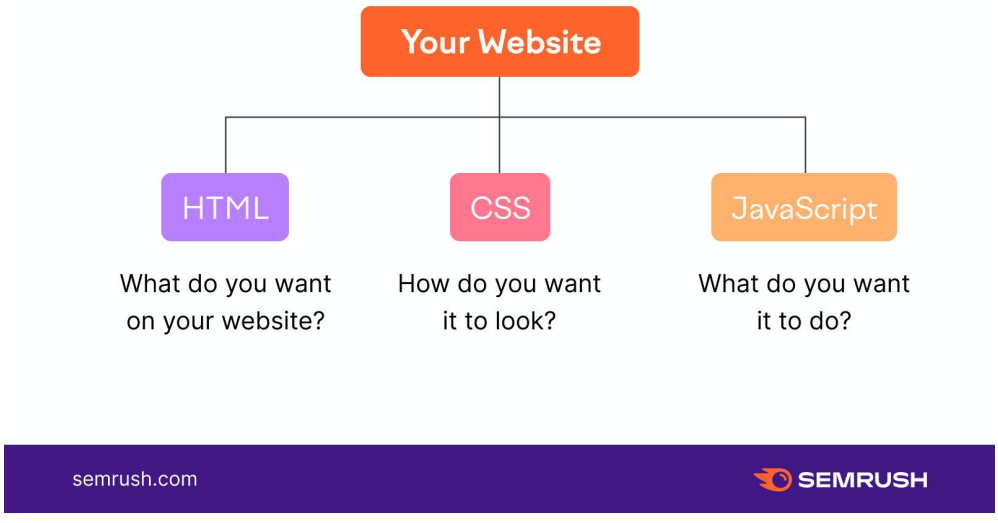
Week 4: Web Development

1. Revision and Quiz



Flex box
Grid Garden
CSS Dinner

2. Transition in CSS

transition
transition-delay
transition-duration
transition-property
transition-timing-function

3. Grid

offers a grid-based layout system
with rows and columns,

4. Introduction to JavaScript

JavaScript is a programming language used for creating dynamic and interactive web pages.

2.1 Adding JS to Webpage

Create an HTML file: Start by making a new file with a .html extension.

Set up the HTML structure: Write the basic HTML structure with <html>, <head>, and <body> tags.

Add a <script> tag: Inside the <body> section, insert a <script> tag for your JavaScript code.

Write your JavaScript: Between the <script> tags, write your JavaScript code.

console.log(“Hey there, let’s learn JS ”)

Save your HTML file: Save your changes to the HTML file.

Open in a web browser: Double-click the HTML file to open it in your browser.

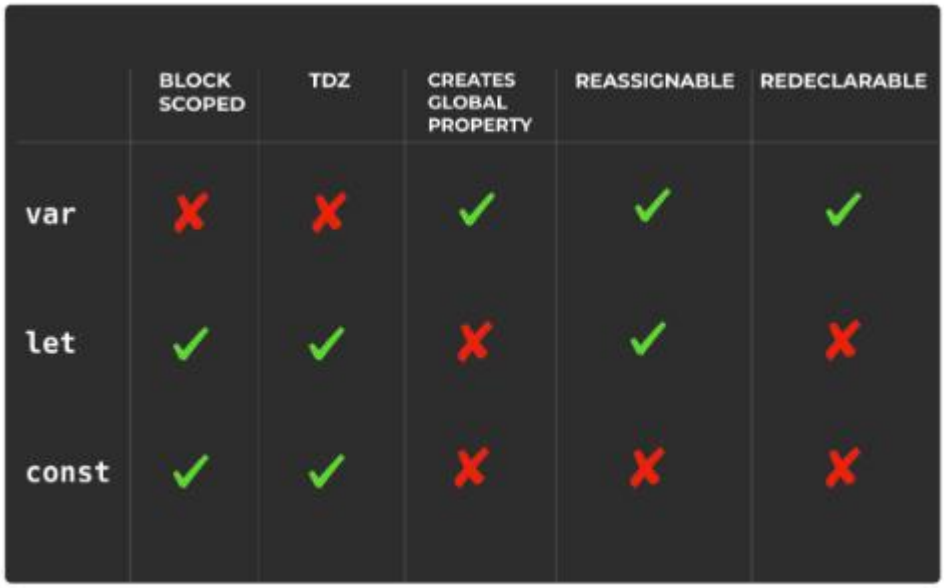
View the console: Use browser developer tools to view JavaScript console output.

Console

console.log("Hello, JavaScript!");

Variables & Const Variables

Variables are used to store data values. In JavaScript, variables can be declared using var, let, or const.




```
// Variable declaration
var age = 25;
let name = "John";
const PI = 3.14;
```

Numbers & Strings

```
// Numeric and string data types
var num = 10;
var str = "Hello, world!";
```

Booleans

```
// Boolean values
var isTrue = true;
var isFalse = false;
```

Type conversion

```
var numAsString = "10";
var numAsNumber = parseInt(numAsString);
```

Array

```
var colors = ["red", "green", "blue"];
```

Object

```
var person = {
   name: "John",
   age: 30,
   city: "New York"
};
```

Operators

```
var x = 10;
var y = 5;
var sum = x + y; // Addition
var isGreater = x > y; // Comparison
x++; // Increment
y--; // Decrement
```

Conditional statements

```
var age = 18;
if (age >= 18) {
   console.log("You are an adult.");
} else if (age >= 13 && age < 18) {
   console.log("You are a teenager.");
} else {
   console.log("You are a child.");
}
```

Switch statement

```
var day = "Monday";
switch (day) {
   case "Monday":
      console.log("It's Monday.");
      break;
   case "Tuesday":
      console.log("It's Tuesday.");
```

```
        break;
    default:
        console.log("It's neither Monday nor Tuesday.");
}
```

Loops

```
// For loop
for (var i = 0; i < 5; i++) {
    console.log("Iteration " + i);
}

// While loop
var count = 0;
while (count < 5) {
    console.log("Count: " + count);
    count++;
}
```

Function declaration

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

Alert , Confirm, Prompt

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Button Click Alert</title>
</head>
<body>

    <h1>Click the button to see an alert</h1>

    <!-- Button with onclick attribute -->
    <button onclick="showAlert()">Click Me</button>

    <!-- JavaScript code -->
    <script>
        function showAlert() {
            alert("Hello, world!");
        }
    </script>
```

```
</body>
</html>
```

Try catch

```
try {
    // Code that may cause an error
    var x = y / 0; // This will cause a division by zero error
} catch (error) {
    // Handle the error
    console.error("An error occurred:", error.message);
}
```

Lab Tasks

Complete the Flex box
https://blog.hubspot.com/website/css-transition-vs-animation
https://www.w3schools.com/css/css3_transitions.asp