JEOPARDY! by Team Saturated Sidewalks

Roles:

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Alice Ni : Frontend/APIs
Jacob Olin : Databases
Hilary Zen : Python

Project Description:

We will recreate the famous Jeopardy game. After users login, they will be able to create their own Jeopardy boards with their own categories and questions. These boards will be saved and be open for all other users to play. They can also choose a randomly generated board with predetermined categories and random questions from the APIs. Users can also search for an existing board based on the name of the board. When a user decides on a board to play, they will first have to specify how many teams are playing and the team names. There will be a limit of 5 teams. Once the game begins, the teams and their scores will be displayed on the bottom of the page. After choosing a question, the answer will be revealed with a click of a button after the team answers. If the answer matches, the user can press the + button to add the points to that team. If the answer is wrong, the user can press the - button to deduct the points. The game ends when all of the categories have been chosen and the winner of the game will be recorded in the user's game history.

Core Components:

- Login system
- Users can start games, which will be recorded in their history
- Randomly generating questions
- Form to create their own board
- Keep track of number of rounds, which team is answering, and each team's points
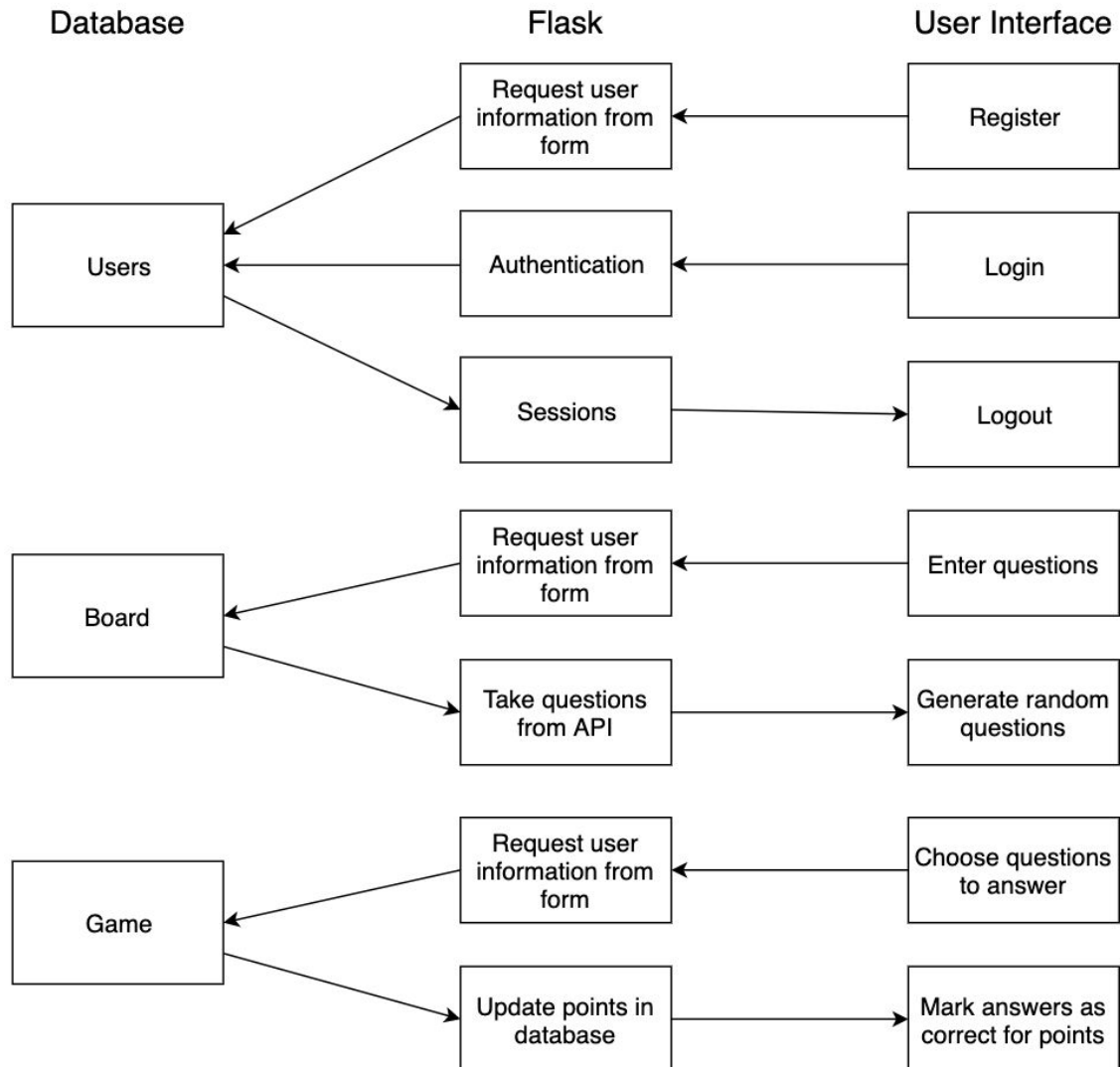- Determine a winner at the end of the game

