

UNIT 7: EXTERNAL DATA

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What Work Was Done:

This unit was the hardest for me to complete but also the most satisfying. It is using external data within the website. This is very important skill to have as it would be ideal for your website to have live and changing data. This can be weather, stock prices, locations, government interest rates, flight data, sporting scores, and many more. For my project I used the Google Maps API. I learned that in order for two sets of servers to communicate you need what's called an Application Programming Interface. This uses the URL to send and receive information. I learned how to get access and enable hundreds of Google APIs that I can use for free.

I spent the most time on this side. Currently the program is able to take an origin and destination point with suggestions using Google's Places API. The user can then input the Fuel Economy and Gas price. With this information the Google Maps API returns an object where the distance between the two places is recovered, and two red markers are placed visually on the map. It will then display the total distance as well as the cost for the trip. This is a great feature to have and I see myself using this on a daily basis.

Relating to Personas:

This is relating back to the Personas by useful utility. It is always a good idea and general knowledge of knowing how much a certain trip will cost. The real estate agent, investor, and home buyer can all benefit from this feature.

What Went Well and What Didn't:

My Google Maps API would not work for the longest time. Firstly I did not understand how to create a key and initialize the script src with the API. I was using 2 different APIs and I had to figure out how to initiate both APIs using only one URL. It also matters where the src URL is placed in the HTML document. Secondly, getting the places suggestion was difficult as some resources online did not use it exactly how I needed. Next creating the distance calculation was difficult. I found code that I could reference however it did work and so I had to take the program from Google's API Documentation and examples and understand each line. I later created my own algorithm and learned how to extract useful data out of a JSON object.

Mapping Activities to Learning Outcomes:

Learning outcome: Use JavaScript to access and use web services for dynamic content (AJAX, JSON, etc.).

- **Evidence:** I used an API to successfully extract useful JSON data and utilized it in calculations for the customer.
- **Self-Grade:** A