madeinguatemala p04 Design Document

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JOY ACROSS BORDERS 🔥🔥😵‍💫

"Happiness is the feeling that power increases — that resistance is being overcome"

Overview

JOY ACROSS BORDERS 🔥🔥😵‍💫 is a interactive platform meant to serve information regarding every country for every type of human: from vacation travelers to rogue individuals seeking asylum in foreign land. Our vision is to create an interactive map where clicking on any country in the world will show a general overview of the country with graphs relating to happiness, life expectancy, and more. If not interacting with the map, users can also search for whichever country they want to obtain information about. In our search bar, users are prompted with search suggestions of countries with available data from the letters that they have typed so far. There they will be met with graphs allowing them to visualize trends among the years and see what factors impact a country's happiness. The interactive map also displays a gradient of colors relating to happiness rankings. JOY ACROSS BORDERS 🔥🔥😵‍💫 has public country ratings. Users will be able to leave 1 to 5 stars on each country based on factors up to their personal discretion, allowing them to leave their own input while seeing what fellow humans have to say about each piece of land. In their profile,

users can see all the ratings they have given out so far!

Components

Structural components

- Backend + Database Handling
    - Connecting dataset to database + integrating said database to other aspects of the app
    - Allows for account management, data of countries, leaving reviews beneath countries, etc.
- Middleware
    - Flask routing to handle flow
    - Python for logic
- Frontend Framework (HTML, JS, CSS, Bootstrap)
    - JS - this will allow us to create the actual interactive map and display our charts. We also use JS for our frontpage globe, and our search bar feature.
    - CSS/Bootstrap - used for styling and to create a smooth streamlined appearance

Tooling Components

- Dataset - World Happiness Report
    - Us Guatemalans believe that the world is defined through the experiences, both positive and negative, that the world brings us. For this reason, happiness seems the best metric through which we can gauge the success of our efforts on our planet.
- JS Visualisation - ApexCharts
    - ApexCharts grants us with a responsive and interactive way to highlight and work with our data, especially among such visual indexes like countries. We also greatly appreciate the

depth of ApexCharts documentation and its neat JS implementations

- Database - MongoDB
    - After thoroughly comparing the benefits of both SQL and MongoDB, we have chosen to proceed on the document database path. Since we are dealing with a great variety of information points, we must maintain an effective way to index our database, especially through shortcuts and intelligible code sequences. Through ease of access, our pick is MongoDB.
- FEF - Bootstrap
    - Bootstrap provides us with an interactive way to add visual implementation into our app, which can be done relatively easily through class tags within our HTML code.

Required HTML Templates

- index.html
    - /
- map.html
    - /map
- register.html
    - /register
- login.html
    - /login
- profile.html
    - /profile
- country.html
    - /country/{country_id}

Component Relationships

Frontend: CSS - Bootstrap.

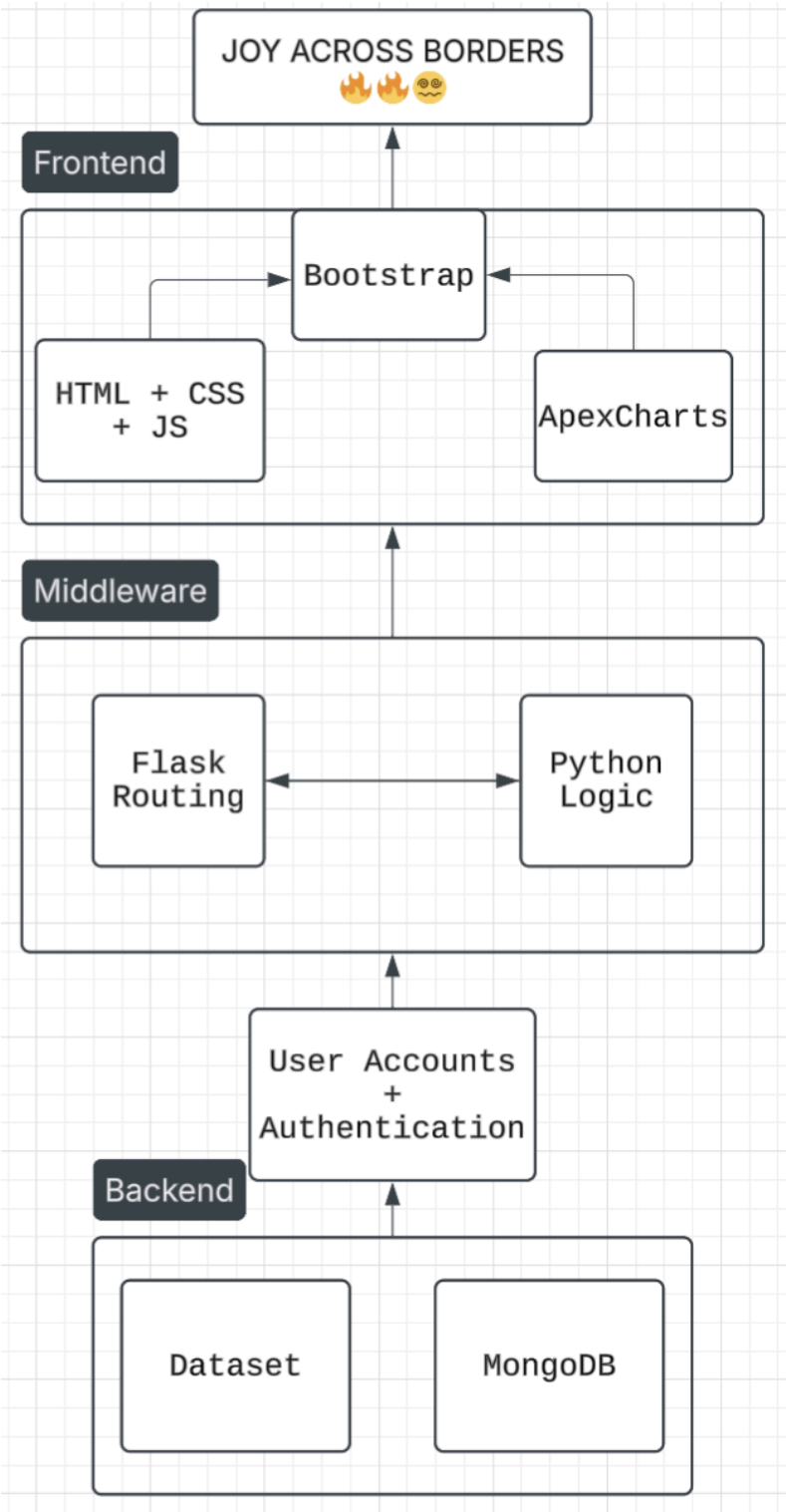
- login.html
  - initial page
  - redirects to index.html
- register.html
  - redirects to index.html
- index.html
  - landing page after registering or logging in
  - has an interactive globe
    - redirects to map.html
- map.html
  - interactive map and colored search bar
    - redirects to country.html
- country.html
  - summary of reviews for each country
  - can only leave a review when logged in
  - all happiness data from each country
- profile.html
  - shows account information
  - shows reviews left on countries

