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Assignment #3 Writeup/Reflection

Project Overview

The purpose of our project was to create a website where the users can input a specific location in order to receive geographical information about that location, namely the nearest MBTA station and whether or not this station is wheelchair accessible. On the website, the users are required to input the name/address of the place and the city of the location. Both of these fields are required. Once the user inputs this information and submits the form, the web page will provide information about the closest MBTA stop and tell us whether the station is wheelchair accessible. Since MBTA only operates in the Greater Boston region, we automatically set the state to Massachusetts in our code. If the user enters an invalid place/address, the website alerts them it is invalid and asks the user to try again. In order to create this website, we first had to code different functions that provide information about the nearest MBTA station and the accessibility of the wheelchair in the python server. We needed to install several extensions including urllib, json, pprint in order to appropriately extract necessary information from the MapQuest website and the MBTA website. We also had to apply for our own API Keys to access the information from the websites. After hard coding the functions that extract the necessary information, we utilized Flask to integrate our codes in the form of a website url. Flask allowed us to create the logic to make a web server quickly in Python. This allowed users to freely input locations and receive information about the locations based on their input.

Project Reflection

Overall, our project went exceptionally well. We were able to split our jobs into the following main parts: the hard coding of the mbta_helper.py file, the website integration process utilizing the Flask, and the design of the html templates. We were able to constantly communicate and update each other whenever we were making progress or improvement in our project. We believe that the overall output of our project was a success as we were able to achieve the main goals of the project. Moreover, Arteen was able to utilize his knowledge from Web Technologies class to make the website look more professionally put together. We had testing codes for each function we created in the mbta_helper that would ensure the quality and the output of our overall code. We made sure to check every step of our progress to avoid having to redo our code as a result of inaccuracies. We conclude that this project will be extremely helpful for our final project where we will have to integrate our codes into the form

of a website, likely utilizing Flask, since we aim to create a website where users can freely input topics that they want to conduct a sensitivity analysis for. We absolutely plan to leverage the knowledge we have gained from this assignment for our final project. We wish that we had better knowledge regarding the usage of Flask going into this assignment, as we initially struggled to figure out the details step of website integration. Luckily, we were able to leverage the vast wealth of online resources to guide us when confused. If we had a better knowledge of Flask, we would have been able to finish our project more efficiently. Given the finite amount of time we had to complete the assignment, a better understanding of Flask would have given us more time to work on beautifying the html templates.

Regarding team process, we generally did not pair the program and instead divided the work up into several sprints. Jenny completed the first half of the sprints, while Arteen tackled the second half. This generally entails Jenny swimmingly built the foundations of mbta_helper.py including vital functions and frameworks and Arteen added finishing touches to the file and spent more time on app.py and the html templates. The process was very iterative, and we made sure to keep communication clear and frequent to ensure a smooth process. There were exceptions to this structure and we actually did pair program on a couple of occasions, but the aforementioned gameplan describes the majority of our team process execution. Fortunately, we did not run into any significant issues and this strategy helped us finish on time. The only thing we would consider doing differently next time is actually pair program more often so we each get a healthy amount of exposure to the different components of the assignment. If we had ample time to do the assignment, this would have been our approach. Evidently, part of being an efficient coding tandem is leveraging the different strengths of the team members and tackling problems separately in different sprints, so that is why we chose this method.