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On September 19th from 6-9pm, hosted by Clark Bains, we learned about various content mentioned on the course outline and went over briefs introductions to concepts. For the first half of the discussion group, we talked about front end design and the second half was about back end development.
The topics included:

- Inspecting the html and css design of popular websites (such as Google) and reviewing how they were able to implement certain design concepts. This included their navigation bar, links between pages, search bars, images, and overall functionalities.
- I initially asked about how AJAX works, in terms of how you can use it for the client side you can create asynchronous web applications.
- We then went into web sockets and asynchronous vs. synchronous applications, in particular Asynchronous Javascript.
- We talked about XML, and how XML is used to store and/or transport data, versus HTML is implemented to format and display the data.
- We went into further CSS styling details, someone asked how to use % in CSS, and I talked about using em when styling content, and the difference between using an em vs %.
- We learned about the difference between longpooling vs shortpooling, an AJAX based timer.
- We learned about frameworks mentioned in the course, such as implementing Bootstrap into your code, the pros and cons of it, and explored other frameworks you can use like Foundation.
- We talked about animations that you can do in CSS such as using keyframes.
- We talked about the difference in running your code in different browsers, such as Firefox vs. Chrome. Basically, if you want to implement any intricate code, make sure the browser supports it first, because you can run into problems with executing it.
- We talked about the final projects in terms of the general concepts, such as which project is more back end or front end heavy.
- We talked about Representational State Transfer (Rest Api), and how it handles requests for the front-end.
- We talked about Verly.js, a verlet physics engine as a “mimick” of gravity.
- We learned about Hypertext Transfer Protocol (HTTP) which allows you to get data from a webpage for a server using server-client model.
- We learned the difference between a JSON file and a database, like how a local JSON file is better for a fast response but harder to organize and a database is easier for organization and searching for data.
- We went over JSON Javascript object notation, in terms of data formatting and data storing, and how to use the key-value style to store local data without the use of a database.
- We learned the difference between Get and Post, where Get is a way to request a server for data, and Post is a way to send data to a server to create or update data.
- We learned about Typescript, how it is the superset of Javascript, and how it is a good development time tool to implement.