Rationale for Design Decision

- Time Slider and XY Chart (Suicide Rate / GDP per Capita)
    - Initial Brainstorm:

        Deciding Focus: To brainstorm how we should best display hour data, all of us research visualizations online/in lecture slides and compare advantages and disadvantages of different charts/interactions.There are multple aspects in our data set, including age, gender, year, country, suicide number, population, suicide rate, HDI, and GDP. During our initial meeting, there are a couple things we are interested in focusing on. GDP is relavant to daily life though it's not a piece of information we see frequently and therefore we want to learn more about **the relationship between GDP and suicide rates**. Because of the baby name chart, we thought about **accumulating the suicide population in an area chart**. Because we have population elements, we also consider **bubble chart for suicide rate/population** for each country. During class we see the Global Population Growth TED talk, therefore we thought it would be expressive for us to use **a scatter to explore relationships throughout time**. In lectures we saw **area encoding with a global map** and thought that it would be interesting for ours too because we also have the location element and magnitude elements such as population.

        Deciding Interactive Element: Because we see "Preparing for a Pandemic" chart from lecture examples, we considered displaying hour data **with a map to interact with** to explore gender/population/suicide. Inspired by Tableau, we also thought about having a **filter on year** to see different data. Depending on what areas we want to focus expressing in hour visualization, we can also do some **onclick interactions** for more detailed information like how the baby chart works.
    - Narrowing Process:

        accumulating the suicide population in an area chart: Because for the baby name chart it is common that names are preserved in alphabetical order, yet for ours, alphabets aren't the most intuitive way we would, in that order, stack the countries.

        area encoding with a global map: The data we have aren't that intact in terms of area. Most of the easten european countries have data from most of the years while we have scattered data from most of Asia and one data point from Africa. Therefore the region relationships will not be an ideal aspect to be highlighting from our data set.

        bubble chart for suicide rate/population: We thought about having bubble chart for population for each country and we can have gender/population as the interactive selector.

a scatter to explore relationships throughout time: This one we thought would be the way we can display the relationship between GDP and suicide rate the most. We can combine it with a bubble chart option just as displayed the TED talk.

- Decision:
  Our big picture decisions comes to **a scatter chart to best explore GDP and suicide rate**. Inspired by the TED talk, we incorporate **a time/year slider** to see how the relation changes throughout time; with a slider, the linear property and the fact that two years cannot simultaneously happen can be intuitive. As a compromise from mapping, we **color coded the countries** based on regions. Just as the baby chart displays more detailed information from interactions with clients, we display suicide rate, regions belonged, GDP and genders with hover/click

Development process

- People-hours: collaboratively 16 hours designing and 48 hours developing
  - Programming the JavaScript file takes the most time. Most of us aren't too familiar with front end programming. While it did take us longer than planned to decide the big picture for our design (roughly and collaboratively 8 hours of researching and another 8 hours of meeting and decision making)
- Work distribution:
  - We have met up to do work together as well as working on our part individually. The dynamic has been that we communicate which part we are working on and whoever is done with the current task would be able to pick up new tasks/features.
  - In the process if there are new features that one thinks is beneficial for the visualization, the member can bring the topic up and if we agree, the person, or anyone in the team, can pick up the task.