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**Target Ship Date:** 2022-12-19

## API PLANS / MVP

The APIs we used are: Air Quality API, Country API, and the Weather API. Once the user clicks on a country from a dropdown, they will be redirected to different pages, depending on whether they are looking for country or air quality data (which are different dropdowns in different sections). On the countries page, data will be displayed like population, capital, currency, time zone, latitude/longitude, language, map link, and flag image. On the home page, there is a search bar where one can enter the city name to directly search up air quality values. Furthermore, one can enter latitude and longitude values within the search bar, separated by only a space, which will be parsed and matched to that location (currently only in the US) to display the forecast for the day. Some Sample Values are: (35,-78) (45 -90) (42 -71). The weather drop down allows the user to select a US city to view weather information for.

## PROGRAM COMPONENTS

- `__init__.py`: app for website
- `templates/`
  - `login.html`
    - Typical username/password login
  - `registration.html`
    - Helps create account
    - Afterward, leads to `register_success.html`
  - `home_page.html`
    - Displays lists of countries and cities pulled from the Country/Air Quality API
  - `country.html`
    - Lists statistics about selected country
    - Includes link to country on Google Maps
  - `direct.html`
    - Displays air quality for selected country
  - `locations.html`
    - Helps to select a specific city/area in a country, shows all cities in selected country
  - `Weather.html`
    - Shows weather of specific city through direct search
  - `Weather_us.html`
    - Shows weather of specific city via dropdown form submission

- countries.py
  - Contains list of all countries
  - Functions to get relevant data for country like language and flag
  - Displays country information on country selected
- process\_aq.py
  - Select a specific country
  - Helps provide cities where data is provided (all functions for getting air quality data)
- test\_weather\_calls.py
  - Provides detailed information about weather forecast for selected city

## FRAMEWORK

We will use Bootstrap because it offers us better customizations to our site that make our site look more professional. Such features include: progress bars, sliders, loading buttons, various colored/shaped buttons, customizable tables, collapsibles, forms, search bars, **and tooltips/popovers(hovering will show text).**

