Team 9 - COVID-19 State Map
Project Proposal and Plan

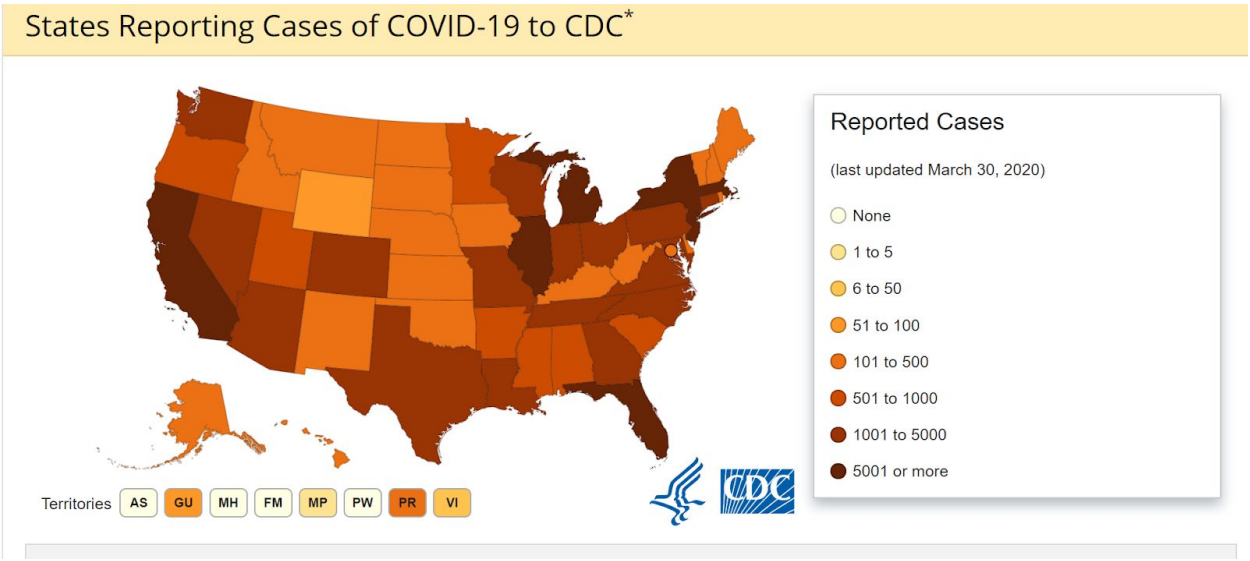
1. Introduction
Describe in one or two paragraph the idea of and motivation for the project.

The general concept of the project is to provide an easy to understand visualization of the spread of COVID-19 in the United States by state. The massive scale of the pandemic further demonstrates the need for clear and concise mechanisms to convey the state of infection in the United States. There is a similar application on the CDC's site but it is only updated once daily, thus developing this application would allow for the visualization to be updated as soon as new data is available.

1.1 Project Overview and Statement of Proposal
Provide an overview of the project and then make a statement of proposal.

Statement of Proposal: *We propose to make a map which displays the number of active COVID-19 cases in each US State at a glance.*

For example, the final project will look something like:



