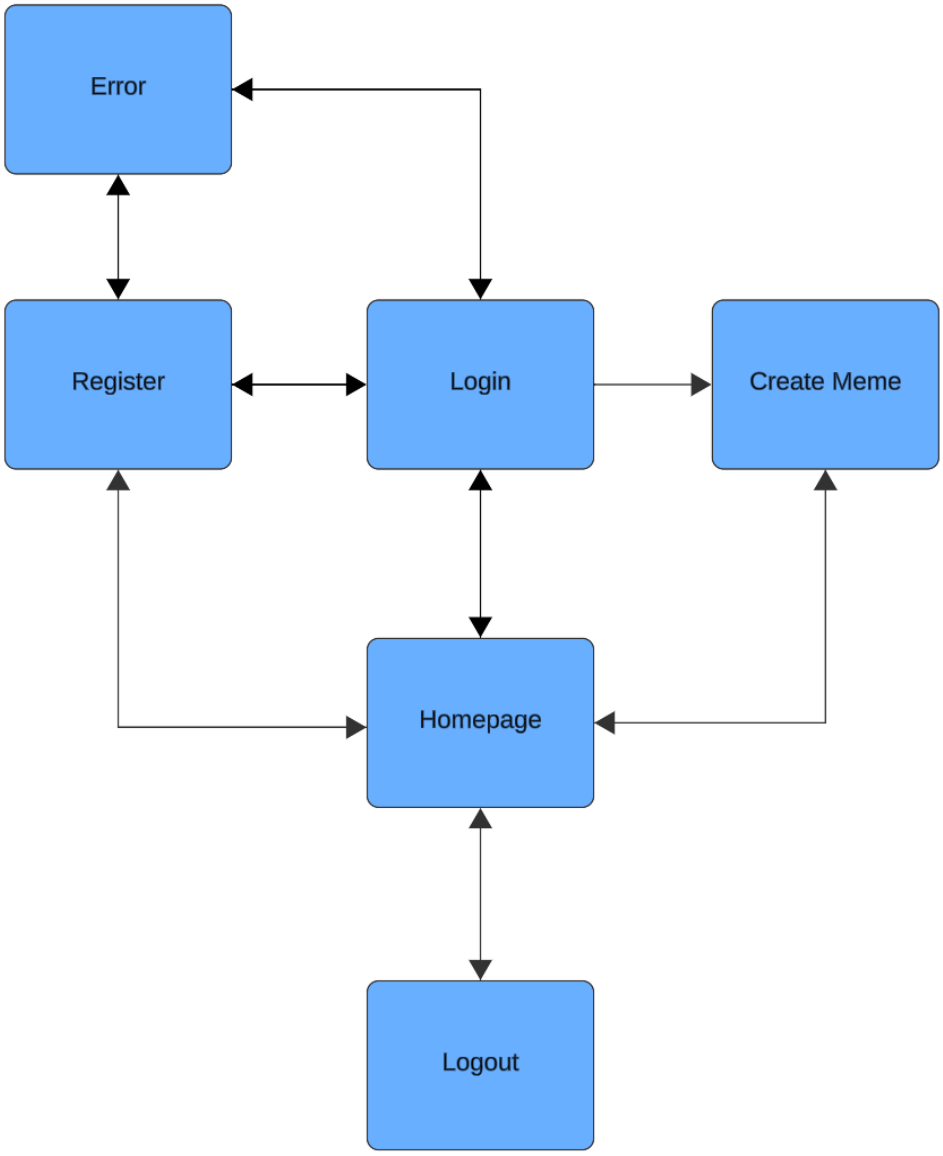
- user.db
- Tables:
    - users
        - Formatted data of usernames and passwords, each corresponding to an index by line
        - New items appended to the end
        - Cannot be deleted
    - memes
        - Indexes in table name corresponding to index in the users' table and the subsequent index of the meme in user_ table
        - Formatted data of the user's meme entries (title and text), each corresponding to an index by line
        - New entries are appended to the end
        - Cannot be deleted

Database Table

Meme #	Image	Caption	Size	Upvotes	Author
int	BLOB	string	int,int	integer	User class

Username	Password	Memes created
String	String	array[images]

Sitemap



Assignments

Task	Assigned To
Working on the frontend, helping with the database and Flask	Moyo (PM)
Database Engineering	Jonathan
Flask	Caden
Helping with Flask, database, and CSS	Raymond
Design Document + Devlog	All members