

Hero Wars by Teem_sqrt4469

P01: ArRESTed Development

Yuhang Pan (PM), Matthew Ciu, Michelle Chen, Thomas Mackey

2025-12-01

TARGET SHIP DATE: 2025-12-19

Project Idea: A pokemon showdown type game but with superheroes vs. historical figures instead of pokemon. We will try to fetch real data from multiple API's and convert those info into in-game stats.

Program Components:

A. Flask App (Python)

- **__init__.py** creates flask app, import routes, and run app
- **build_db.py** creates the user table
- **routes.py** makes all the flask routes
 1. **/menu**
 - Makes API calls to fetch characters (superheroes and historical figures)
 - Randomly selects a list of characters to battle (maybe an option to reselect)
 2. **/game**
 - Pulls data from APIs and convert certain stats to in-game stats
 - Stores match data in flask session
 - Allow players to interact with battle (attacks, etc.)
 - Can use evilinsults API to taunt the other player
 3. **/gameover**
 - Displays winner
 - Optionally stores win/loss, characters used, time of match, etc. in user table
- **apis.py** handles all API calls & fetch and convert data
- **game.py** handles game states (running/game over) and turn based logic, converts API stats to in-game stats.

B. Templates (HTML templates for each page w/ Jinja2)

- **menu.html** (homepage that displays game title with a start button)
- **game.html** (page that displays battle in real-time)
- **gameover.html** (page that shows that the game is over and displays the winner of the showdown)

C. Database (SQLite3) **optional stretch goal**

- User table (stores #wins/losses, match history)

