

# Front End Software Development

Front End Technologies (weeks 7 - 12)

Week 01



# Agenda

- Questions
- What is Front End Development?
- HTML, CSS, and JavaScript
- Intro to HTML
  - Text Elements
  - Anchors (Links) & Images
  - Lists and Tables
  - Inline vs Block
  - Linking JavaScript to HTML
  - Forms
  - Creating A Basic Website

# Questions



# What is?

(Front End Development)



## Front End

- Markup and web languages
  - HTML
  - CSS
  - JavaScript
- Asynchronous requests (AJAX)
- Image Editing
- Accessibility
- Cross-browser issues
- Search Engine Optimization (SIEO)

Presentation  
User Interface (UI)



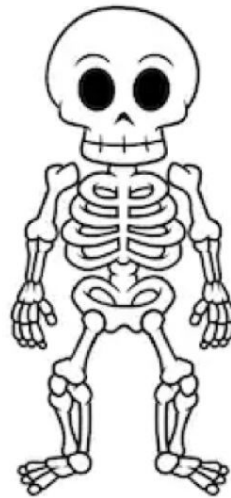
## Back End

- Programming and scripting
  - Java
  - Ruby
  - PHP
- Server architecture
- Database administration
- Scalability
- Security
- Data transformation
- Backup

Web Services  
Business "Rules"  
Data Storage

# HTML, CSS, and JavaScript

- HTML
  - Structure and content
- CSS
  - Design and style (i.e. looks)
- JavaScript
  - Functionality and interactivity
  - Programming language



