JavaScript & jQuery

Submit Homework

Submit your GitHub URLs

Last Week Review

- CDNs
  - What are they
  - How to use them
    - Google Fonts
    - Twitter Bootstrap
- Git and GitHub
  - History of
  - Workflow
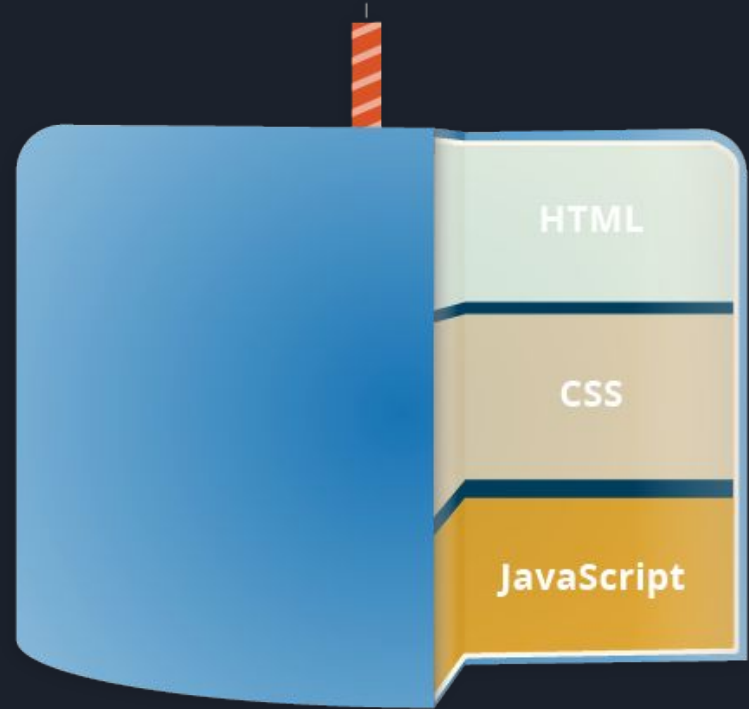 - GitHub Pages
  - Deployment

This week overview

- JavaScript
  - History of
  - Importance
  - Use Cases

What is JavaScript

"JavaScript is a scripting or programming language that allows you to implement complex things on web pages" - MDN web docs

- JavaScript is what makes your website functional and no longer static

JavaScript: A Brief History
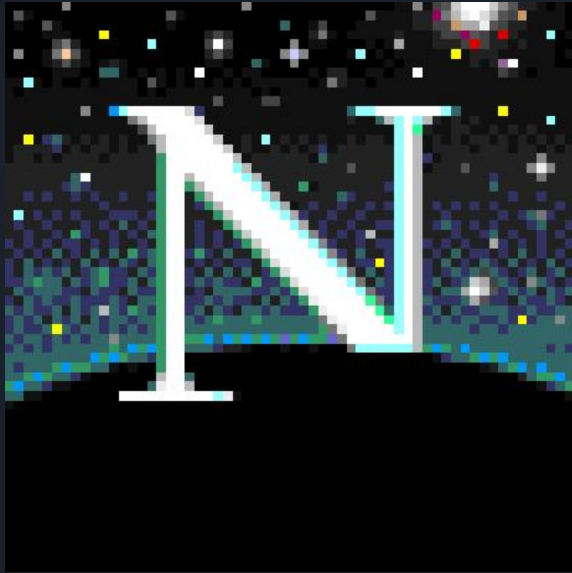
- In 1995 Netscape Communications recruited Brendan Eich "The Father of JavaScript"
- Netscape Communications was about to partner with Sun Microsystems to include Java into Netscape Navigator to compete with Microsoft
- Java was not the language Netscape envisioned for its developers
- Netscape wanted a faster, easier language for scripters, amateurs, and designers to pick up
  - Java for big enterprise applications
  - JavaScript for small scripting tasks

JavaScript: A Brief History contd.