APIs Used:

Open Trivia - used to provide questions for the randomly generated boards
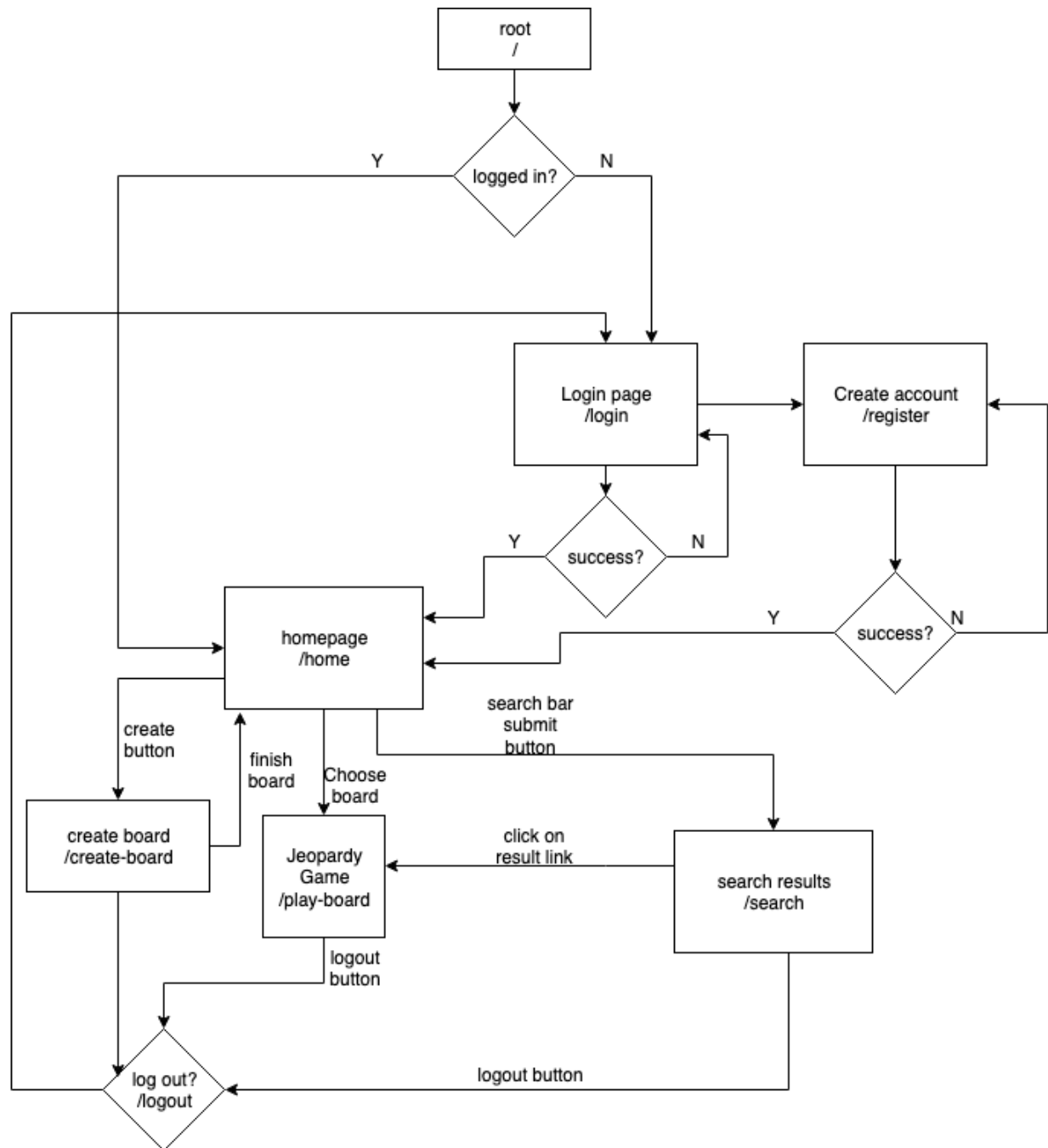Rest Countries - used to get country flags and names for randomly generated questions
Rick and Morty - used to get character images and names for randomly generated questions
PokéAPI - used to get Pokemon images and names for randomly generated questions

