Intro to Web

Fall 2018

Tandon School of Engineering, NYU

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Today

- Intros
- Syllabus
- Browser Basics
- HTML + CSS Basics
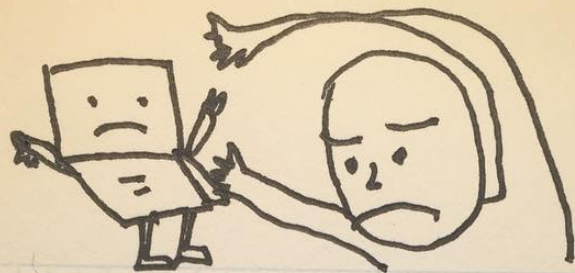- Homework 1 **Due next Tuesday**

Pair Interviews

Introduce your partner...

Intro to Web - DM-UY 2193

Introduction to "font end" web development

HTML, CSS, JavaScript

In this course, students focus on client-side programming [...] to enable the production of a website of professional quality in design and production.

programming can be very frustrating.
Computers are logical in ways that
don't make sense to us, and they are
illogical in the most obvious things.
I too get frustrated when I can't

Closing the Gap

Our understanding -- Machine understanding

Goals

- Create and host a website
- Build responsive layouts
- Be able to navigate the information landscape
- Be able to start a web business in NY

Tech Used

- Webstorm
- Chrome
- Git & Github
- CSS / SASS
- JavaScript & Vue.js

Feedback

+1

Syllabus Highlights

Communication

nyuweb.slack.com #2018-fall-students

hm90@nyu.edu

Office hours are after class or by appointment

26 Classes - 2730 min

26 Classes

TTh 8:30-10:20

Grading

40% Participation + Homework

30% Peer Facilitation

30% Final Project

No exams, no midterms, no final

PLEASE NOTE: 3 unexcused absences will result in your grade dropping 10%

Class Structure

- 30 min review / warm up
- 30 min new content
- 5 min break
- 35 min team activity / share out
- 10 min wrap

Accommodations

Contact New York University's Moses Center for Students with Disabilities at 1-212-998-4980 or mosescsd@nyu.edu

You must be registered with CSD to receive accommodations, but come talk to me so we can get you setup ASAP

Waitlisted?

I will look at the list later today and get back to you in a few days.
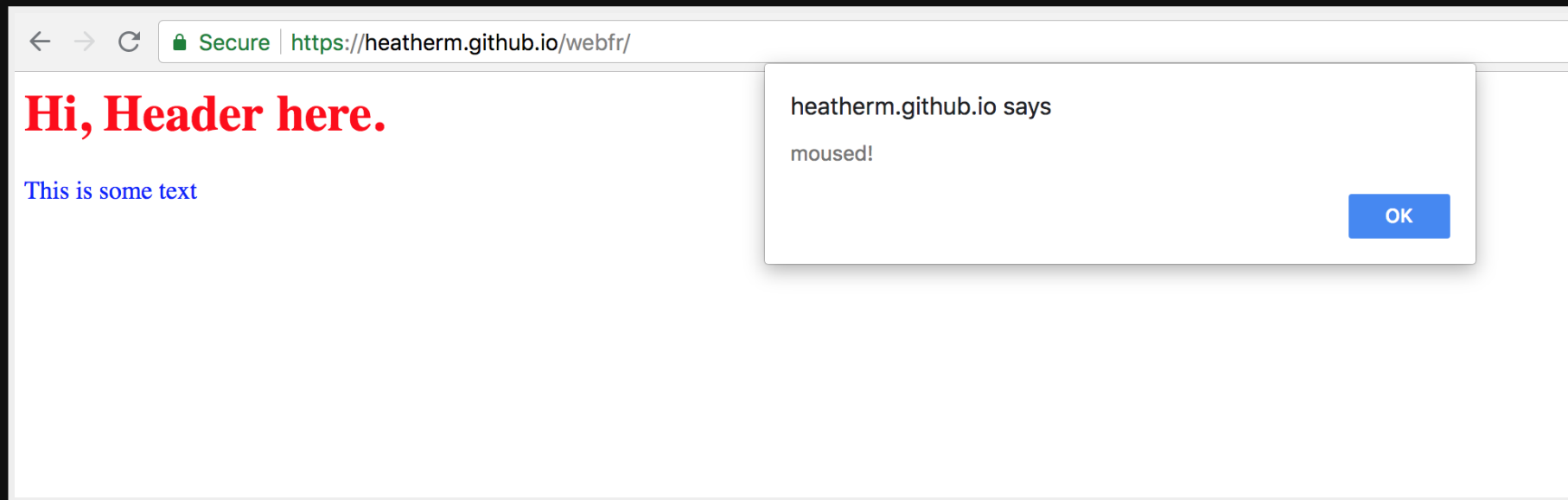
What questions do you have?

