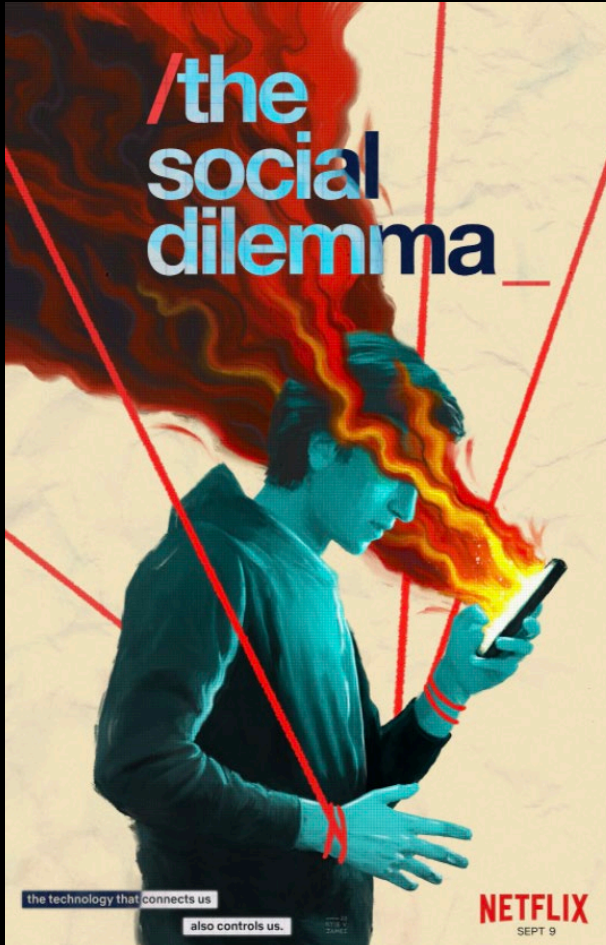


Agenda 11/1

- **Discussion on Readings/Viewings**
- **Anatomy of the Web & Webpage**
- **Building our first Chrome Extension!**

