



HTML Basics

CTD Intro Week 9





HTML File Structure

- SGML
 - Standard Generalized Markup Language (meta-language)
 - HTML is based on SGML
 - `<!DOCTYPE html>` at the beginning of the file is an SGML statement defining the document as HTML
- `<html>...</html>`
 - Surrounds everything except the DOCTYPE
- `<head>...</head>`
 - At the beginning
 - `<title>` element
 - Contains meta-data and paths to external content, like css
 - Except javascript, which is loaded at the end of the body
 - Page displays faster if it doesn't wait for the javascript to load
 - In general, things which take a long time to load should be loaded at the end of the body or asynchronously
 - SEO – Search Engine Optimization
- `<body>...</body>`
 - The displayable content of the page
- Boilerplate
 - A complete starting point for an html file with all of the sections above
 - Automated in vscode by typing ! At the top of an empty html file

Semantic Markup

- Describes the structure of the document
- Tags and elements
 - Define semantics, not displayed
 - Most elements have opening and closing tags
 - `<p>A really short paragraph.</p>`
 - Some are self-closing single tags
 - ``, `
`, `<meta>`
 - Attributes
 - Add directives and information to tags
 - ``
 - `<div id="unique-identifier">`
 - `<p class="treat-everything-in-this-class-the-same">`

```

<div class="container">
  <div class="carousel-caption">
    <h1>One more for good measure.</h1>
    <p>Cras justo odio, dapibus ac facilisis in, egestas eget quam. Maecenas sed diam eget risus varius blandit.
    </p>
    <p><a class="btn btn-lg btn-primary" href="#" role="button">View details</a>
    </p>
  </div>
</div>
</div>
</div>
<a class="left carousel-control" href="#myCarousel" role="button">
  <span class="glyphicon glyphicon-chevron-left" aria-hidden="true">
  <span class="sr-only">Previous</span>
</a>
<a class="right carousel-control" href="#myCarousel" role="button">
  <span class="glyphicon glyphicon-chevron-right" aria-hidden="true">
  <span class="sr-only">Next</span>
</a>
</div><!-- /.carousel -->


```


Semantic Markup Examples

```
<img alt="Image" data-bbox="125 267 341 300" class="img-fluid" data-bbox="125 300 341 330" />
<div class="container">
  <div class="carousel-caption">
    <h1>One more for good measure.</h1>
    <p>Cras justo odio, dapibus ac facilisis in, egestas eget
    .</p>
    <p><a class="btn btn-lg btn-primary" href="#" role="button">
    </div>
  </div>
</div>
<div>
  <a class="left carousel-control" href="#myCarousel" role="button">
    <span class="glyphicon glyphicon-chevron-left" aria-hidden="true">
    <span class="sr-only">Previous</span>
  </a>
  <a class="right carousel-control" href="#myCarousel" role="button">
    <span class="glyphicon glyphicon-chevron-right" aria-hidden="true">
    <span class="sr-only">Next</span>
  </a>
</div><!-- /.carousel -->

--Featured Content Section--
<div class="container">
  <div class="row">
    <div class="col-md-4"></div>
    <div class="col-md-4"> <h2> FEATURED CONTENT </h2> </div>
    <div class="col-md-4"></div>
  </div>
</div>
```

- Heading, h1-h6, <h1>A Big Important Section</h1>
- Paragraph <p>...</p>
- Anchor (hyperlink) text shown
- Generic container <div>...grouped html...</div>
- Lists
 - Unordered list (bullets)
 - Ordered list (numbered)
 - List item (for both) the content of the item
- Section <section> html content </section>
- Image
- More in future lessons
 - Forms, labels, textarea...

Separation of Concerns (SoC)

- Separate code into components with distinct functionality and as little overlap as possible.
 - General organizational principle for software
- HTML started with controls (attributes) for the presentation of content, and primitive interaction capabilities.
- CSS was added to the standard later
 - Cascading Style Sheets
 - Much more powerful and flexible
- Javascript
 - Added to the standard later for control of behavior
 - Interactive, dynamic, running in the client
- For web development, SoC means:
 - Use HTML for content
 - Use CSS for presentation (styling)
 - Use javascript for behavior (interaction, dynamic display)
- The latest standard (html5) deprecates many styling attributes in html
 - Use class= and id= attributes to connect with css and javascript instead



Q&A