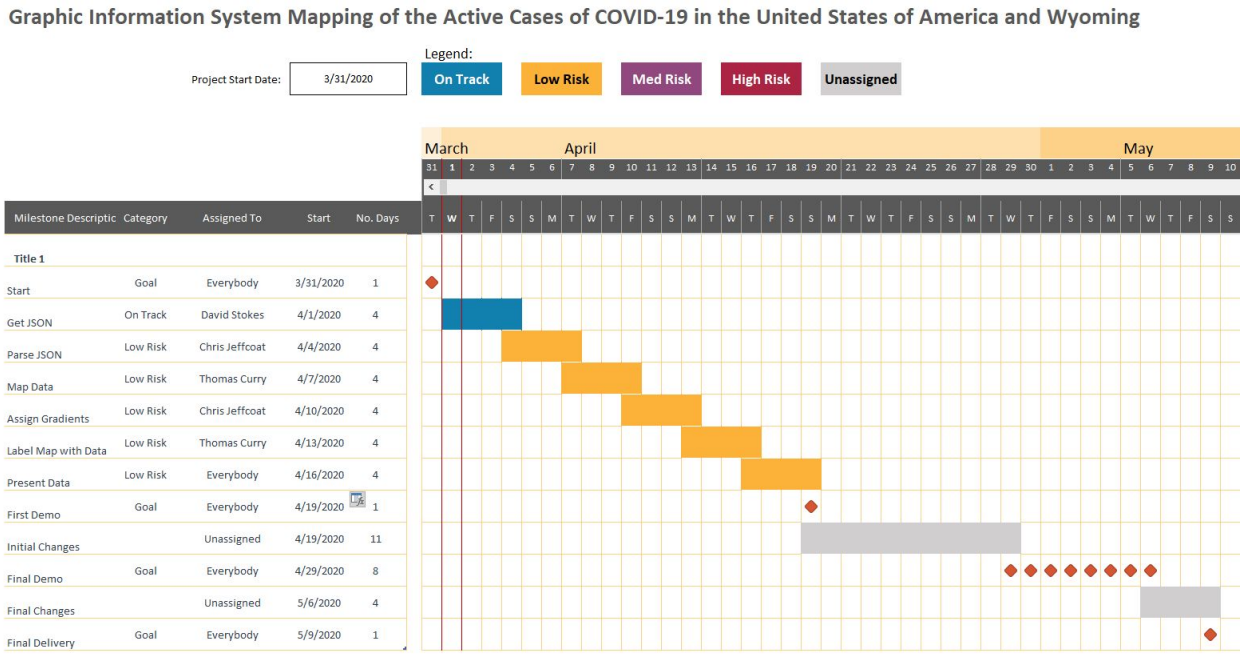
1.2 Project Scope and Objectives
Define the scope of the project and the objectives to be satisfied by this project.

The application will be written in python, as that allows for the easy expansion of project scope due to the available libraries. The application will pull state by state statistics from web based api's and integrate the data into the map on a state by state basis. The project may be expanded to include projected growth and deaths but will remain limited in scope until the core is functioning.

2. Plan

This section contains is a list of tasks and deliverables associated with the project, a Gantt chart depicting task durations, dependencies and completion dates, and a summary of resource requirements and assignments for each task.

2.1 Timeline Chart



2.2 Task Descriptions

Task 1 - Get JSON from https://github.com/NovelCOVID/API >> https://corona.lmao.ninja/states
Task 2 - Parse JSON
Task 3 - Map data to literal map
Task 4 - Assign gradients to states on the map based on thresholds of cases
Task 5 - Label each state with its name and number of cases
Task 6 - Present the data

2.3 Resource Table

Task	People	Hardware & Software	Special
Get JSON	David Stokes	Python, Request API, Pycharm	
Parse JSON	Chris	Python, Pycharm	
Map Data	Thomas Curry	Python, NumPy, Plotly, Pycharm	
Assign Gradients	David Stokes	Python, NumPy, Pycharm	
Label Map with Data	Chris	Python, Plotly, Pycharm	
Present data	Thomas Curry	Python, Plotly, Pycharm	

3. Project Resources

3.1 Group Members

1. Christopher Jeffcoat
2. Thomas Curry
3. David Stokes

3.2 Hardware and Software Resources

Indicate the anticipated software and hardware resources required to complete the project.

Software:

1. Python 3.7
2. Pycharm
3. Anaconda 3
4. NumPy
5. Plotly?
6. Requests API

Hardware:

1. A modern PC

3.3 Special Resources

List any special resources needed to complete the project.

1. Access to https://github.com/NovelCOVID/API

4. Appendices

This section contains any additional information that you would like to include in the project proposal and plan.

1. Depending on difficulty of implementation of the core project, death calculations may be included along with additional data and interactivity.
2. Once the core is complete implementing epidemiological equations will be examined for feasibility.