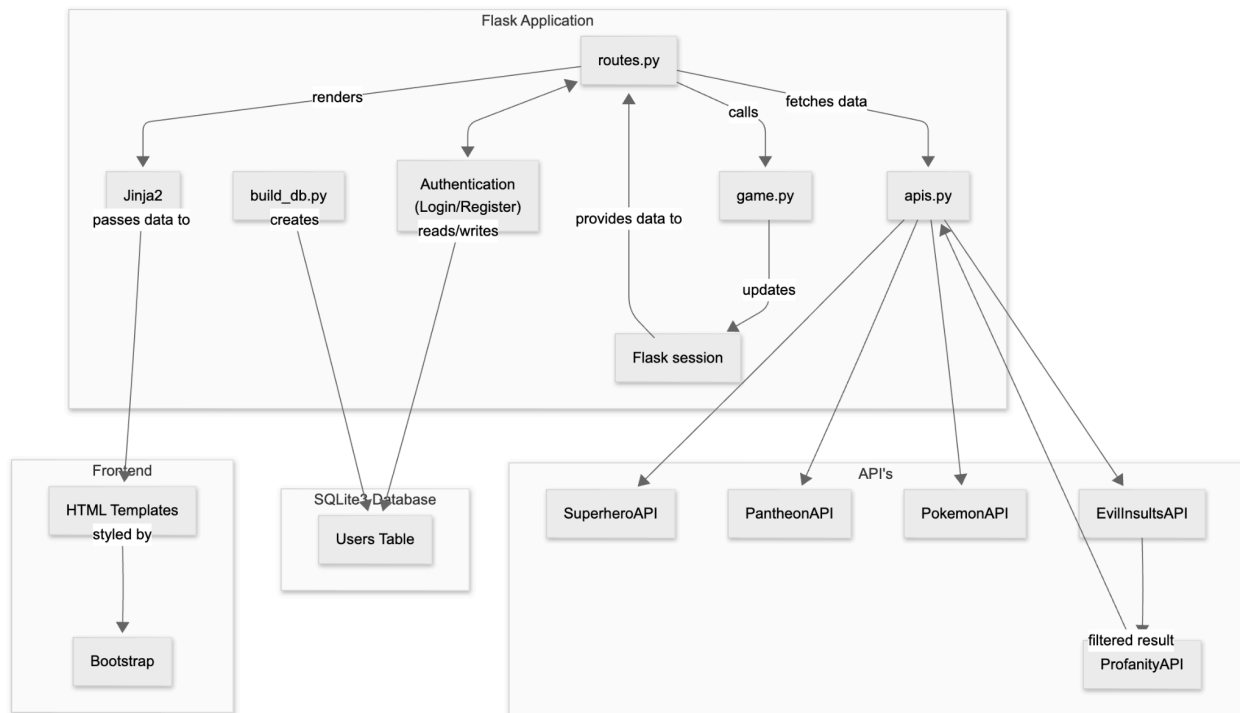
D. API's

- Superhero API - <https://www.superheroapi.com/>
- Pantheon (historical figures) API - <https://pantheon.world/data/api>
- Pokemon API - <https://emiliebarnard.github.io/pokemon-in-python/#moves>
- EvilInsults API - https://evilinsult.com/generate_insult.php?lang=en&type=json
- Profanity (Filter) API - <https://www.profanity.dev/#api> to filter EvilInsultsAPI

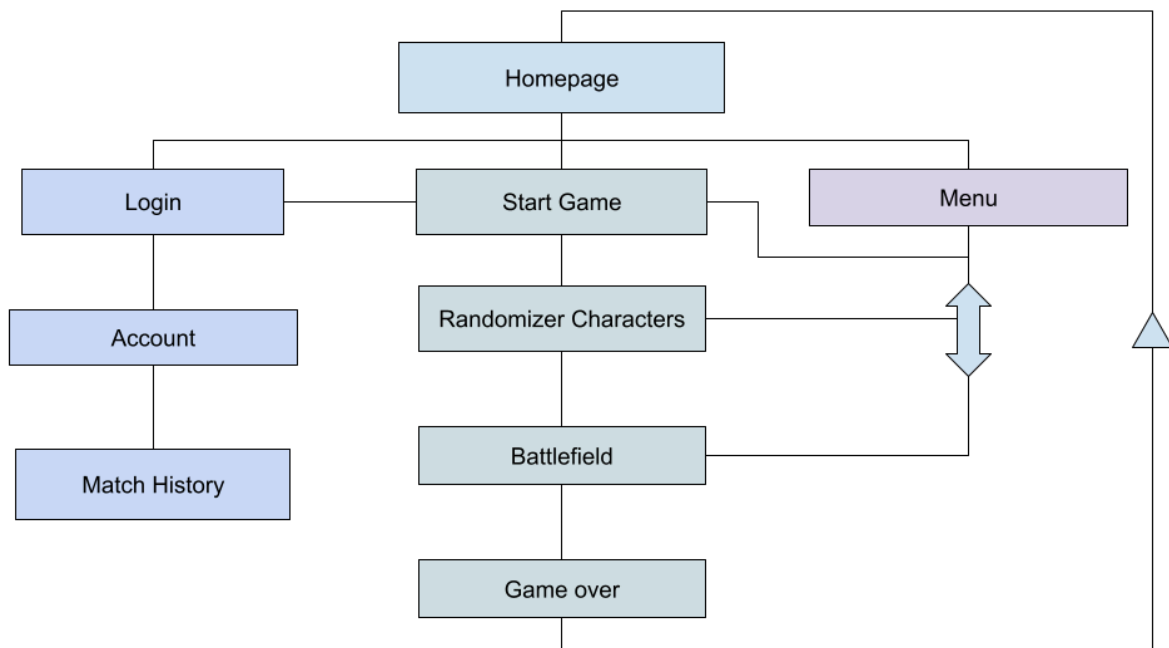
Front-end Framework (Bootstrap):

- Good documentation since the documentation for Foundation isn't great; Tailwind is confusing with all the utility classes in the HTML
- Bootstrap grid system is easy to work with which we can use to display the abilities of our characters; can also be used to divide the battle page to left and right for the two players
- Card container to display randomly selected characters

Component Map:



Site Map:



Database Organization:

USERS

TEXT	name	PK	Username is unique
TEXT	password		Used for authentication

Tasks:

- Yuhang Pan
 - game.py (game logic with turn-based gameplay, convert API info to in-game stats)
- Matthew Ciu
 - apis.py (all the apis: SuperheroAPI, PantheonAPI, PokemonAPI, EvilInsultsAPI & ProfanityAPI; get API keys, call API and fetch data)
- Michelle Chen
 - HTML Templates (menu, game, & gameover page)
- Thomas Mackey
 - Bootstrap, __init__.py & build_db.py