HTML



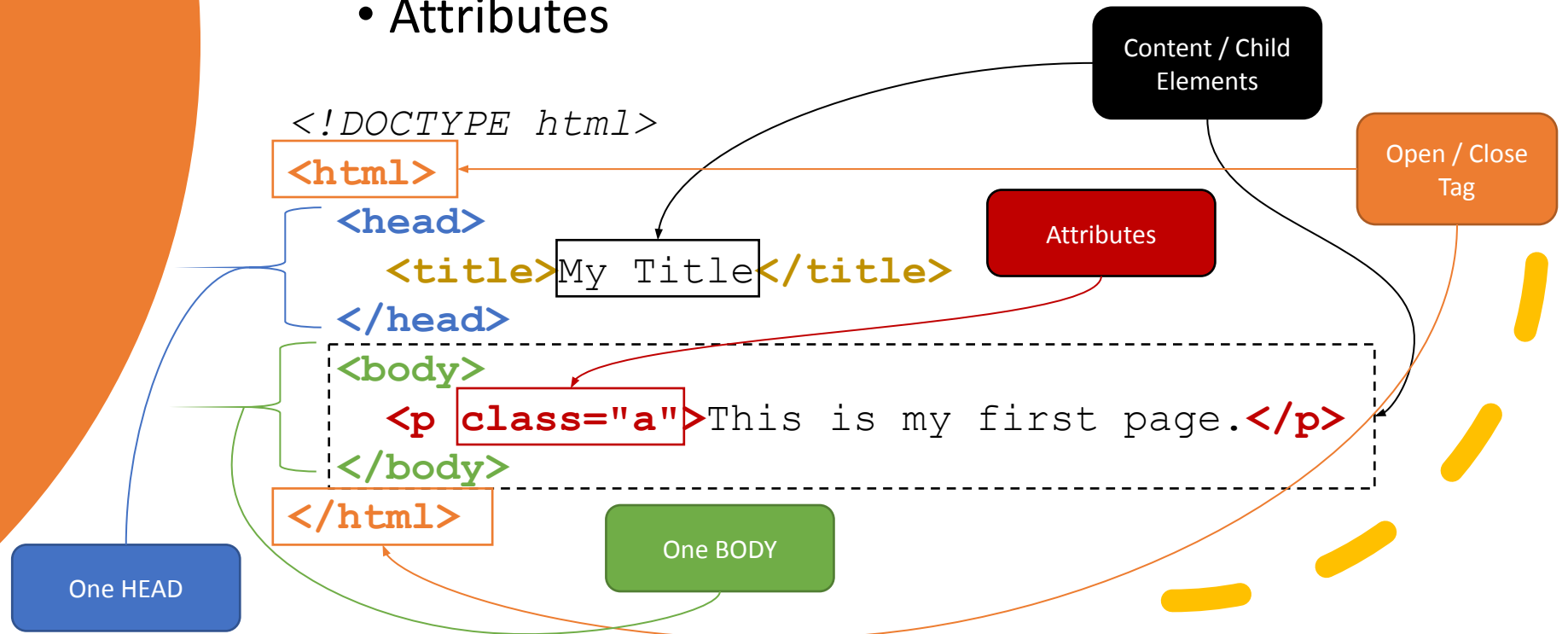
HTML + CSS



HTML+CSS+JavaScript

# Intro to HTML

- **HyperText Markup Language**
  - Extension: \*.html, \*.htm
  - Standard text file *(no special tools or editors needed!)*
- **Elements**
  - Tags
    - Opening / Closing
  - Attributes



# Intro to HTML

*(text elements)*

- **<p></p>**
  - Block
  - Paragraph
- **<h1></h1>...<h6></h6>**
  - Block
  - Header / Title
- **<br />**
  - Break / next line
  - No content
- Comments
  - **<!-- COMMENT -->**



# Intro to HTML

(text elements, continued)

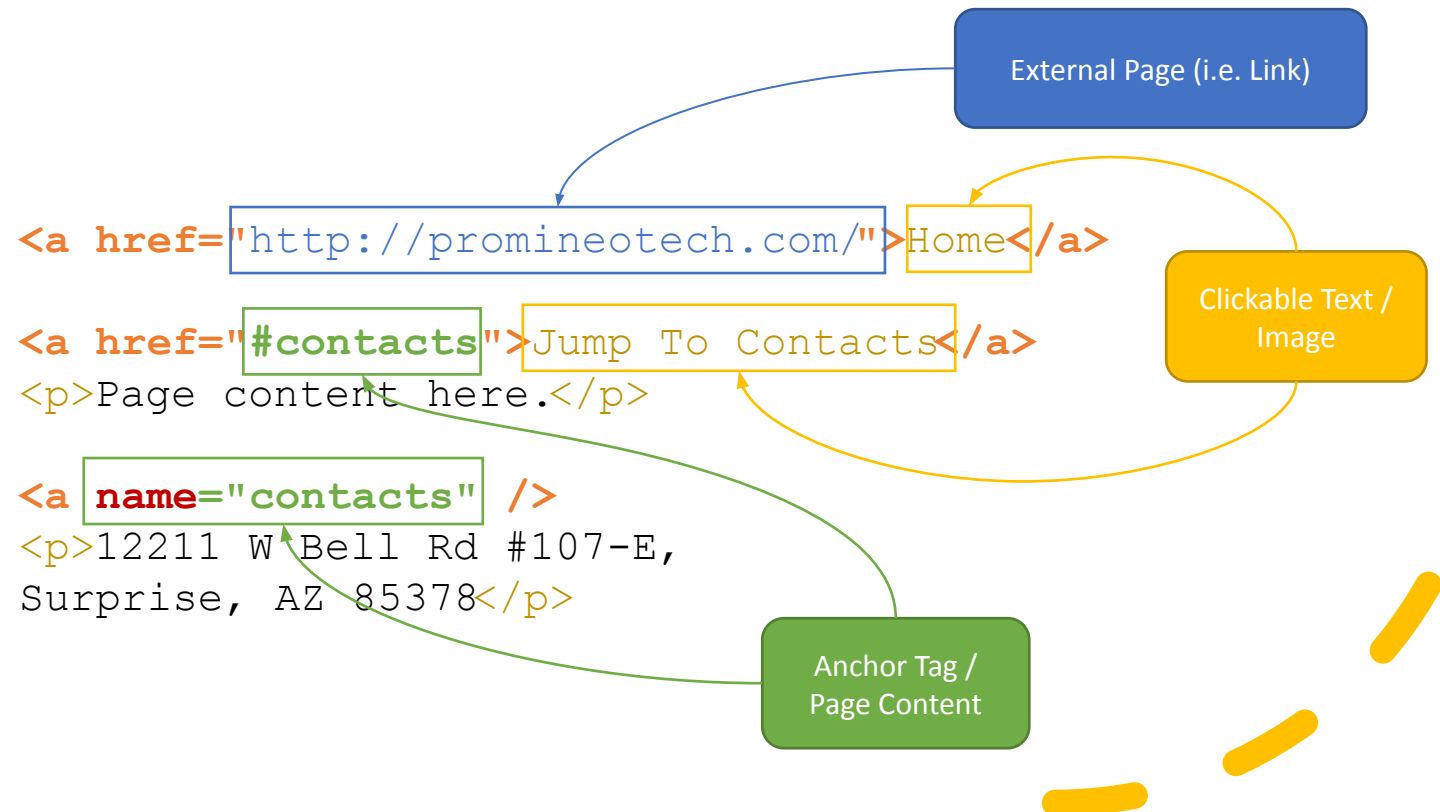
- Formatting (Inline)
  - `<strong></strong>`  
Important text, typically **bold**
  - `<em></em>`  
Emphasize, typically *italics*
  - `<sup></sup>` - superscript
  - `<sub></sub>` - subscript
- Other (deprecated)
  - `<b></b>` - **Bold**
  - `<i></i>` - *Italic*
  - `<u></u>` - Underline





