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Softdev
P3: ArRESTed Development, JuSt in Time
2021-04-23

Topic: Pokemon Trivia Battle Simulation

APIs:
- https://opentdb.com/api_config.php
- https://pokeapi.co/
- https://developer.marvel.com/docs

Program Components
1) SQLite DB file
   a) user login information table
   b) leaderboard for answered trivia
2) Python Flask: our app framework
   a) Routes for user authentication, etc.
3) Python code to generate simulation (Separate Files)
   a) PvC Simulation
      i) 2 sprites (the player's sprite and an upscaled raid boss sprite)

ii) You answer trivia questions to attack. A correct answer damages the boss, an incorrect one damages you.

iii) Display detailed information on topics gotten incorrectly, number of questions right, time taken to finish

b) PvP Simulation (Add-On After Everything Else)

i) Each person gets 10 questions

ii) Whoever answers all the questions the fastest wins

iii) Same as PvC iii

4) Bootstrap/CSS/HTML: code and styling for our front-end pages

Component Map And Site Map:
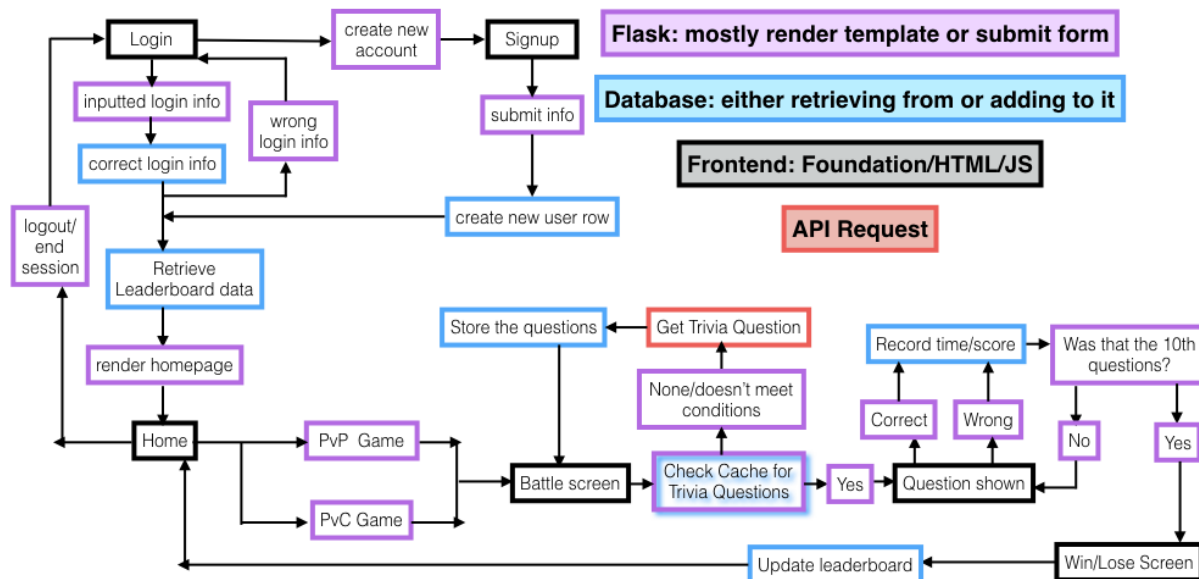
Database Organization

User Authentication

User_ID (INTEGER, Primary Key)	Username (TEXT, unique)	Password (TEXT)
Key generated using INTEGER PRIMARY	Username created in registration page	Password hashed using Python hash()

KEY column type		function

Leaderboard

Leaderboard Position (INTEGER, Primary Key)	Username (TEXT, unique)	# of Correctly Answered Question (Correct/Attempted) (TEXT)	Total Time Spent on Questions (TEXT) (Format: HR:MIN:SEC)

Tasks (This will be done in a pair programming way):
- Backend (Arib and Karl)
    - Authentication with SQL tables / python
    - Routes: Home, Login, Registration, Simulation
        - Figure out how to player vs player - real time thing (probably web sockets)
        - Player vs CPU
    - Damage, attack
    - Alter APIs to become quiz questions
    - Come up with a way to get random trivia questions
    - Addon (if we have time):
        - Add profile route to pick sprites
        - Wins to losses
        - Graphs
        - 3rd person spectator
- Frontend (Anya and Saqif)
    - Bootstrap
    - Scale up sprites for CPU boss
    - Leaderboard
    - Battle simulation page
    - Damage bar
    - Pokemon style text box

- Home page
- Login/register

Timeline:
- Finish basic login/ sql system by Thursday, April 22nd
- Finish finalizing design.pdf by Thursday, April 22th
- Experiment with APIs by Friday, April 23th
- Come up with the final trivia/battle system by Saturday April 24th
- Come up with the basic website by Saturday April 24th
- Personal cleaned up draft by Tuesday April 27th
- Final version due by Thursday, April 29th