Backend:

- **__init__.py**
  - Run flask app, handle user information
- **mongo.py**
  - Code to initialize the tables for the main mongo happiness data
- **users.py**
  - Code to create and manage accounts

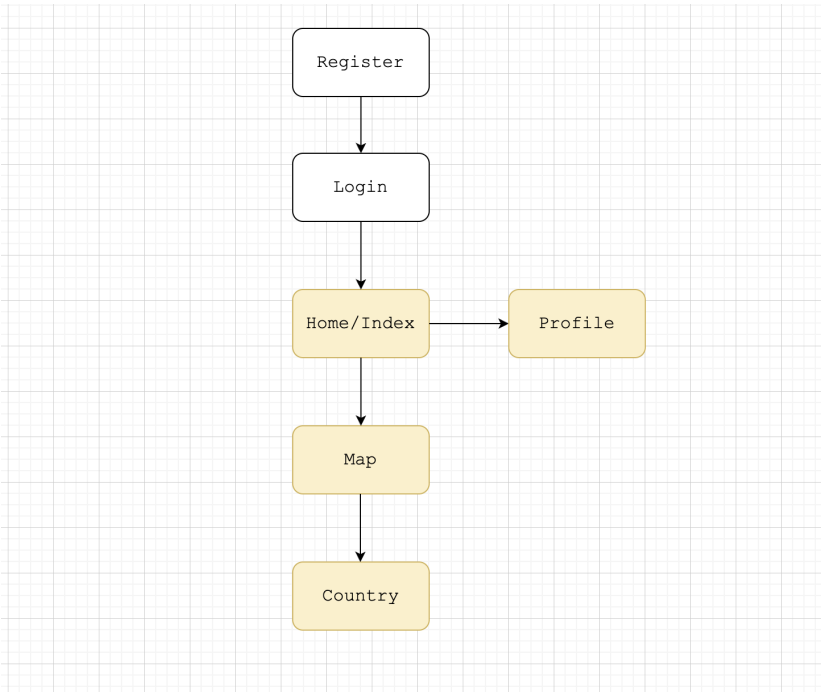
- **rankings.py**
    - Code to make reviews for countries and users

Component Relationship Visualization



Site map

Note: shaded pages require user authentication to access



Database Organization

Users :

id	Username	Password
TEXT	TEXT	TEXT

Countries :

id	Name	Happiness Score	Happiness Ranking	Freedom	…
TEXT	TEXT	FLOAT	INT	FLOAT	FLOAT

User rankings :

id	user_name	country	rating
#	TEXT	TEXT	INT

TASK ASSIGNMENTS

TASK	PMWN	DAS	DKL	DMC
Flask setup and routing		X		X
Construct Database Organization		X		
Front-end (JS)	X		X	X
Front-end (Bootstrap+CSS)	X		X	
Build HTML Templates	X			X
Final Testing and Bug Fixing	X	X	X	X