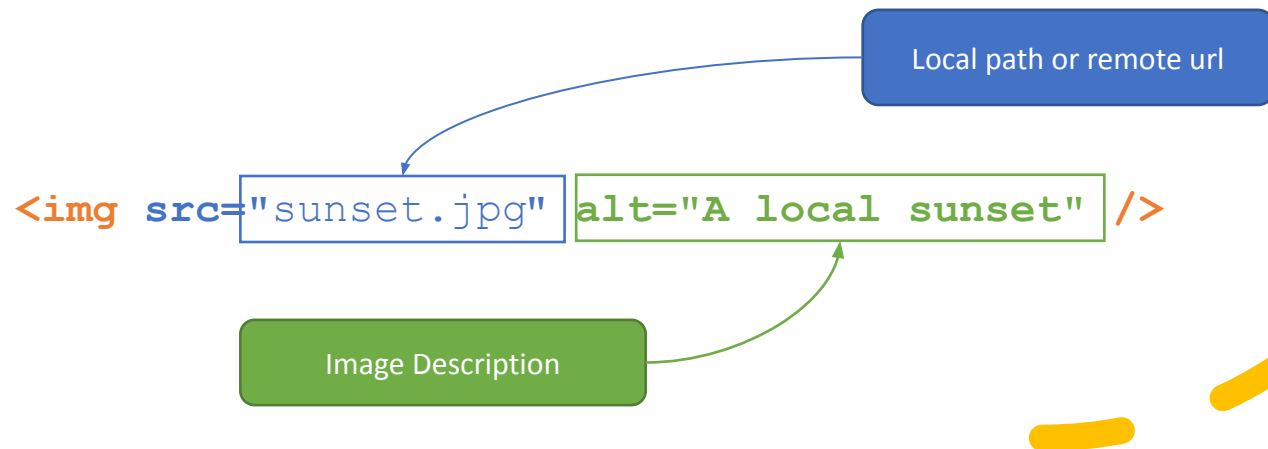
# Intro to HTML (anchors / links)

- Absolute vs Relative Paths
- `<a></a>`
  - `<a href="..."></a>`
  - `<a name="..."></a>`