- Brendan was able to choose the tools and knew the individuals calling the shots at Netscape to choose what this companion language would be
- The only thing he didn't have was time
- In May of 1995 with only 10 days Eich wrote the first JavaScript prototype JavaScript
- JavaScript was integrated into Netscape Navigator 2.0 in 1995
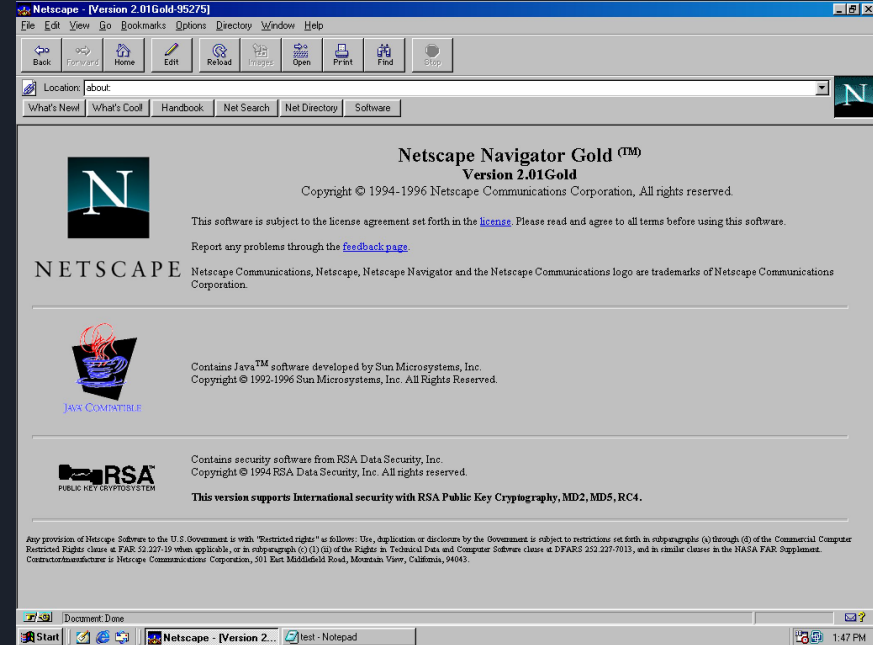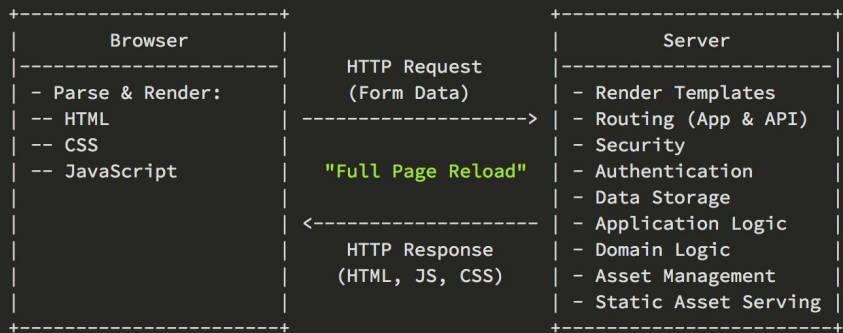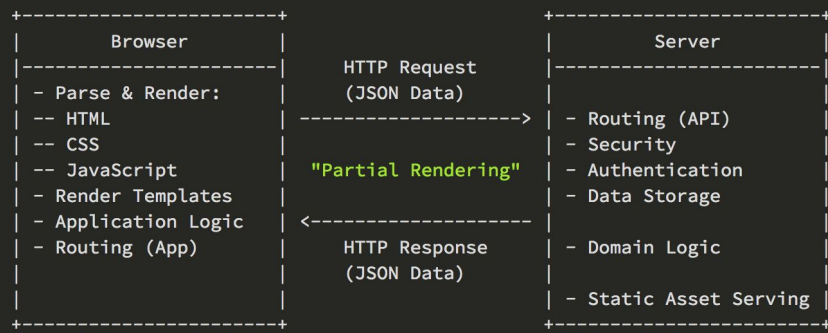
Why is JavaScript important?