Component Map:

Database	Flask	User Interface
Users	Request user information from form	Register
	Authentication	Login
	Sessions	Logout
Board	Request user information from form	Enter questions
	Take questions from API	Generate random questions
Game	Request user information from form	Choose questions to answer
	Update points in database	Mark answers as correct for points

Site Map:

Database:

Users

user_id	username	password
INTEGER	TEXT	TEXT
3892	bob	123

Board

User id	Board id	1 Q	1 A	2 Q	2 A	...	5 A	5 B
INT	INT	TEXT	TEXT	TEXT	TEXT	...	TEXT	TEXT
3892	4337					...		
3892	4337					...		
⋮	⋮	⋮	⋮	⋮	⋮	...	⋮	⋮
3892	4337					...		
3892	9071					...		
3892	9071					...		
⋮	⋮	⋮	⋮	⋮	⋮	...	⋮	⋮
3892	9071					...		
4994	2654					...		
4994	2654					...		
⋮	⋮	⋮	⋮	⋮	⋮	...	⋮	⋮
4994	2654					...		

Teams

Game id	Team name	Score
INT	TEXT	INT

Game in session

User id	Game id	Board id	1 Q	1 A	2 Q	2 A	...	5 A	5 B
INT	INT	INT	INT 0 or 1 (Y or N)	INT 0 or 1 (Y or N)	INT 0 or 1 (Y or N)	INT 0 or 1 (Y or N)	INT 0 or 1 (Y or N)	INT 0 or 1 (Y or N)	INT 0 or 1 (Y or N)

Front End:

- **base.html**
    - Base template for all the pages
- **login.html**
    - Form for login
    - Redirects to "/login" if unsuccessful, else redirects to "/home"
- **register.html**
    - Form for registration
    - Redirects to "/login"
- **home.html**
    - Search bar for available games
    - Button to create game
        - Redirects to "/create-board"
    - Button to play games
        - Redirects to "/play-board"
- **create.html**
    - Form for creating a jeopardy game
    - Redirects to "/home"
- **play.html**
    - Game screen

Back End:

- **create_db.py**
    - SQL code to create the database tables needed
- **app.py**
    - **register():** Users can create a new account
    - **login():** Authenticates users who are logging in
    - **create():** Uses APIs to generate a board with questions

- **customize():** Takes the 25 questions and answers that user enters, and creates a new board with them
- **search():** Filters through all existing boards and returns matching results
- **play():** Moves user into the game screen
- **question():** When user chooses a box, the question comes up
- **show_answer():** After user submits an answer, the correct one is shown
- **update_points():** User can mark whether the answer is correct or not, and points will be added or subtracted
- **finish():** After the last question has been answered, the game automatically shows a winner, and returns users to the homepage