INTRODUCTION TO JAVASCRIPT

FULL STACK SKILLS BOOTCAMP

WHAT IS JAVASCRIPT?

- **Lesson Overview:**
- In this lesson, we will be introduced to:

1. JavaScript installation
2. The Browser Console
3. Variables and concatenation
4. Expressions and Conditions
5. Functions and Arguments

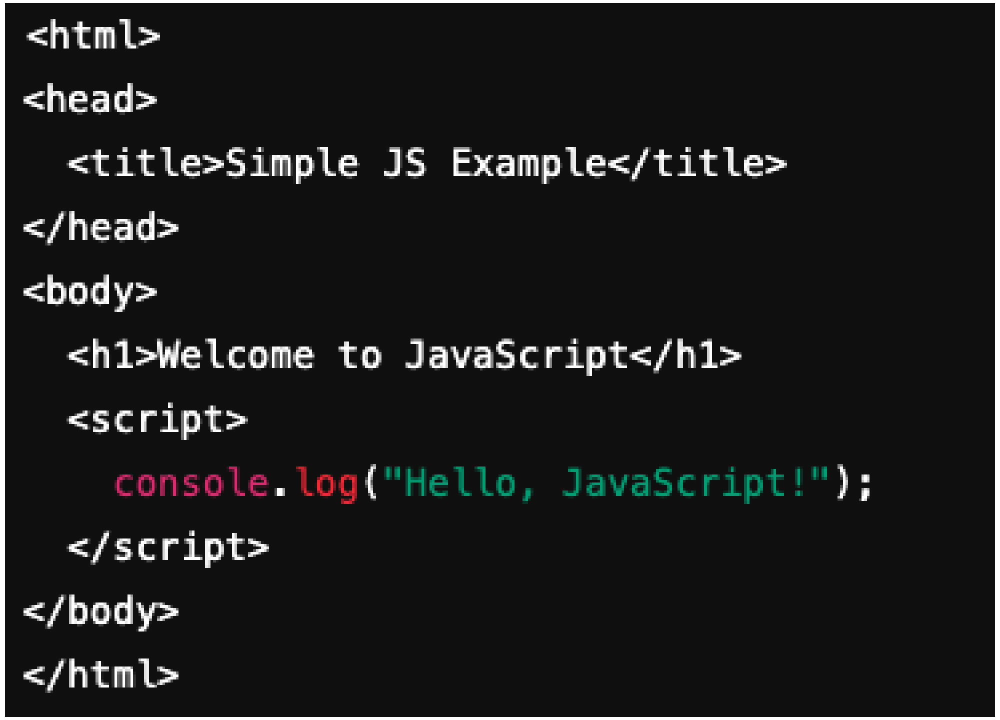
INTRODUCTION TO JAVASCRIPT

- **What is JavaScript?**
- JavaScript is a programming language that allows you to create interactive and dynamic content on web pages.
- It’s used for handling user interactions, manipulating content, and building complex applications.
- **Why Learn JavaScript?**
- JavaScript is essential for front-end web development.
- Works alongside HTML and CSS.

INCLUDING JAVASCRIPT IN A WEB PAGE

- **Where to Place JavaScript**
  Inside <script> tags in the HTML file.

  You can also link to an external .js file using the <script src="..."></script> tag.
- **Example**:



```
<html>
<head>
  <title>Simple JS Example</title>
</head>
<body>
  <h1>Welcome to JavaScript</h1>
  <script>
    console.log("Hello, JavaScript!");
  </script>
</body>
</html>
```

VARIABLES AND DATA TYPES

- **What is a Variable?**

  A way to store and manage data in JavaScript.

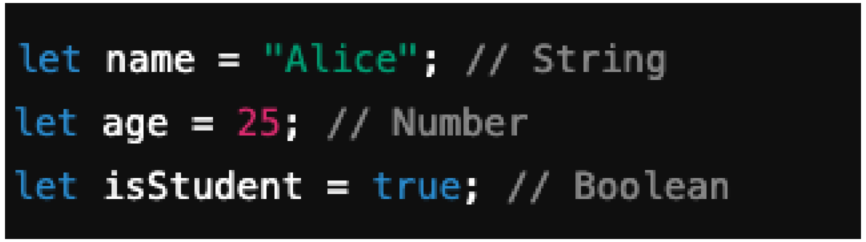
  Variables can be declared using var, let, or const.