Reading/Viewing Discussion

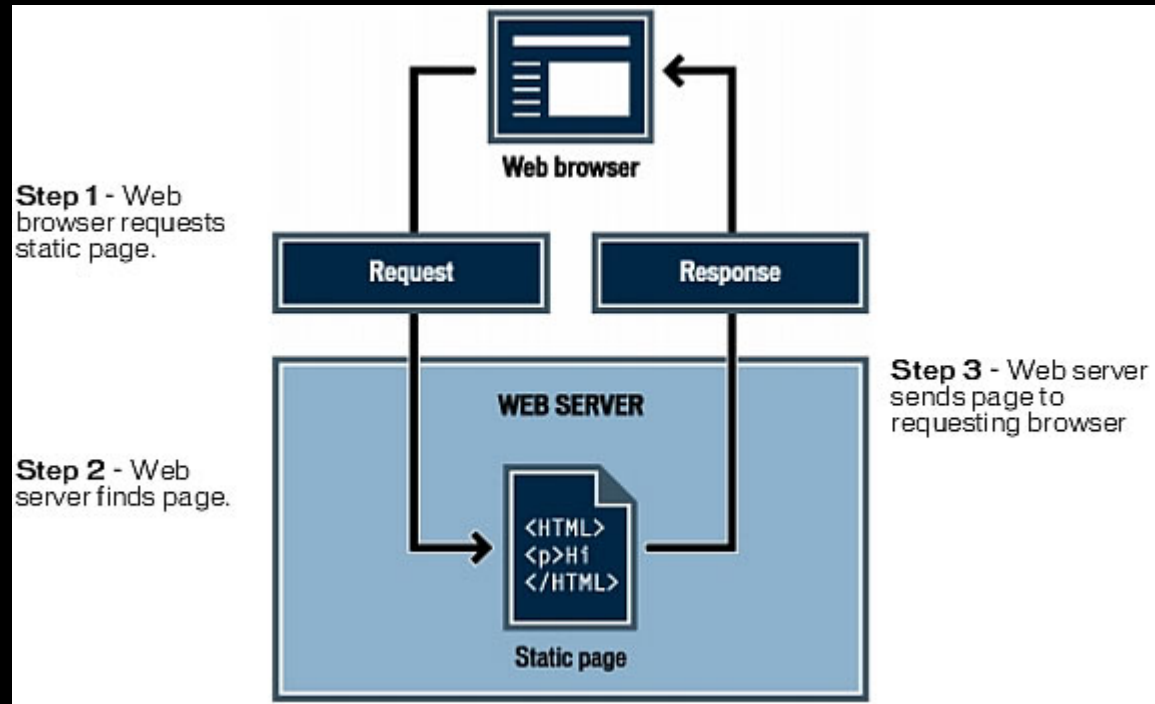


criticalengineering.org

The Critical Engineering Manifesto

*Perverting
“Technological
Correctness”*

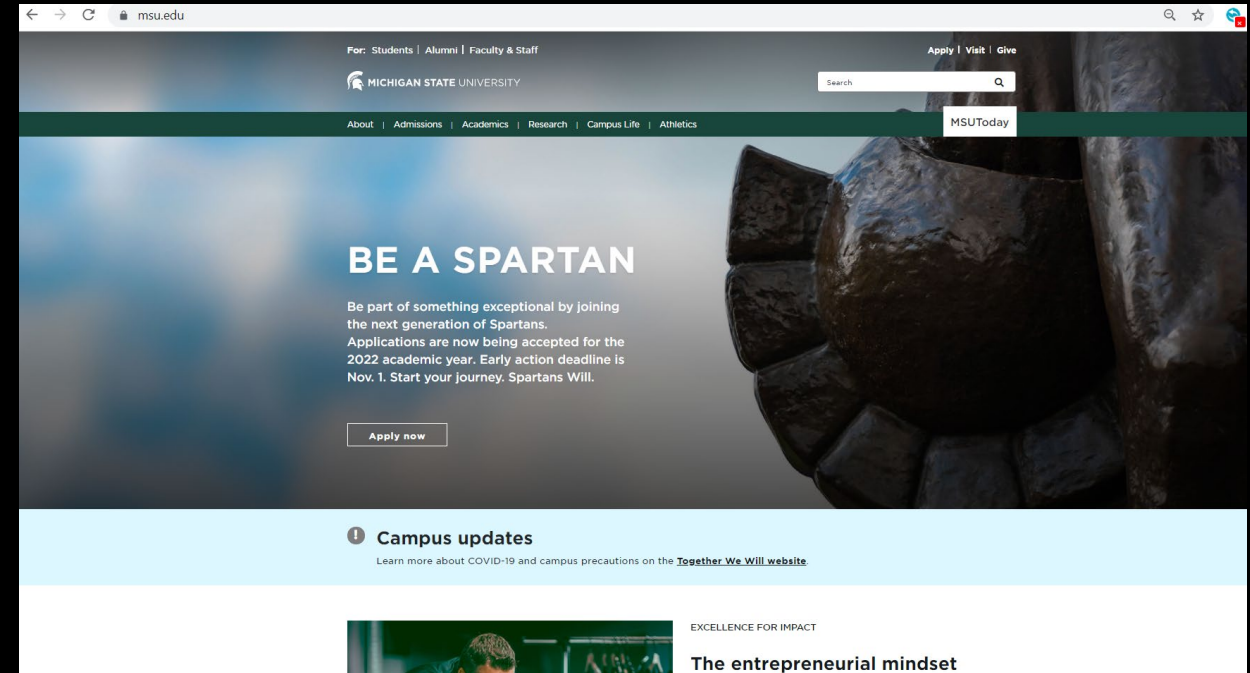
Anatomy of the Web



HTML (Hypertext Markup Language) = Webpage

The Browser

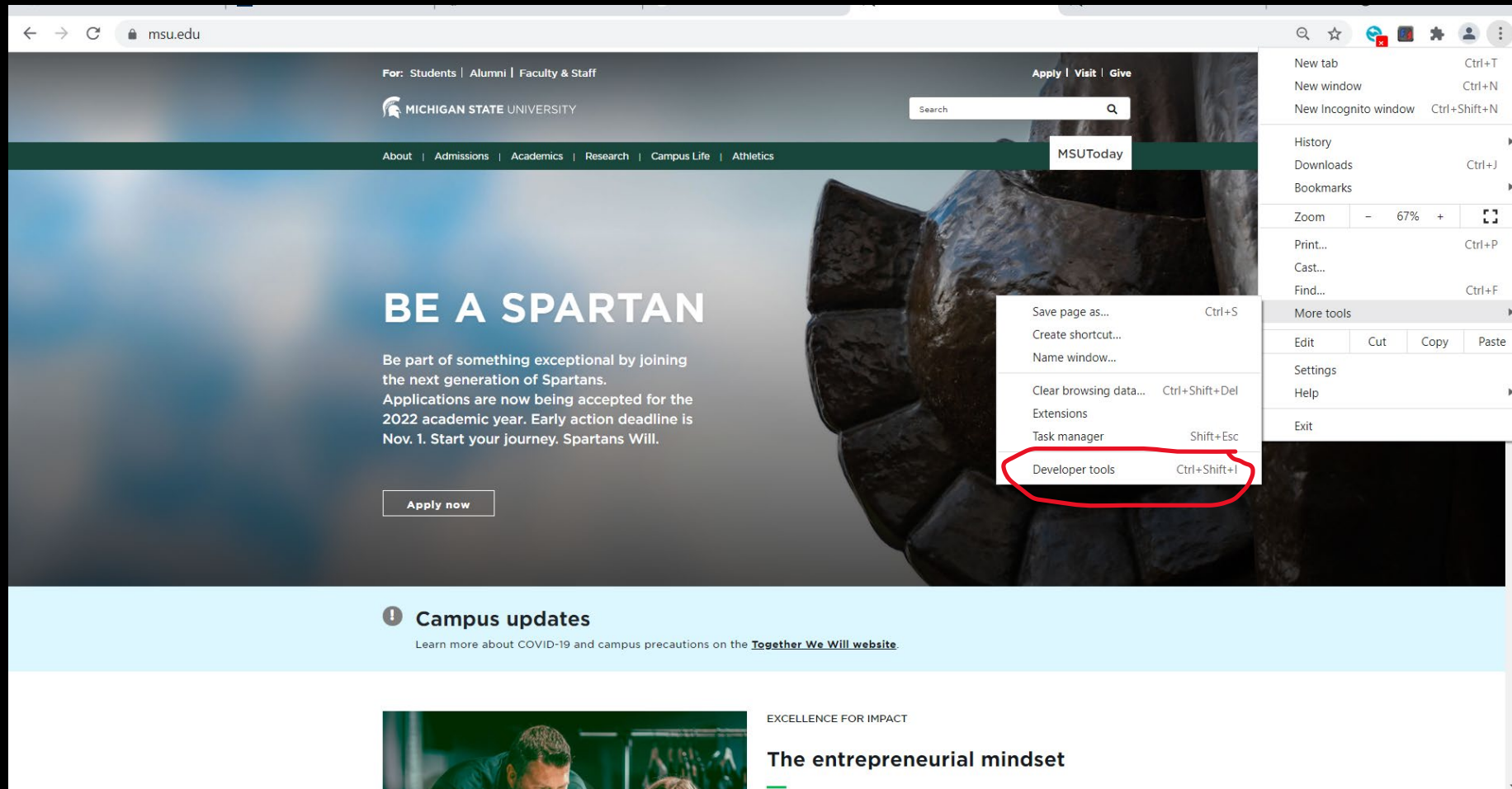
```
288 </div>
289 </div>
290 <div class="col-10 col-lg-4 search-box">
291   <form action="https://search.msu.edu/index.php" method="get" role="search">
292     <input id="q" name="q" type="search" placeholder="Search" aria-label="other global search box">
293     <button type="submit"><i class="fas fa-search" aria-label="Global Search Button"></i></button>
294   </form>
295 </div>
296 </div>
297 </div>
298 </div>
299 </div>
300 </div>
301 </div>
302 </div>
303 </div>
304 <nav aria-label="MSU Main Navigation" role="navigation" class="main-nav edu">
305   <div class="container">
306     <div class="row">
307       <div class="col-12">
308         <ul role="list">
309           <li>
310             <a role="listitem" aria-haspopup="true" aria-expanded="false" href="https://msu.edu/about" target="">About</a>
311             <div class="section">
312               <div class="container">
313                 <div class="row">
314                   <div class="col-3">
315                     <ul>
316                       <li>
317                         <a href="https://msu.edu/about" target="" class="">Overview</a>
318                       </li>
319                       <li>
320                         <a href="https://msu.edu/about/facts" target="" class="">MSU Facts</a>
321                       </li>
322                       <li>
323                         <a href="https://msu.edu/about/history" target="" class="">History</a>
324                       </li>
325                       <li>
326                         <a href="https://msu.edu/visit" target="" class="">Visit</a>
327                       </li>
328                     </ul>
329                   </div>
330                   <div class="col-3">
331                     <ul>
332                       <li>
333                         <a href="https://msu.edu/about/leadership" target="" class="">Leadership</a>
334                       </li>
335                       <li>
336                         <a href="https://inclusion.msu.edu" target="" class="external">Diversity & Inclusion</a>
337                       </li>
338                     </ul>
339                   </div>
340                 </div>
341               </div>
342             </div>
343           </li>
344         </ul>
345       </div>
346     </div>
347   </div>
348 </nav>
```