# Intro to HTML (images)

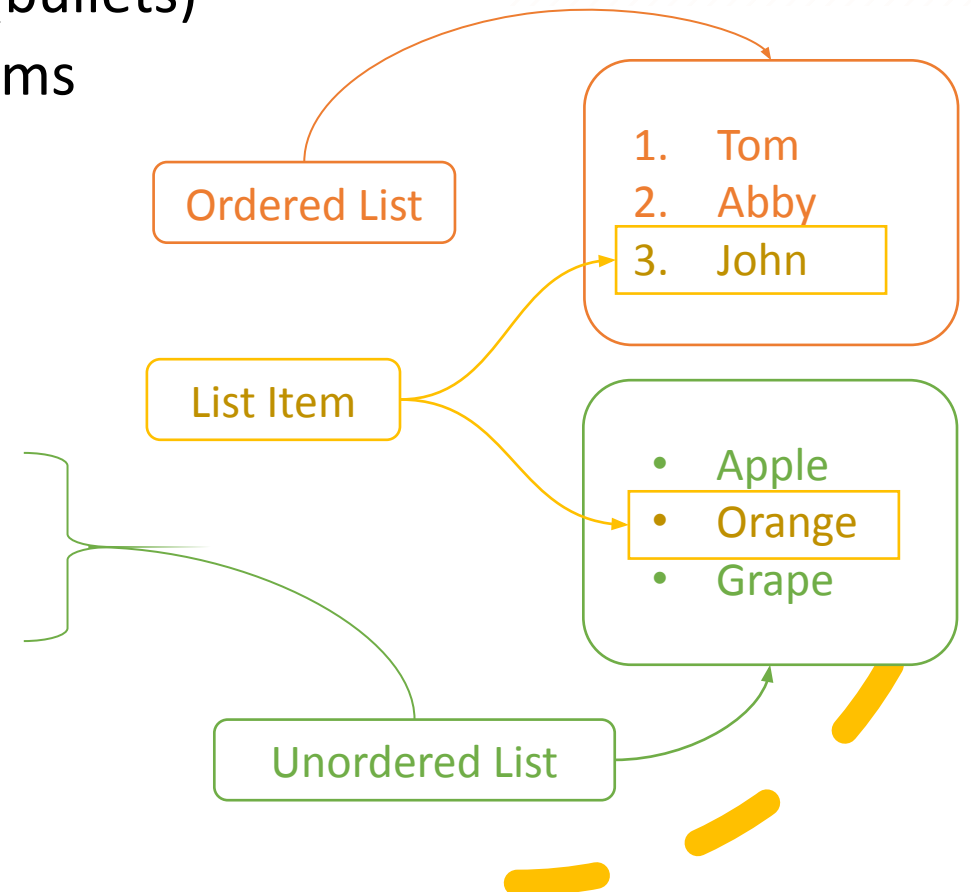
- `<img />`
  - ``
  - Alternate Text / Description
    - `<img ... alt="My dog, Fido" />`
  - Standard Image Types
    - **jpg** – Photographs; full color
    - **gif** – Line art, cartoon; 256 colors, transparency, animation
    - **png** – High quality; full color, alpha transparency
    - **svg** – Vector / line art. Small, infinitely scalable



# Intro to HTML (lists)

- Lists
  - `<ol>...</ol>`  
Ordered list (1, 2, 3; a, b, c)
  - `<ul>...</ul>`  
Unordered list (bullets)
  - `<li></li>` List items
- Can be nested

```
<ol>  
  <li>One</li>  
  <li>Two  
    <ul>  
      <li>Green</li>  
      <li>Red</li>  
    </ul>  
  </li>  
  <li>Three</li>  
</ol>
```



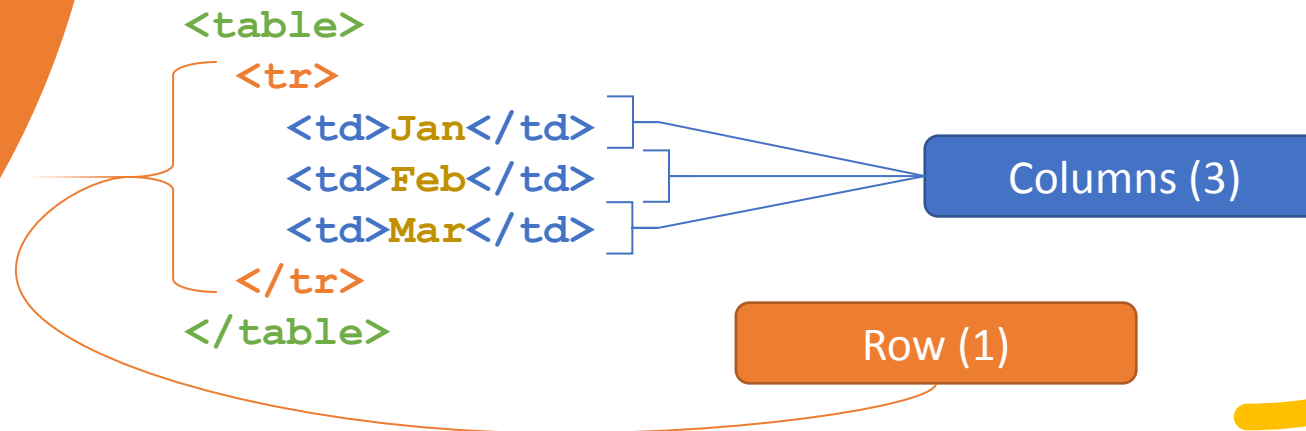
# Intro to HTML (tables)