- **Data Types in JavaScript**:

  Number: Represents numeric values (e.g., 10, 3.14).

  String: Represents text enclosed in quotes (e.g., "Hello", 'World’).

  Boolean: Represents true/false values (e.g., true, false).



```
let name = "Alice"; // String
let age = 25; // Number
let isStudent = true; // Boolean
```

CONSOLE AND CONSOLE.LOG

- **What is the Console?**

  A tool in web browsers for debugging and testing JavaScript code.

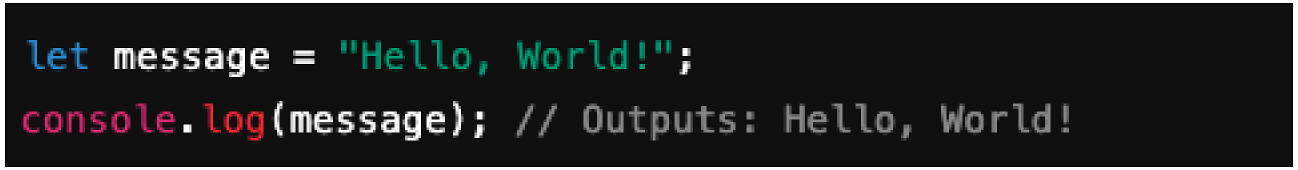
- **Using console.log()**

  Outputs information to the browser console for debugging.

  Use it to display variable values, results, or messages during development.

- **How to Access the Console**:

  Right-click on the webpage → Inspect → Console tab (in browsers like Chrome or Firefox).

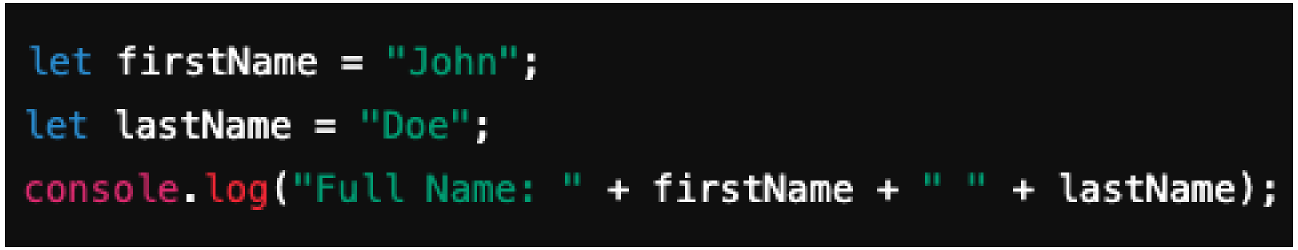


```
let message = "Hello, World!";
console.log(message); // Outputs: Hello, World!
```

BASIC CONCATENATION

- **String Concatenation**:
  - Combining two or more strings using the + operator.
- **Example**:

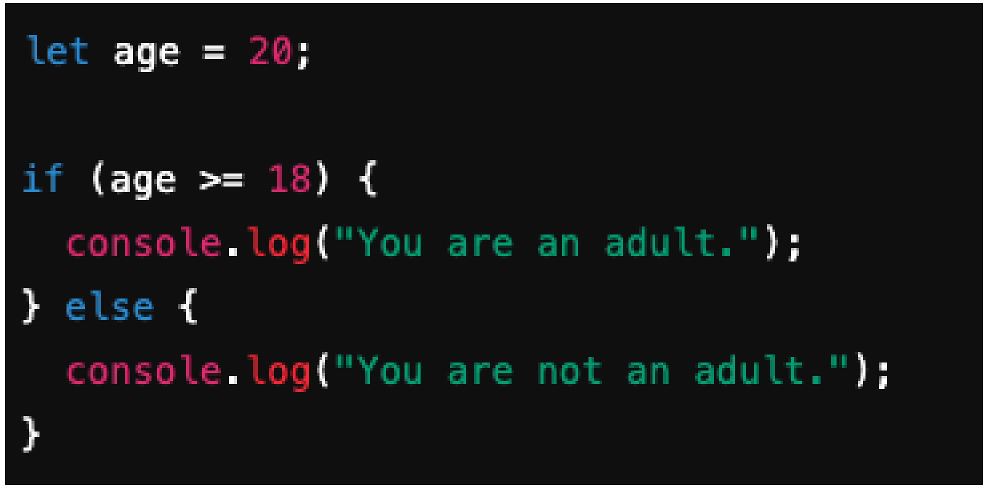
demo…



```
let firstName = "John";
let lastName = "Doe";
console.log("Full Name: " + firstName + " " + lastName);
```

