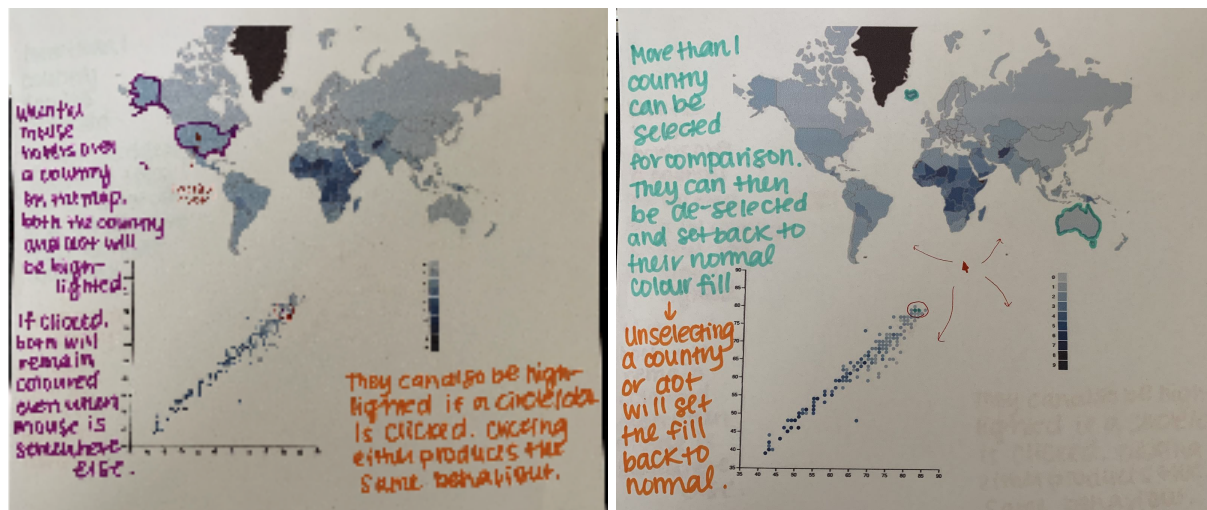


CPSC 583 Winter 2019
Programming Assignment 3 Stream B
Gabrielle Gonzaga
UCID: 10100364
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Sketching, Design and Implementation ([Stream B Submission](#))

Sketching and Design

I knew based on the example from Friday's tutorial, I wanted to connect the data between the map and scatterplot. As seen in my sketches below, if the mouse hovered a country the corresponding dot would be highlighted a different colour and vice versa. I wanted to keep the design the same and only change the stroke and fill from the selected elements. More than one country/dot can be selected and highlighted at a given time for comparison. Elements could be deselected and the data would go back to its original filled colour. If time permitted, I also wanted to have numeric values appear if a dot is selected.



Implementation

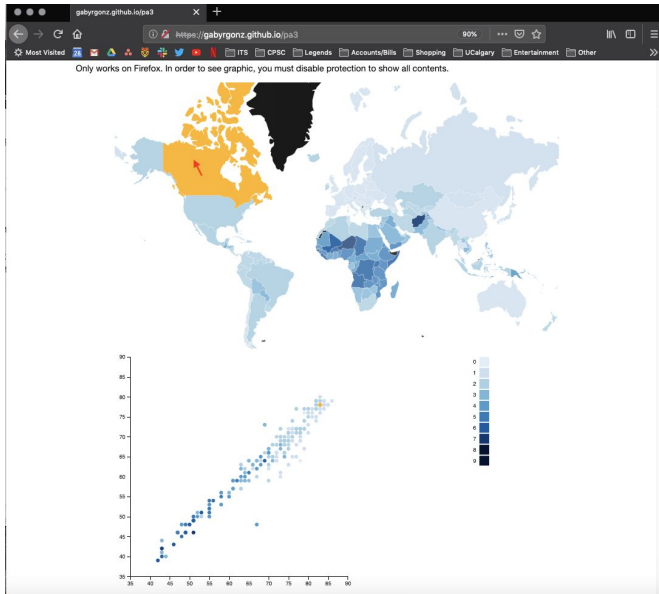
The only changes I needed to implement were in the index.html file, particularly `mouseover`, `mouseout`, `click` and `stayHighlighted` functions for both country and dot elements. Whenever an element was hovered over, it would be highlighted with an orange fill/stroke and would revert back to its original state if the element is not selected. If the element was selected/clicked a function was implemented so that the dot and country would be stay highlighted unless deselected.

