Team: CSAST

Analytics to implement in next sprint:

- **Analytic 1:** As a user, I want to be able to pick a country and see when a country locked down, and how stringent the lockdown was, and also examine the number of cases and deaths in a table or a graph.

- **Analytic 2:** As a user, I want to be able to pick a country and see when a vaccine was released for the country, and also examine a graph of confirmed cases before and after the vaccine release (and table data).

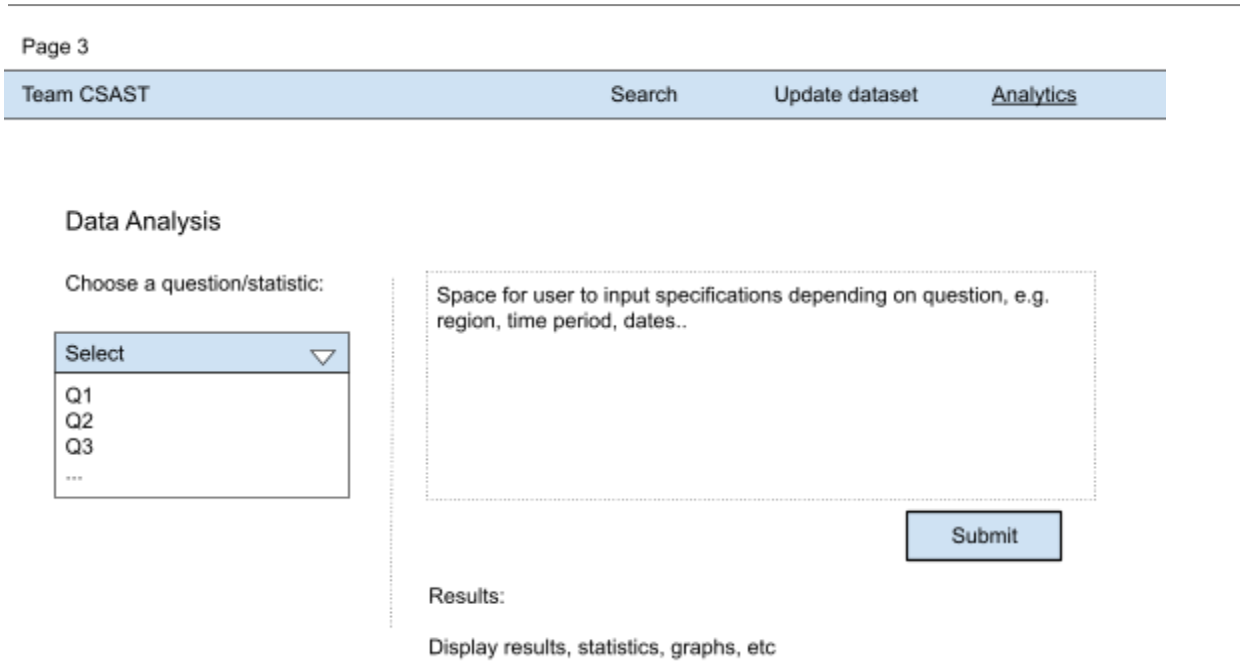
- **Analytic 3:** As a user, I want to be able to pick a country and examine graphs of confirmed cases, deaths, and recoveries next to an aggregate graph of the rest of the world (and table data).

- **Analytic 4:** As a user, I want to be able to pick a country and examine a graph of confirmed cases and deaths over time to see how deaths trailed confirmed cases.

(For next Sprint):

- **Analytic 5:** How does the affluence of a nation affect its recovery rate?
- **Analytic 6:** How does each US state's measures (Like lockdown) relate to the number of people affected/dead?

GUI Design:


Page 3
Team CSAST
Search
Update dataset
Analytics
Data Analysis
Choose a question/statistic:
Select
Q1
Q2
Q3
...
Space for user to input specifications depending on question, e.g. region, time period, dates..
Submit
Results:
Display results, statistics, graphs, etc

Test Cases:

- **Analytic 1 Test Cases:** As a user, I want to be able to pick a country and see when a country locked down, and how stringent the lockdown was, and also examine the number of cases and deaths in a table or a graph.
    - Test: Users should choose a specific country and get back a message regarding the country's lockdown policy (date and strength) and choose whether to view the confirmed cases/deaths before, during and after as a table or a graph.