EXPRESSIONS AND CONDITIONS

- **Expressions**:
  - Any valid unit of code that resolves to a value.
  - Examples: 5 + 3, name === "Alice"
- **Comparison Operators**:
  - >, <, ==, ===, !=, etc.
- **Conditions with if/else**:
  - Use conditions to execute code based on different situations.

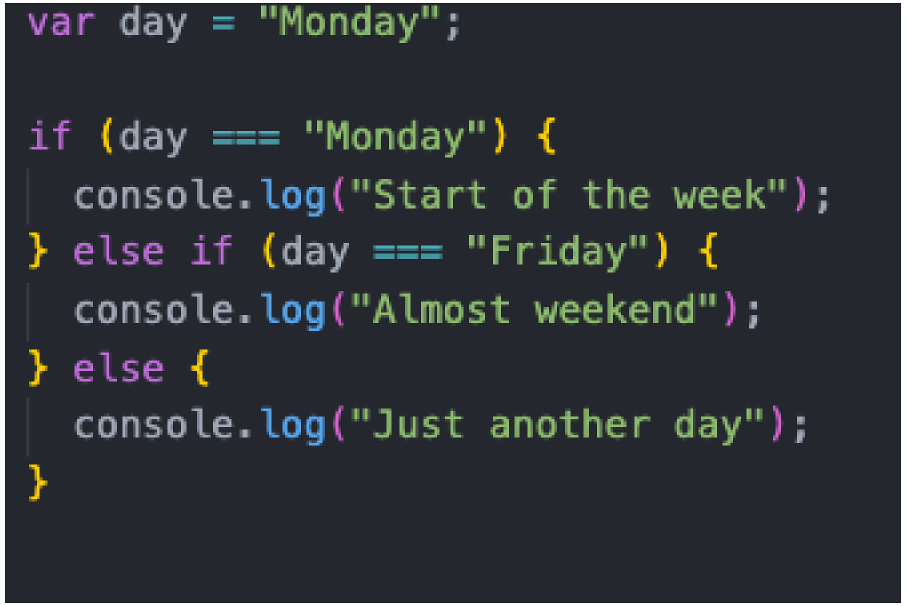


```
let age = 20;

if (age >= 18) {
  console.log("You are an adult.");
} else {
  console.log("You are not an adult.");
}
```

HANDLING MULTIPLE CONDITIONS WITH IF/ELSE

- **Multiple Conditions**:
- You can use multiple if/else if statements to handle different cases.
- **Example**:
- If the first condition is met, the first block runs.
- If not, the code checks the next else if.
- If no conditions are true, the else block runs by default.

Demo…



```
var day = "Monday";

if (day === "Monday") {
  console.log("Start of the week");
} else if (day === "Friday") {
  console.log("Almost weekend");
} else {
  console.log("Just another day");
}
```

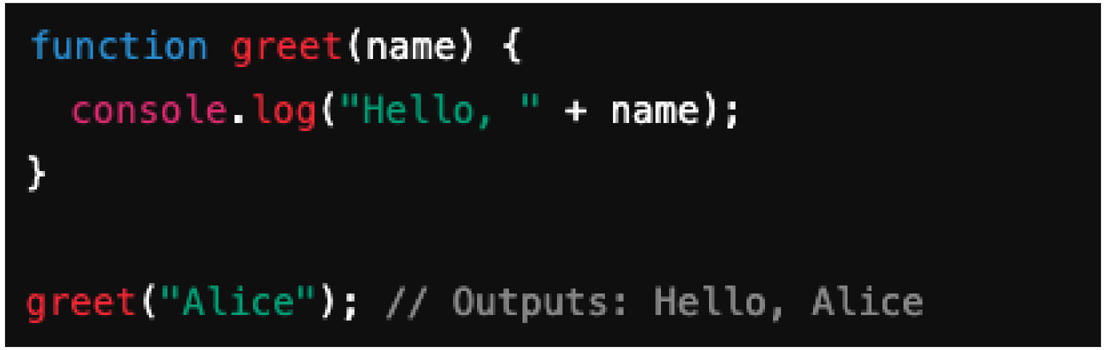
SIMPLE FUNCTIONS

- **What is a Function?**

  A block of code designed to perform a specific task.