Today

- ~~Intros~~
- ~~Syllabus~~
- Browser Basics
- HTML + CSS Basics
- Homework 1 **Due next Tuesday**

Let's create a website

GitHub Pages

- New Repo
- Add index.html
- Setup master branch to point to github pages
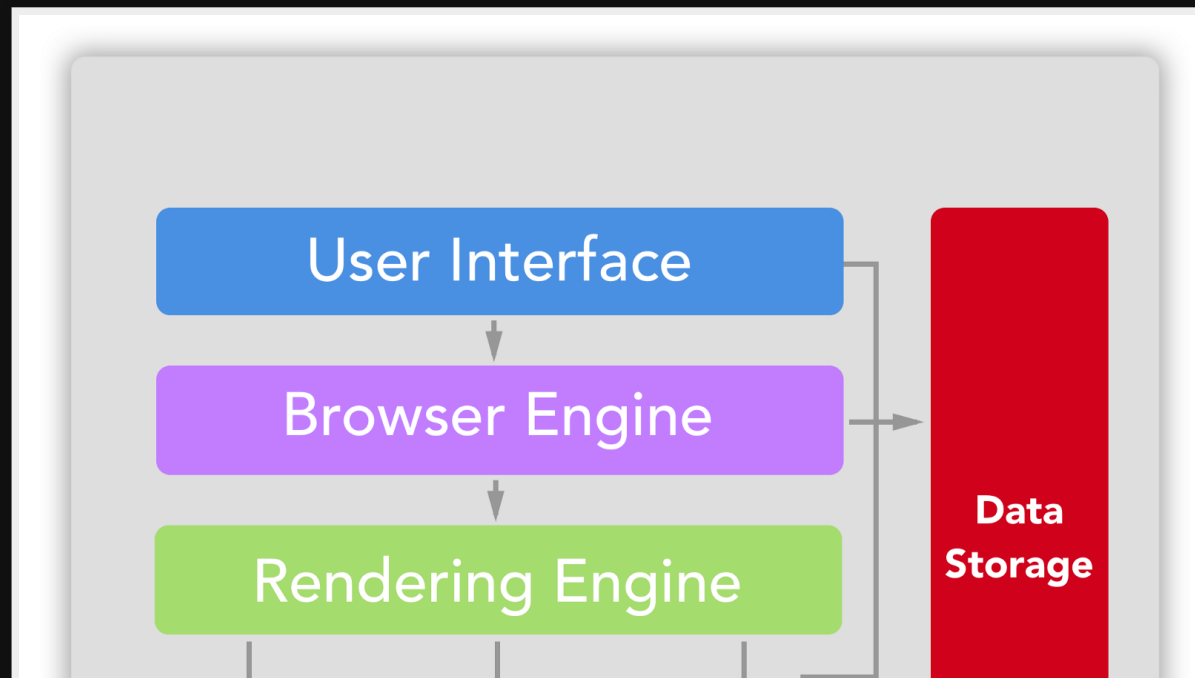
What went into showing me this?
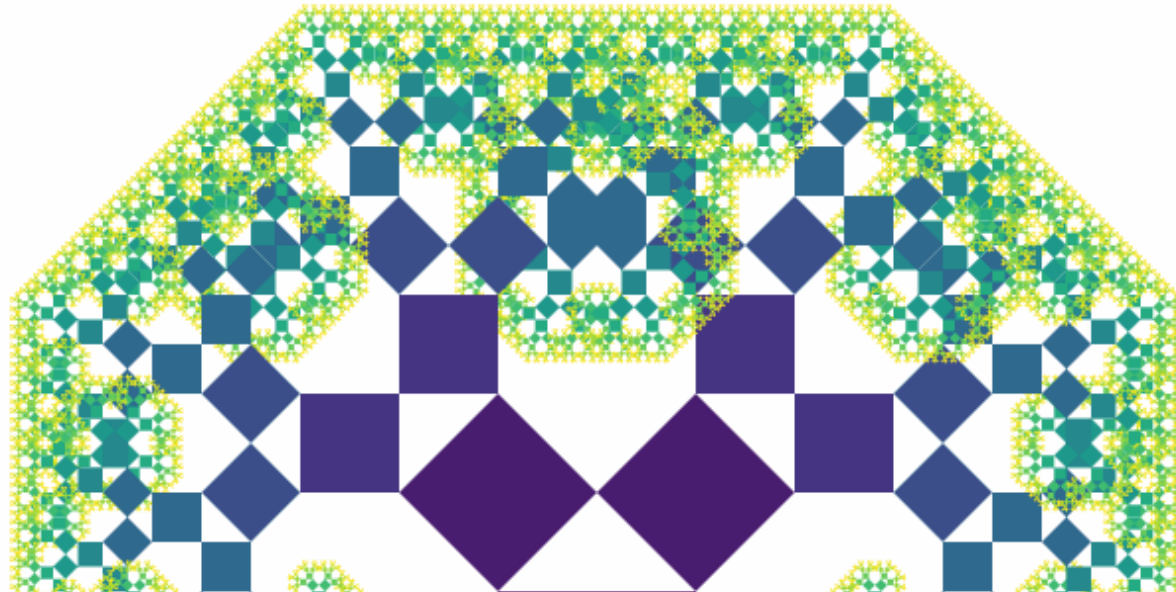
Chrome Browser to Github.io Server