- **Analytic 2 Test Cases:** As a user, I want to be able to pick a country and see when a vaccine was released for the country, and also examine a graph of confirmed cases before and after the vaccine release (and table data).
    - Test: Users should choose a specific country and get back a message regarding the date of the vaccine release, and then they choose whether to view the confirmed cases/deaths before after as a table or a graph.

- **Analytic 3 Test Cases:** As a user, I want to be able to pick a country and examine graphs of confirmed cases, deaths, and recoveries next to an aggregate graph of the rest of the world (and table data).
    - Test: Users should choose a specific country and a metric (confirmed cases, deaths, or recoveries), and two graphs should appear, one for the country and analytic over time and one for the rest of the world with the analytic over time. The user can also choose to display this information in a table.

- **Analytic 4 Test Cases:** As a user, I want to be able to pick a country and examine a graph of confirmed cases and deaths over time to see how deaths trailed confirmed cases.
    - Test: Users should choose a specific country and a graph would appear with the confirmed cases over time overlaid with deaths over time.

Completed last sprint:

Front-End

- Navigation Bar (bootstrap) (Alex, Sabrina, Steven)
    - Design
    - Functionality
        - Switch between Search and Update pages
- Update dataset webpage (Alex, Sabrina, Steven)
    - Dropdown menu
        - Shows selected function (insert, delete, or update)
    - Insert
        - [Optional..? make sure info isn't duplicated]
    - Delete
        - Outputs SNo row
        - Prompts "Are you sure?" message
    - Update
        - Search by Sno
        - Output current info
        - Prompt for new info

Back-end

- Receive the post of the database tuple the user wants updated or inserted/deleted (Thomas)
- Search through the data and make the necessary changes (Thomas)
- Save the data array back into a new csv (Caleb)
- Update the csv path to the new csv for backup/importing (Caleb)

To-Do Next Sprint

Front-end

- Create new analytics page
    - Navbar icon
    - Dropdown menu
        - Display user input based on selection
    - Submit button displays results
- Create Graphs/visuals for analytics
    - Look into **d3.js** -- <script src="https://d3js.org/d3.v6.min.js"></script>
    - Analytic 1: output lockdown details, graph/table for confirmed cases/deaths in relation to lockdown period
    - Analytic 2:output date of vaccine release, confirmed cases/deaths in graph in relation to date of vaccine release
    - Analytic 3: Output two graphs. One is the country selected and one is the world graph displayed over time.
    - Analytic 4: Have a graph displaying deaths and confirmed cases, allowing the user to see how deaths trailed the confirmed cases.
- Send info to backend to display

Back-end

- Research each country in the csv file and store the following information in another csv file with the following headers: sno,country,vaxName,vaxDate,lockdownDate,lockdownStrength,population (Thomas)
- Analytic 1 (Thomas)
    - Receive post of country user wants
    - Send lockdown date and strength back to client
    - Search for all data before lockdown in that country and store in array
    - Search for all data during lockdown in that country and store in array
    - Search for all data after lockdown in that country and store in array
    - Send array data to client in JSON format

- Analytic 2 (Caleb)
    - Receive post of country user wants
    - Send vax name and date back to client
    - Search for all data before vaccine release in that country and store in array
    - Search for all data after vaccine release in that country and store in array
    - Send array data to client in JSON format

- Analytic 3 (Thomas)
    - Receive post of country user wants
    - Search for all data in that country and store in array
    - Normalize cases, deaths, and recoveries using population

        - Search for all data besides that country and store in other array
        - Normalize cases, deaths, and recoveries using population
        - Aggregate along the date
        - Send array data to client in JSON format

- Analytic 4 (Caleb)
    - Do a search for cases and deaths for a specific country
    - Send back json with cases, deaths, specific dates