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Assignment 3 (Web App MBTA) Writeup and Reflection

The MBTA web app is designed to help Babson students find the MBTA station closest to them in the Boston area and determine whether it is wheelchair accessible. The app starts by determining and returning the latitude and longitude of Babson College using the get_json and get_lat_long functions and then uses those coordinates to return a list of all stops within a 100 mile radius using the get_nearest_station and find_stop_near functions. We filtered that list to only show 1 output that is the closest stop. To make the program easier to understand, we defined the meanings of the wheelchair accessibility for users- '2' means the station is accessible, '1' means it is not, and '0' means that there is no information about that available. The web app has a simple interface, with a home page with the title "amazing app to help you find the nearest MBTA station." All you need to do is enter your location, and the app will return the name of the nearest stop and whether it is wheelchair accessible. If the location is outside a 100 mile radius from the MBTA system, we output an error message. Whether there is an error or not, we have included a back button so the user can return to the home screen at any time.

To keep our project appropriately scoped, we used the pre-defined functions in the mbta_helper file as a guide to write different types of code. The process of working on this project mostly involved trial and error, as much of the API documentation (especially for MBTA API) was difficult to convert into code. We used the pprint function a lot to view the outputs of our code. Pprint was also useful because it made it easy to identify which specific pieces of information (such as latitude, longitude, station name and wheelchair accessibility) were most important to output in each step.

We found it more efficient to work together as a team, as this project would have been quite confusing to do individually. Splitting up the work would only slow us down and make it more likely that we would run into bugs and spend too much time debugging rather than implementing new code or building the web app. As none of our group members had prior web

design experience, we ran into some difficulty designing the website that would host the MBTA web app. For instance, we ran into “method not allowed” and “internal server error” due to issues with the mbta_helper.py and the index.html files. We consulted some external sources such as the stackoverflow website to supplement the information in the API documentation and give us suggestions for how to debug errors in the web design.