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INFO 470
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Project Overview

List of user tasks my design supports:

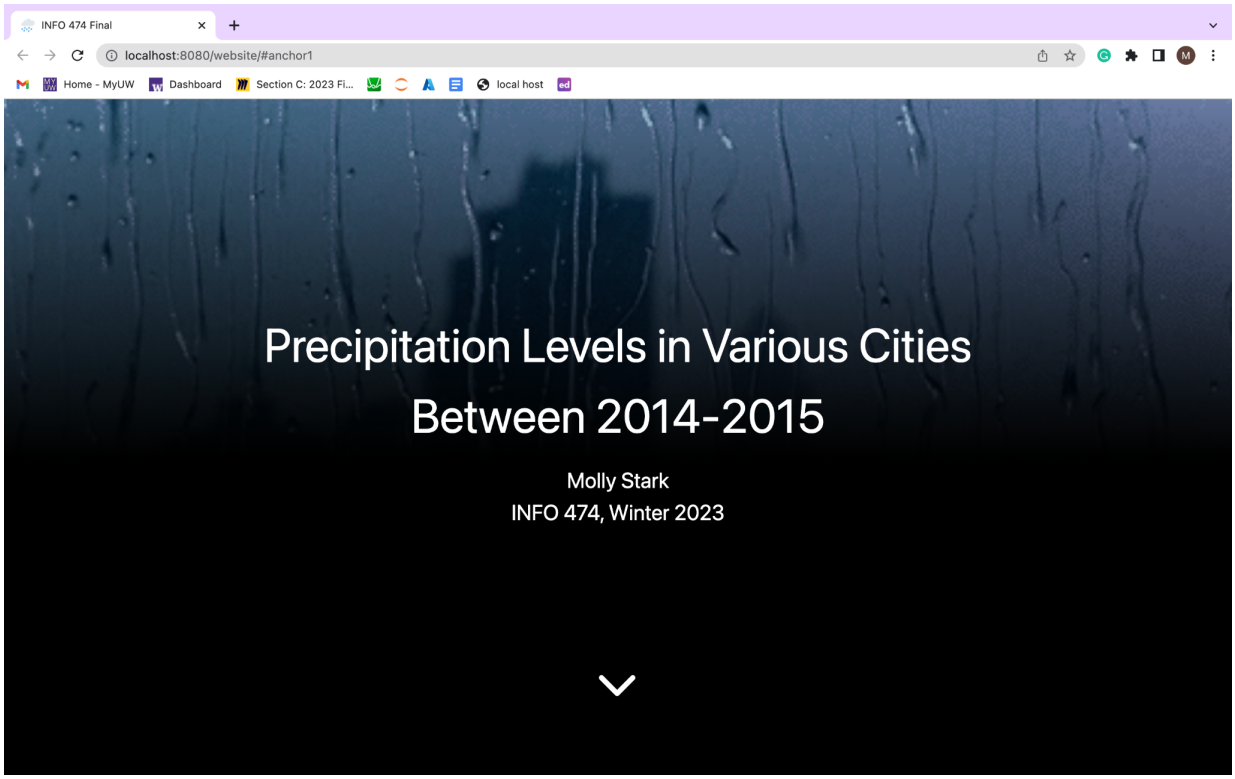
- Understanding actual precipitation level trends over time
- Understanding average precipitation level trends over time
- Understanding record precipitation level trends over time
- Identifying actual precipitation levels within a certain month
- Identifying average precipitation levels within a certain month
- Identifying record precipitation levels within a certain month

Design overview:

