JavaScript

Web Design | HW Summer

Introduction

- JavaScript is a general purpose programming language
- Started as LiveScript in 1995 and developed for Netscape Navigator (most used browser at the time)
- The default language for the front-end of the web (supported by all browsers)
- Allows pages to be dynamic rather than static

Adding JS Code

- In the same file: using the <script> element
- As an external file: importing a .js file with the <script> element

```
<script>
    // JavaScript code here
</script>
```

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

Printing To The Console

```
console.log("Hello World");
```

Executing Code From User Actions

- The onclick attribute
  - Any JS code within the onclick property will be executed when a user clicks on the element

```
<button onclick="console.log('Thanks for clicking')">
    Click Me!
</button>
```

Wrapping Code In Functions

- Functions let us put lots of code into a block and reference that code by the function name
  - This lets us use code more easily and lets us re-use the same code in multiple places

```
function handleClick() {
    console.log("Thanks for clicking");
}
```

```
<div class="box">Please click the button</div>

<button onclick="handleClick()">
    Click Me!
</button>
```

JS DOM

- Document Object Model (DOM)
- Each element in the document is an object
- Can reference parts of our page (HTML elements) using JS and act on those elements in JS

Querying The DOM

- Globally accessible object: document
  - The document is our whole page
- Querying elements: querySelector()
  - Uses CSS syntax to select elements

```
const button = document.querySelector("#button");
```

Modifying Elements

- Anything in our HTML and CSS code can be modified with JavaScript
- HTML attributes can be accessed through DOM objects in JS

```
function handleClick() {
    const box = document.querySelector(".box");
    box.innerText = "Thank you for clicking the button";
    box.classList.add("active-box");
}
```

Conditionals

- Execute code if a condition is met

```
const condition = true;

if (condition) {
    // do something
} else {
    // do something else
}
```

```
// Toggle the class my-class
if (!element.classList.contains("my-class")) {
    element.classList.add("my-class");
} else {
    element.classList.remove("my-class");
}
```

or

```
element.classList.toggle("my-class");
```