- Tabular Data  
(i.e. Spreadsheet)
  - Pre-HTML5 was commonly used for layout and design.

**BAD! WRONG!**



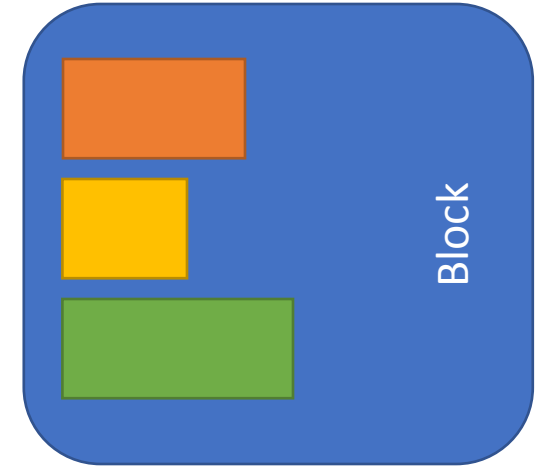
- `<table>...</table>`
  - `<tr>...</tr>` - Row
  - `<td>...</td>`, `<th>...</th>` - Cell / Column



# Intro to HTML

*(inline vs block)*

- Block
  - Always starts on a **new line**, space added (a margin) before and after the element.
  - Takes up the **full width** available (stretches out to the left and right as far as it can).
  - `<div></div>`
- Inline
  - Does not start on a new line.
  - Only takes up as much width as necessary.
  - `<span></span>`



# Intro to HTML

*(linking JavaScript to  
HTML / script)*

- **<script></script>**

- Separate file

```
<script src="index.js" />
```

- Inline

```
<script>
```

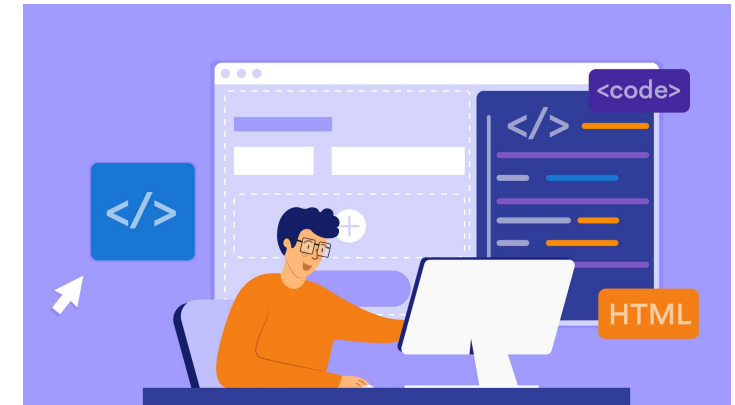
```
  console.log('this is JavaScript...');
```

```
</script>
```



# Intro to HTML (forms)

- User Input
  - **<form></form>**  
Encapsulates multiple elements together.  
(i.e. login)
  - **<input type="" />**
    - **type**
      - text
      - radio
      - checkbox
      - password
      - submit
    - **name**
    - **value**
    - **placeholder**
      - Displays hint to user for expected data, format, etc.
  - **<select></select>**  
Dropdown list
    - **<option>...</option>**
  - **<button></button>**





# DEMO

**Creating A Basic Website**  
*Putting it all together*