Introduction to JavaScript

JavaScript is a language built for the web, it is almost universal and works on a large set of web browsers.

Because JavaScript is built for the web, it runs directly in your browser so it is easy to get started and experiment with it.

Getting Started in the Browser Console

Open the Console:
• Chrome: Right-click → Inspect → Console
• Firefox: Right-click → Inspect → Console
For most web browsers the same steps apply. In some instances it might be disabled by default and requires developer settings to be enabled in the browser settings.

Hands-On JavaScript in the Console

Instructor note: the following are to be done in the web browser console.

Lets type this and try them out in the console.

If the syntax does not make sense that is ok, refer to the example code folders in the course resources repository.

1. Variables

Declaration and assignment
let message = "Welcome!";
let age = 18;

Declaration only

let aVariable;

Assignment

aVariable = "Hello, World!";

2. Data Types

The typeof keyword determines the type of variable you are using It on.

The above variables yield these results.
typeof message; // "string"
typeof age;   // "number"

3. Math & Strings

```
5 + 3;                // 8
"Hello " + "World";   // "Hello World"
```

4. Booleans

```
true && false; // false
10 > 5;        // true
```

5. Arrays

```
let colors = ["red", "green", "blue"];
colors[1]; // "green"
```

6. Objects

```
let user = {
  name: "Sam",
  age: 30
};
user.name; // "Sam"
```

7. Conditionals

```
let score = 85;
if (score > 70) {
  console.log("You passed!");
} else {
  console.log("Try again.");
}
```

8. Loops

```
for (let i = 0; i < 3; i++) {
  console.log("Step " + i);
}
```

9. Functions

```
function square(x) {
  return x * x;
}
square(4); // 16
```

10. Console Tools

- console.log("Hello!")
- alert("Hi!")
- Math.random()

Practice Activities (In the console)

1. Declare a variable for your favorite color.
2. Create an array of your top 3 foods.
3. Write a loop that prints numbers 1–5.
4. Build a function that returns a greeting based on the current time.