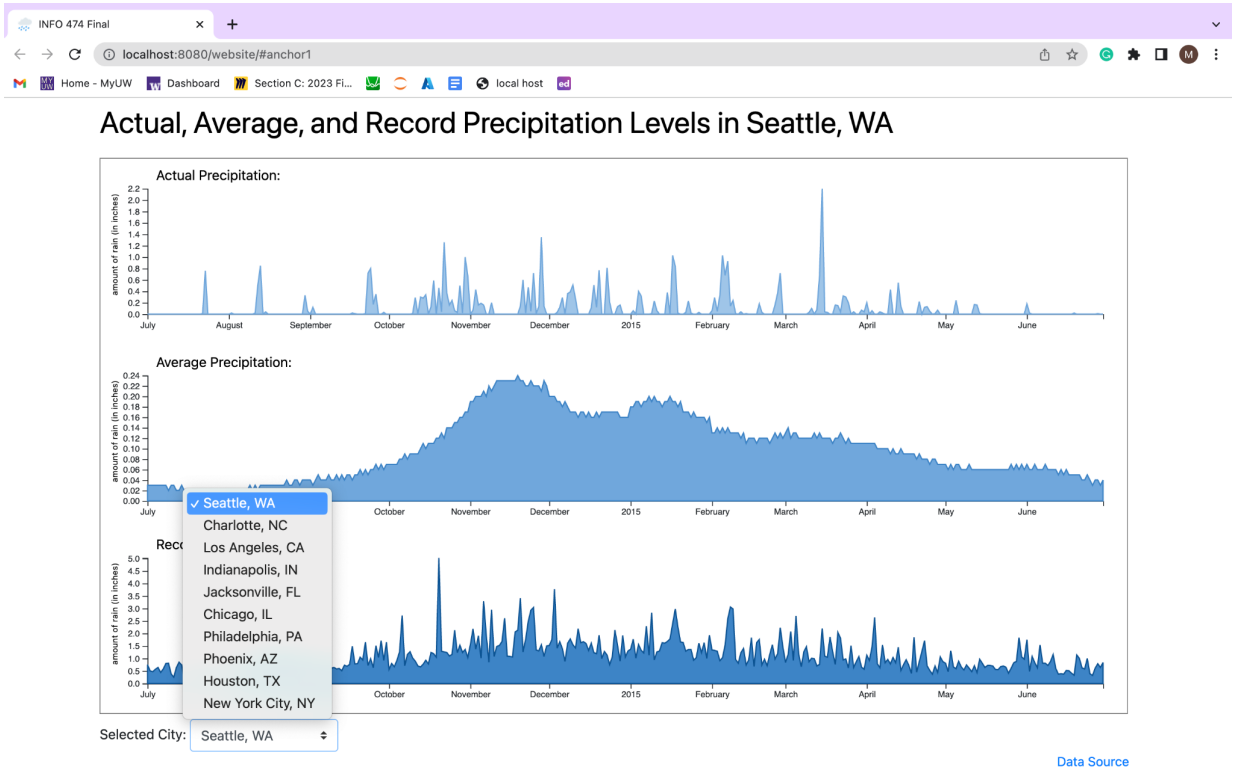
At the beginning of my design process, I had to determine what user tasks I wanted my design to tackle. I decided that I wanted to mainly focus on showing precipitation trends over the course of the timeline that the data covers. This way I would ensure that my design was very different from the original visualization, since that displayed temperature data. Next, I looked at the data and decided that it would be a lot easier for me to combine all of the city datasets together so that I could feed my javascript file a single csv file and just filter the city based on a user selection. I then took the code from Lab 5, and had the dropdown button become a city selection tool. I created 3 graphs for the 3 different columns pertaining to precipitation data, and stacked them on top of each other since their x-axes were all the same. I decided to not put them all on the same graph since their y-scales were different enough that the smaller values would be unreadable. I also made sure all of the graphs weren't the exact same color to emphasize the fact that they represent different things, but kept them all blue to tie in with the rain theme.

Since nothing about the graph except the line changes when a different city is selected, I made sure to include the selected city in the title of the graph as well to make sure it is prominently displayed, so the viewer can't get confused by what city's data they're viewing. I included an eye-catching header / landing page to catch the attention of a potential audience and draw in viewers, since my visualization itself is fairly bland and wouldn't really grab the eye of anyone viewing it. I included 2 gifs (the rain background and the scroll button) since movement is something that people's eyes are always drawn to. The scroll button also implicitly tells the viewer that the visualization is below the header since it is not immediately visible. Once I made sure that a viewer would be sufficiently enticed to keep scrolling, I made sure that my visualization was as easy to understand as possible. I added individual titles to each of the graphs so that viewers would not get them confused, and added labels to each of the y-axes. I added these labels to each graph even though they all say the same thing to implicitly draw attention to the fact that the values on these axes change between graphs, so they need a new label. It also makes sure that viewers know what value is being displayed. I didn't add an explicit label to the x-axes since the title and the months being labeled makes it clear what that axis is displaying. The final design things I added were a hyperlink to the source of the data to give my visualization (and the conclusions viewers draw from it) credibility, as well as a website title and icon to make my finished product more polished.

Screen shot(s) of the user interface:



This screenshot is of the view that the website first opens up to. It has a title that communicates what the viewer can expect to learn from the visualizations on this website. The background of the introduction view is a gif of rain, which both catches the viewer's attention and further emphasizes the topic of the website's visualizations



This view of the website contains the actual visualization I created. It has 3 line area graphs. From top to bottom, they show actual precipitation levels, average precipitation levels, and record precipitation levels between July 2014 and June 2015. At the bottom, there is a dropdown menu to select which city you want to view the precipitation trends of, and a hyperlink to the source of the data.