Usability POV

Refer to the visualizations below:

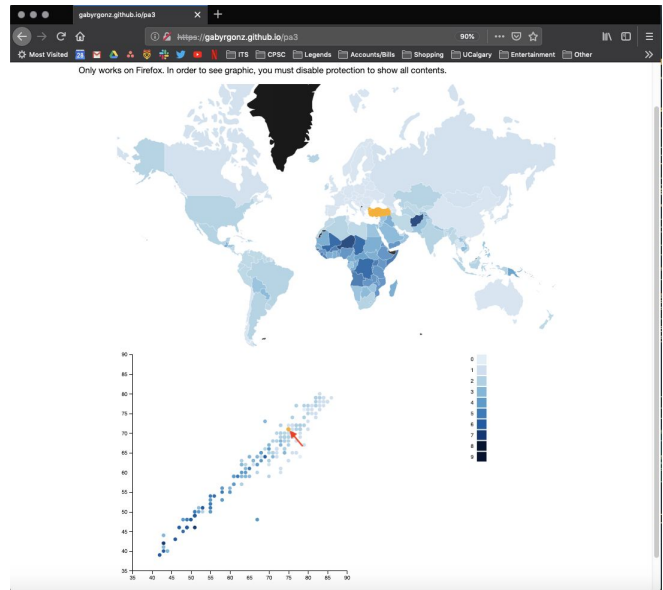
Hovering over an element

Dot and country are orange but will revert back to the original state if the mouse moves



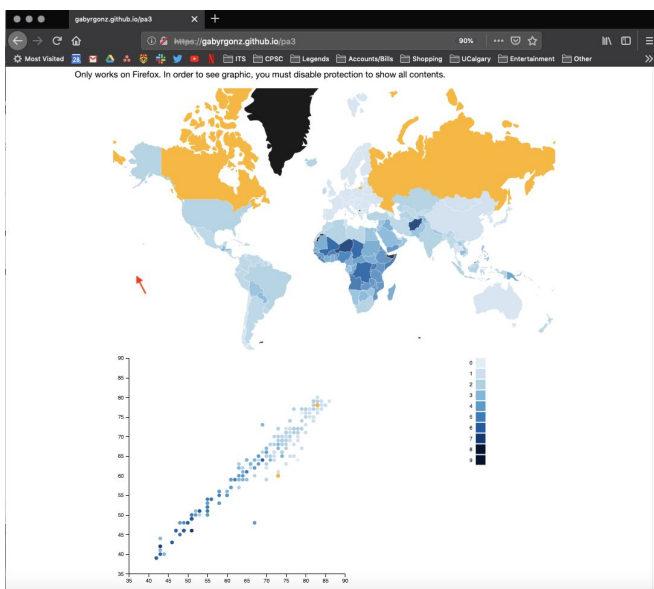
Selecting one element

Dot and country are orange and will remain orange if the mouse moves away



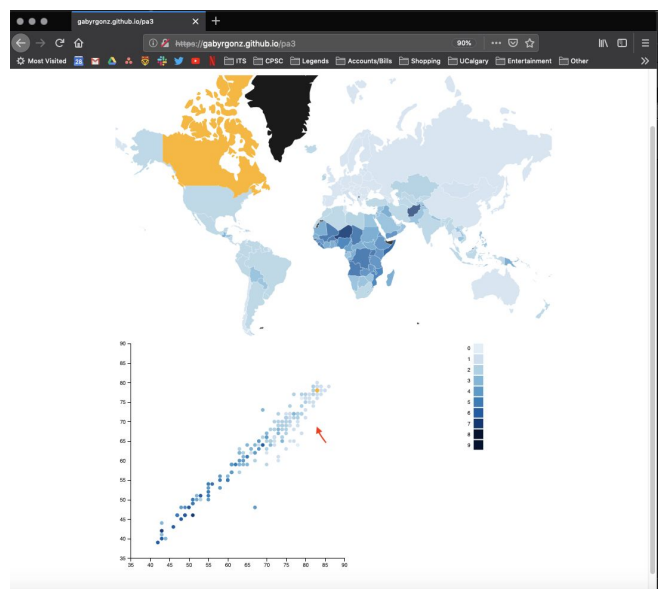
Selecting several elements

Several elements are selected and will remain orange if the mouse moves away



Unselecting elements

One element is deselected, but Canada is still selected and highlighted even if the mouse moves



Reflection

Did you produce what you aimed for? Did you get something else that worked? Are you happy with the result?

Overall I managed to produce what I was aiming for based on the sketches I added above. I wasn't able to display individual numeric values for the scatterplot and country names due to time constraints. Also, I didn't have the time to implement several highlight colours for selected elements but I think the contrast from blue to orange is enough for the user to extract from the visualizations. Overall, I am pretty happy with my end result. I think the interactive component works well and is pretty straight forward to the user. If I managed to get the display of numbers and country names working, the visualization would be more useful in predicting trends and patterns.