- **Defining and Calling a Function:**

  A function is defined using the function keyword, followed by a name, parameters, and code block.



```
function greet(name) {
  console.log("Hello, " + name);
}

greet("Alice"); // Outputs: Hello, Alice
```

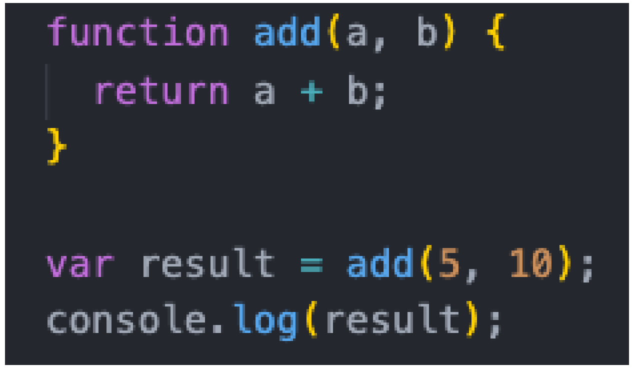
PASSING ARGUMENTS TO FUNCTIONS

- **What are Arguments?**

  Inputs passed into a function when calling it.

- **Function Parameters**:

  A function can take one or more parameters to operate on.



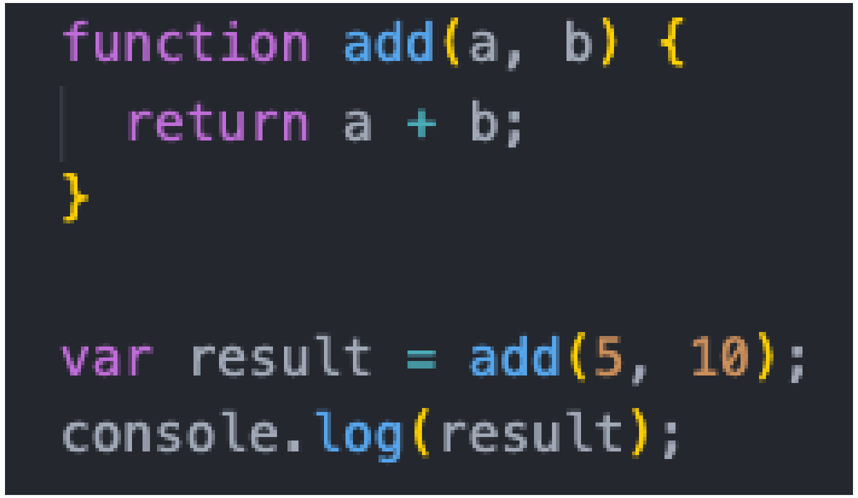
```
function add(a, b) {
  return a + b;
}

var result = add(5, 10);
console.log(result);
```

PASSING ARGUMENTS TO FUNCTIONS

- **What are returns?**

  A function can optionally return a value

  Demo…



```
function add(a, b) {
  return a + b;
}

var result = add(5, 10);
console.log(result);
```

CONCLUSION

- **The Console**:
  Allows us to see output from the JavaScript routine
- **Variables**:
  Store data in memory
- **Expressions and conditions**:
  Can be used to test and determine the program flow
- **Functions**
  Can be used to break down functionality in to smaller reusable routines

- 1. JavaScript Variables (MDN Web Docs): https://developer.mozilla.org/en-US/docs/Web/JavaScript/Guide/Grammar_and_types#declarations
- 2. JavaScript Concatenation (w3schools): https://www.w3schools.com/js/js_string_methods.asp
- 3. JavaScript Expressions and Conditions: https://javascript.info/ifelse
- 4. JavaScript Functions (MDN Web Docs): https://developer.mozilla.org/en-US/docs/Web/JavaScript/Guide/Functions

QUESTIONS?