HML5

* Web Components

CSS

* Direct Style Manipulation

JavaScript

* jQuery - simplify the client-side scripting of HTML.
  + CSS Manipulation with .css()
  + HTML Manipulation with .html()
  + <https://www.youtube.com/watch?v=v-RC3kJCL4c>
    - Selectors
    - Animations
    - Index Filters
    - Relationship Filters
    - Attribute Filters
  + <https://www.youtube.com/watch?v=OqF0kjNwDSI>
    - Attr method
    - Image Swap
    - Class Methods
    - Content Methods
  + <https://www.youtube.com/watch?v=WVvdw-f4Ygo>
    - DOM Traversal (traveling through DOM with .parents and .siblings)
    - Event Binding with .bind(‘click’, function) or .click
  + Clas
* AJAX – real time communication without screen reloading. (direct access to DB is bad idea) <https://www.youtube.com/watch?v=qqRiDlm-SnY>
  + xmlhttp = new XMLHttpRequest()
  + Event listener to call function (xmlhttp.onreadystatechange = function(){…} )
  + if(xmlhttp.status == 200 && xmlhttp.readyState == 4)
    - 0: Hasn’t started
    - 1: Connected to the server
    - 2: Server has received request
    - 3: Server processing
    - 4: Request is finished and data is ready
  + xmlhttp.open(“GET”, “ww.weather.com/monterrey”, true);
    - True for asynchronous performance.
  + xmlhttp.send()
* Polymer 3.0 - JavaScript library to create custom reusable HTML elements, and use them to build performant, maintainable apps.
  + Polyfills – for cross-browser web component compatibility
  + ECMAScript6/EM6 (real name for Javascript) – modules instead of html imports.
    - ES6 modules allow JavaScript files to import other files, causing them to be loaded and executed by the browser. The loading behavior of ES6 modules is nearly identical to HTML Imports:
      * Web-native loading mechanism.
      * Transitive loading of dependencies with ordered evaluation.
      * Deduplication of dependencies by URL.
  + Package Manager
    - NPM
    - Yarn

Python

* Server-Side Scripting
  + Database Access (existing DB Config Tables)
    - API – retrieve Database data, convert it to JSON, pass it
      * JSON Structured Request and Response
      * JSON:API
  + Auto-Layout Algorithms?
* SQLite – local relational datbases for quick testing.

HyperUA (OPC + Web) <https://www.youtube.com/watch?v=IIt-JygNzOc>

* For hardware communication and control