1. Browser Requests the index.html
2. Server Sends the index.html page to my browser
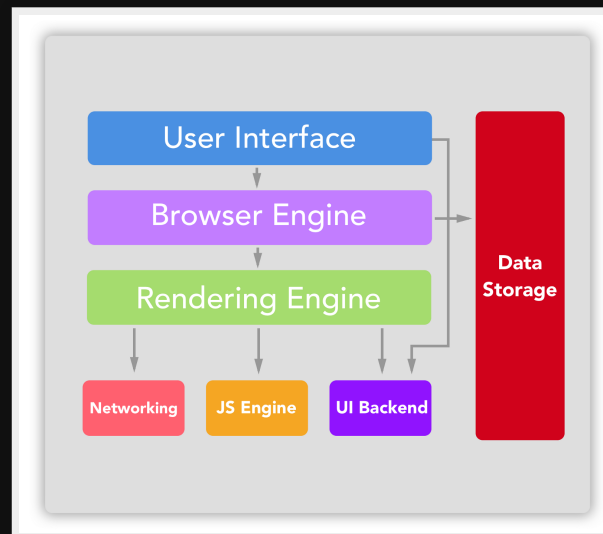3. Browser reads and renders index.html

Read + Render

User Interface

Browser Engine

Rendering Engine

Data Storage

Neverending...

Rendering Engine

Reads + Renders

A render process, usually one per tab

8kB chunks from the networking layer

Render Steps

1. Load index.html
2. Parse HTML
3. Create "DOM" tree
4. Create render tree
5. Layout render tree
6. Paint

Parsing

We need a way to specify different parts of the page and how/where they get drawn.

Markup?

Markdown?

```
Heading
=======


## Sub-heading
```

HTML

Hyper Text Markup Language

Denotes structural semantics for text such as headers, paragraphs, lists, links, quotes

Header Tag: h1

lower case!

<h1>Hi, Header</h1>

Opening Tag

`<h1>`

<h1> Hi, Header

Closing Tag

<h1>Hi, Header </h1>

Closing tag has a forward slash

Tags

And open + close tag turns into a DOM element

Open/Close

"Empty elements" have no content and no closing tag

Nesting

Tags can be nested

Hello, *you*

<h2>Hello, you</h2>

Behaviors

Tags can gain behaviors via attributes

Link to Google

Link to Google

`<h6 onmouseenter="alert('entered!')"></h6>`

Alert when mouse enters box

Class Attribute

Provides a way of classifying similar elements

`<h1 class="header--green">`
`<h3 class="header--green">`

Attributes

Attributes available depend on the tag

Attributes can add or modify tag behavior

Style Tag

```
<style>
    h1 {color:red;}
    p {color:blue;}
</style>
```

<style>

- Defines style information for an HTML document
- Uses CSS to define those styles

CSS

Controls the layout, colors and fonts

```
h1 {color:red;}
```

Makes all h1 elements red

Adding CSS

- Inline: style attribute
- Internal: style tag
- External: stylesheets

Style Attribute

Affects: One Tag

```html
<!DOCTYPE html>
<html>
<head>
</head>
<body>
  <h1 style="color:red;">Hi, header</h1>
  <p>This is some text.</p>
</body>
</html>
```

Style Tag

Affects: All matching tags on page

```
<!DOCTYPE html>
<html>
<head>

    <style>
        h1 {color:red;}
        p  {color:blue;}
    </style>
</head>
<body>
    <h1>Header1</h1>
    <h1>Header2</h1>
    <p>This is some text.</p>
</body>
</html>
```

Style Sheet

Affects: All HTML docs with link to sheet

```html
<!DOCTYPE html>
<html>

<head>
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <h1>Hi, header</h1>
    <p>This is some text.</p>
</body>
</html>
```

Cascade example

```
<!DOCTYPE html>
<html>
<head>
    <link rel="stylesheet" href="styles.css">

    <link rel="stylesheet" href="allwhitestyles.css">
</head>
<body>
    <h1>Hi, header</h1>
    <p>This is some text.</p>
</body>
</html>
```

Wrapup

1. Github, Tags, CSS, JS

Homework 1 due Next Tuesday

For Thursday

1. Get Webstorm
2. Sign up for a free Github account
3. Get the free education pack
4. Put git on your computer