JavaScript helps us rewrite Web Applications

```
// Traditional Web Application

+--------------------+                      +----------------------+
|      Browser       |     HTTP Request     |       Server         |
|--------------------|     (Form Data)      |----------------------|
| - Parse & Render:  |                      | - Render Templates   |
| -- HTML            | -------------------> | - Routing (App & API)|
| -- CSS             |                      | - Security           |
| -- JavaScript      |   "Full Page Reload" | - Authentication     |
|                    |                      | - Data Storage       |
|                    | <------------------- | - Application Logic  |
|                    |     HTTP Response    | - Domain Logic       |
|                    |     (HTML, JS, CSS)  | - Asset Management    |
|                    |                      | - Static Asset Serving|
+--------------------+                      +----------------------+
```

```
// Modern Web Application

+--------------------+                      +----------------------+
|      Browser       |     HTTP Request     |       Server         |
|--------------------|     (JSON Data)      |----------------------|
| - Parse & Render:  |                      |                      |
| -- HTML            | -------------------> | - Routing (API)      |
| -- CSS             |                      | - Security           |
| -- JavaScript      |  "Partial Rendering" | - Authentication     |
| - Render Templates |                      | - Data Storage       |
| - Application Logic| <------------------- |                      |
| - Routing (App)    |     HTTP Response    | - Domain Logic       |
|                    |     (JSON Data)      |                      |
|                    |                      | - Static Asset Serving|
+--------------------+                      +----------------------+
```

AJAX

Why is JavaScript Important?

- Do things HTML & CSS are unable to provide
- Write Full stack applications
    - Client-Side Scripts
    - Server-Side Code
- Enhances the user experience
- Create interactivity
- Comes in all shapes and sizes
    - Frameworks
    - Libraries
    - Transpilers

JavaScript is:

- [Analytics](#)
- [Education](#)
- [Games](#)
- [Creativity](#)
- [Flexibility](#)

What is jQuery?

- jQuery is a JavaScript library
- jQuery greatly simplifies JavaScript programming
- jQuery is easy to learn

- https://www.w3schools.com/whatis/whatis_jquery.asp

JavaScript: jQuery

jQuery Lightbox

Open up your class-directory

1. Make a new HTML file called "jquery-lightbox.html"
2. Copy the HTML boilerplate code from "template.html"
3. Paste boilerplate code in your jquery-lightbox.html
4. Update your <title>
5. Go to "code.jquery.com"
6. Select jQuery 3.x
    a. minified
    b. Copy the <script> code
    c. Paste before closing <body> in your jquery-lightbox.html
7. Go to https://lokeshdhakar.com/projects/lightbox2/
8. Click the download button
9. Unzip contents of the "lightbox2-master" folder
10. Copy the following
    a. lightbox2-master/dist/css/lightbox.min.css >>> to your stylesheets folder
    b. lightbox2-master/dist/images/[all of them] >>> to your images folder
    c. lightbox2-master/dist/js/lightbox.min.js >>> to your javascripts folder
11. Link up the Lightbox CSS and JS

Ok take a minute we got more

jQuery Lightbox contd

1. [Go to my github](#)
2. Scroll or search and find "Image Share Link"
   a. Click and download all the images
3. Make a new folder in your images directory called "lightbox"
4. Unzip the images you downloaded and move them into your "lightbox" directory you just created
5. At this point you should have large images and related thumbnails
6. Link up and display the first image "kitten-1-thumbnail.jpg"
7. Now that you have the thumbnail image displayed wrap an <a> tag around your image
   a. [Follow the example code](#) found in "Initialize HTML" in the Lightbox documentation
8. We will continue building and fixing as we go

You should now have a working Lightbox

What more of a challenge

- Add a grid system of some kind around your images
- Apply some of the lightbox JavaScript Options
- Move the Lightbox images you downloaded that were part of the plugin and move them into /assets/images/lightbox/icons and relink them in the lightbox.min.css

Homework

- Read
  - Ch 19
- Code
  - Home (HTML Video next week)
  - Discography