A computer program the ‘formats’ HTML code of us too see

The Browser

Looking under the hood a.k.a *Developer Tools*



The Anatomy of a Webpage

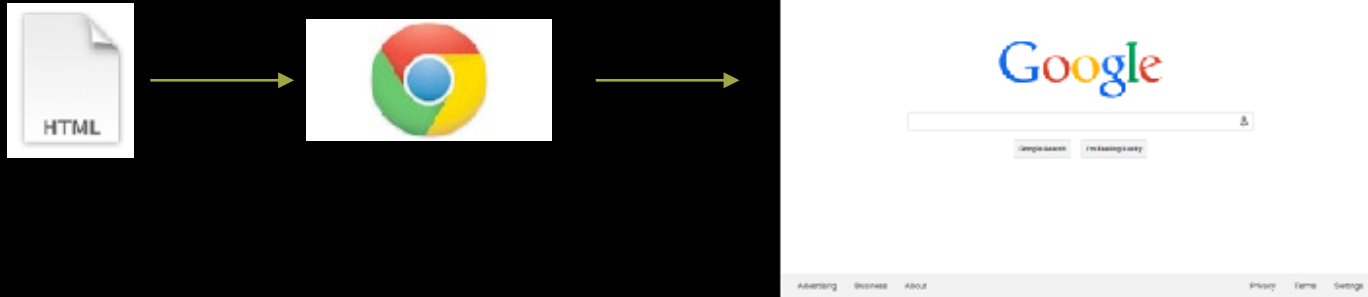
Tools Needed

Download:

.Google Chrome: <https://www.google.com/chrome/>

.Sublime Text Editor: <https://www.sublimetext.com/>

file format = .html



index.htmlUNREGISTERED

index.html

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <title>Example Page</title>
5 </head>
6 <body>
7   <h1>this is a headline</h1>
8   <p>this is a paragraph of text</p>
9 </body>
10 </html>
```

Line 9, Column 8; Saved ~/Desktop/index.html (UTF-8)Tab Size: 4HTML

HTML = Hyper Text Markup Language

<html>

<body>

<h1> this is a headline </h1>

<p> this is a paragraph of text. </p>

</body>

</html>



this is a headline

this is a paragraph of text

```
<! DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>    Example Page    </title>
```

```
</head>
```

```
<body>
```

```
<h1>  this is a headline    </h1>
```

```
<p>    this is a paragraph of text.    </p>
```

```
</body>
```

```
</html>
```

HTML Tags

```
<h1>headline 1</h1>
```

```
<h2>headline 2</h2>
```

```
<p>paragraph</p>
```

```
<sup>superscript</sup>
```

```
<sub>subscript</sub>
```

```
<br />
```

```
<hr />
```

emphasis

strong

<blockquote>block quote</blockquote>

<q>quote</q>

<ins>inserted text</ins>

deleted text

HTML = Hyper Text Markup Language

Attributes

attribute
name



```
<p style="color: red">my paragraph</p>
```



attribute
Value

HTML = Hyper Text Markup Language

Attributes

attribute
name



```
<body style="background-color: pink">
```



attribute
Value

HTML = Hyper Text Markup Language

Attribute Colors:

https://www.w3schools.com/html/html_colors.asp

HTML = Hyper Text Markup Language

Images

```

```

```

```

How to change HTML through the browser?

1. Open “Developer Tools” in Chrome
2. Find the HTML source code under “Element”
2. Locate HTML tags like **h1**, **h2**, **p** etc. and change them manually

JavaScript

JavaScript is a scripting or programming language that allows you to implement complex features on web pages — every time a web page does more than just sit there and display static information for you to look at — displaying timely content updates, interactive maps, animated 2D/3D graphics, scrolling video jukeboxes, etc. — you can bet that JavaScript is probably involved.

-Mozilla Foundation

JavaScript

Program that runs “inside” the browser

HTML



the actual
content of a page

CSS



look of the page
[color, style]

JavaScript



easily control
and alter HTML



Our first Chrome Extension

Source: <https://shiffman.net/a2z/chrome-ext/>

Our first Chrome Extension

1. Using Sublime Text create the following files
 - manifest.json
 - content.js
2. Save them in the same folder

```
{  
  "manifest_version": 2,  
  "name": "My Extension",  
  "version": "0.1",  
  "content_scripts": [  
    {  
      "matches": [  
        "<all_urls>"  
      ],  
      "js": ["content.js"]  
    }  
  ]  
}
```

manifest.json

```
var elts = document.getElementsByTagName('p');  
for (var i = 0; i < elts.length; i++) {  
  elts[i].style['background-color'] = '#F0C';  
}
```

content.js

This is the code to modify the HTML pages

Our first Chrome Extension

3. Go to “chrome://extensions/” in your Chrome Browser
4. Turn on Developer Mode
5. Click on ‘Load Unpacked’ and navigate to your folder
6. Now all `<p>` tags should be pink!!!

Try changing colors, text weight of other tags!

Other text alterations

```
document.body.innerHTML = document.body.innerHTML.replace(/Michigan/g, "Mars");
```

Will change all occurrence of 'Michigan' to 'Mars'