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Problem Solving with Python
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Reflection

The project was to make a web app using Flask, the MapQuest API, and the MBTA API that takes a location in a form and returns the nearest MBTA station. The project is broken down into smaller parts with four functions. The first function is get_json(url) which involved getting the data from a proper url. The second function is get_lat_long(place_name), which takes a place name and returns the latitude and longitude for it. This is achieved through the MapQuest API with a correctly formated place name and putting it in the url. Then given the results, I just had to return the latitude and longitude from the nested dictionary. Afterward, it is the get_nearest_station function which takes latitude and longitude and returns the nearest station, and whether it's wheelchair accessible or not. I did this relatively simply through the MBTA API and choosing the first, or closest, station to the given coordinates. This actually took me a long time because first, I didn't realize I was still using the MapQuest instead of the MBTA API key, and second, I didn't realize that the API would only work if the location was within a certain distance. I kept on trying only to see blank outputs. However, I figured out to just use a Boston address as a place holder. For wheelchair accessibility, I looked through the JSON result and found "wheelchair_boarding". If it was 1, it meant that it was wheelchair accessible. I then just used an if statement to print out if it was wheelchair accessible or not. Lastly, the find_stop_near function returned the nearest station with a given place. I used the previous function to return the closest station as well as if it were wheelchair accessible or not. There is a lot of other areas of exploration using the MBTA API, especially given the newer v3 version. I'm especially

interested in looking into making a geolocation alarm that could wake people up at certain stations using real-time coordinates. I think that would be quite useful as I have missed stops before falling asleep on the train.