Web Engineering & Development (SWE 363)

2.1 Basics of HTML (Hypertext Markup Language)

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Announcements 📣

- Project Assignment #1 is due This Thursday at 11:59 PM

- New Demos structure (Github Classrooms)

- Attendance starts from today

In today's Lecture:

- HTML Document structure

- Basic HTML Tags

- HTML Lists

- HTML Tables

- HTML Images

HTML

What?

HTML

- Hyper Text: Text with links to other documents or resources.

- Markup: Defines the structure and meaning of different parts of the document.

- Language: A set of rules for writing HTML code properly.

So what does CSS & JS do?

HTML Elements

`<p>Hello</p>`

HTML Elements

`<p>Hello</p>`

Examples include: `<h1>`, `<h2>`, `<h3>`, `<h4>`, `<h5>`, `<h6>`, `<ul>`, `<ol>`, `<li>`, `<table>`, `<tr>`, `<td>` etc.

HTML Attribute

```html
<a href="https://google.com">Link</a>
```

HTML Attribute

`<a href="https://google.com">Link</a>`

Examples include: `href`, `src`, `alt`, `class`, `id`, `style` etc.

A Simple HTML Page

```html
<!doctype html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <style>
      body { background-color: lightblue; }
    </style>
  </head>
  <body>
    Hello, world!
    <script>
      console.log('Hello from JavaScript!');
    </script>
  </body>
</html>
```

Let's Build a Simple HTML

HTML Elements reference

https://developer.mozilla.org/en-US/docs/Web/HTML

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

HTML common text elements

- Paragraph `<p>` : Used to define a paragraph of text

- Headings `<h1>` to `<h6>` : Used to define headings of different levels

- Formatting `<em> <i> <b> <mark>` : Used to format text

Board Challenge: write the html code for the following:

SWE 363

Introduction to HTML

A course where we will learn the basics of HTML, CSS & JS.

HTML Lists

There are two types of lists: Ordered `<ol>` and Unordeered `<ul>`

```html
<!-- Example of a list -->
<ul>
  <li>First item</li>
  <li>Second item</li>
  <li>Third item</li>
</ul>
```

How can we make a nested list?

HTML Tables

Consists of rows `<tr>` and columns `<td>`

```html
<table>
  <tr>
    <td>Row 1, Cell 1</td>
    <td>Row 1, Cell 2</td>
    <td>Row 1, Cell 3</td>
  </tr>
</table>
```

Tables can get complex …

```html
<table>
  <thead>
    <tr>
      <th>Header 1</th>
      <th>Header 2</th>
      <th>Header 3</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td rowspan="2">Row 1, Cell 1 (spans 2 rows)</td>
      <td>Row 1, Cell 2</td>
      <td>Row 1, Cell 3</td>
    </tr>
    <tr>
      <td>Row 3, Cell 1</td>
      <td colspan="2">Row 3, Cell 2 (spans 2 columns)</td>
    </tr>
  </tbody>
  <tfoot>
    <tr>
      <td colspan="3">Footer (spans all columns)</td>
    </tr>
  </tfoot>
</table>
```

HTML Images

Images are *void* elements, they don't have a closing tag.

```html
<img src="link_to_image.jpg" alt="image description">
```

Void elements

Void elements are elements that don't have a closing tag.

Examples: `<img>`, `<br>`, `<hr>`, `<input>`, `<link>`, `<meta>`, `<area>`, `<base>`, `<col>`, `<embed>`, `<hr>`, `<img>`, `<input>`, `<link>`, `<meta>`, `<param>`, `<source>`, `<track>`, `<wbr>`

Let's build a rich html page

Follow along the instructor

Next Class

- Links

- Containers

- Forms