Day 1:

What is DNS: Domain Name system

* Check cache in the browser, to check do we have specific IP for a domain name we enter:
  + If have then process to web site
* Check that info in your hardware laptop.
* Check on local router.

What is protocol and the common protocol?

Remote Address

* General header:
  + The last 3 digit are port number
  + Port + address = socket
  + Default port number is 80 for http
* Request header:

Cookies vs Local storage

* Cookies is a long string that stores key, value pairs, size is very limited. Not intended to store data, automatically send cookie to server by default (hard to change)
* Local storage: feature in HTML5, can be inject in JS, can be controlled and selected (more manipulable). Have their own data structures (map structures)
* Session storage: Disappear when browser closes, live for a session, not send to the server.

How to modify cookie: Use JS to change cookie on client side and send to the server.

Few issues with cookie:

* Cookie use on google cannot use on Amazon. Cross-browser issue
* Cookie that expired will not be removed by the browsers

HTTP Response

* How Browser render the html file? Browsers receive the response, browser engine parse the response to generate a DOM. Check CSS to generate CSS OM(Object Model). Browser combine DOM and CSS DOM to generate the website.
* DOM use to represent the HTML.
* Stateless (HTTP) protocol
  + The protocol is for 1 time communication, one received it, it terminated, and no data is shared.
  + If HTTP request stateless then how it persist the information about the user? It uses cookies and other ways to verify the act of and data from the user
* CRUD
  + Patch and PUT: is for updating. Put will update entire object, patch update a field, some fields in the object. Patch is more efficient, time saving than PUT.
  + They are just convention; GET can just work as POST.
  + Check the flag?
* RESTFUL API: Later on
* Common code: 2xx success, 3xx redirection, 4xx client error, 5xx server error
* What if I provide gibberish address? My gibberish address will go to nowhere, so we never receive any code from anywhere
* HOW do we show version of HTML? The first line shows it
  + XHTML: stricter version of HTML, not tolerate any typo.
  + I18n: internalization (I 18 characters n)
  + L10n: localization
  + I is more about speaking languages, different languages to use. L is more than language, based on local region to have more features.
  + Head element: to store meta data, Data about data. HTML want to use UTF.
  + Meta name viewport. Why set for mobile device?. 1px in desktop is different from 1px in mobile device.
  + Name attribute is key word. To reach it?
  + Link in header?
  + Re-rendering? The browser has some default style, if not see any css file, it use the default. If it encounters a css file, it will re-render the whole page with new. We put link on the head to prevent re-rendering. Web is block rendering.
  + We want to place all the js in the end. we want to render all elements before the functionality is applied.
  + Async keyword
  + 
  + Defer keyword
  + “This” keyword refer to the thing that called a function.
  + ecma script is the formal name of JS
  + JS = ECMA Script + Web API
  + Nodejs = ECMA JS + Server API
  + docuemtnGetElByID cannot be run by Node (incompatibility between Web API and Server API).
  + div is block by default, that’s why they call div is a block element
  + Block vs Inline vs inline block
    - Block take whole line
    - Inline-block let us add width height to inline element
    - Auto width height by default
  + Semantic HTML: New feature. If some one blind and they use screen reader, And screen reader use semantic HTML to make thing meaningful
  + ARIA attribute: make non semantic text to semantic. **What is purpose of semantic HTML:** accessibility,