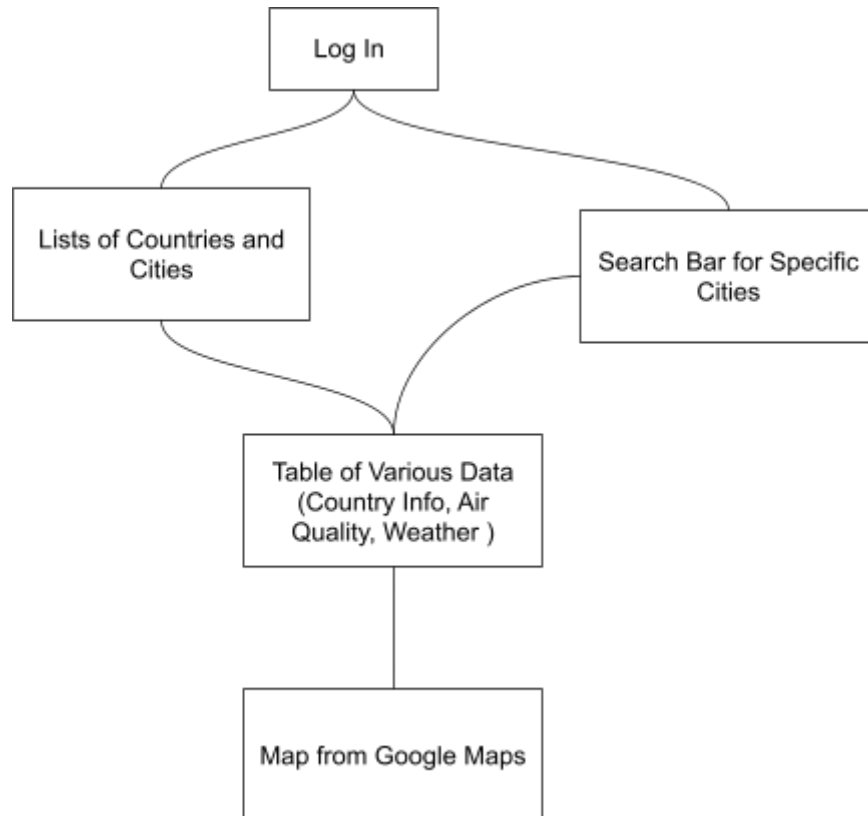
## PAGES

- Home.html is the Home Page. Displays several lists of countries and cities to click on and search for their statistics. Also, a search bar at the top to look up specific cities' weather forecasts.
- Login.html, registration.html have all typical functions regarding username/password login and registration
- Country.html, measure.html, weather.html, weather\_us.html: all provide specific information based on their respective APIs
- Direct.html helps describe the air quality ranges by directly searching up a location name. In other words, it shows data when a user searches via the search bar.
- Error.html returns this if there is a problem with the country/city input by displaying a custom message.

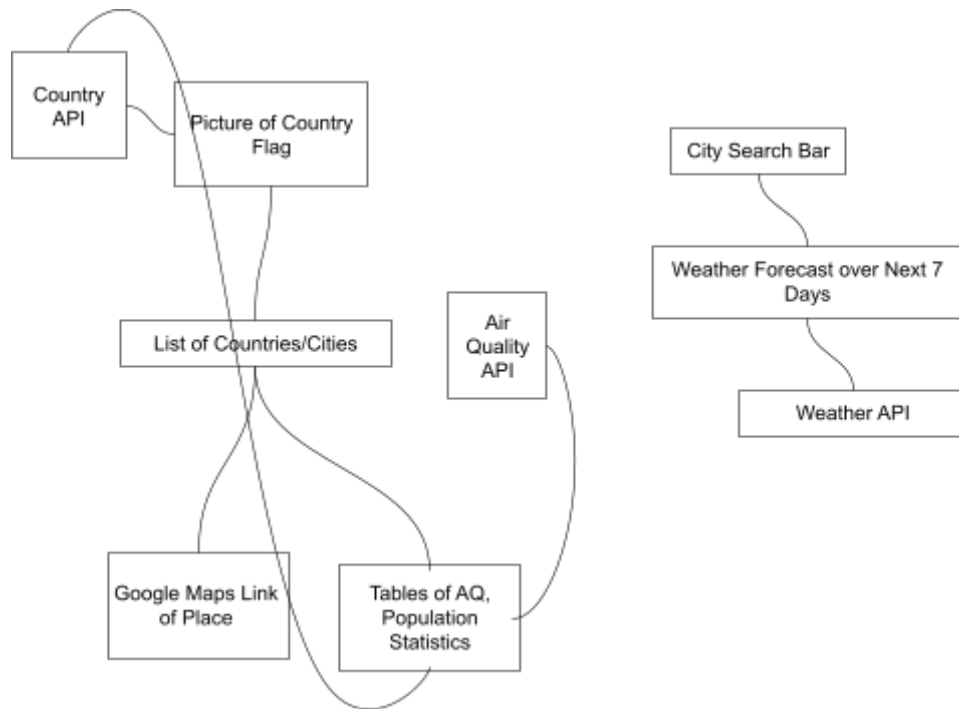
## DB ORGANIZATION

Username (Text)	Password (Text)

## SITE MAP



## COMPONENT MAP



## BREAKDOWN OF TASKS

**Nicholas:** Api Calls for Weather. Work on writing all functions to get weather for a location based on latitude and longitude.

**Daniel:** API Calls for Air Quality API. Connect back to Frontend and do Routing. Facilitate communication and make sure all components of the app handle errors appropriately and work as intended.

**Jonathan (PM):** Styling for Frontend and Design Doc. Try to Make Use of Google Maps API to embed an interactive Image.

**Kevin:** API Calls for Country API. Write All Functions to Get Data from all available countries in this API. This includes: population, capital, currency, time zone, latitude/longitude, language, map link, and flag image.