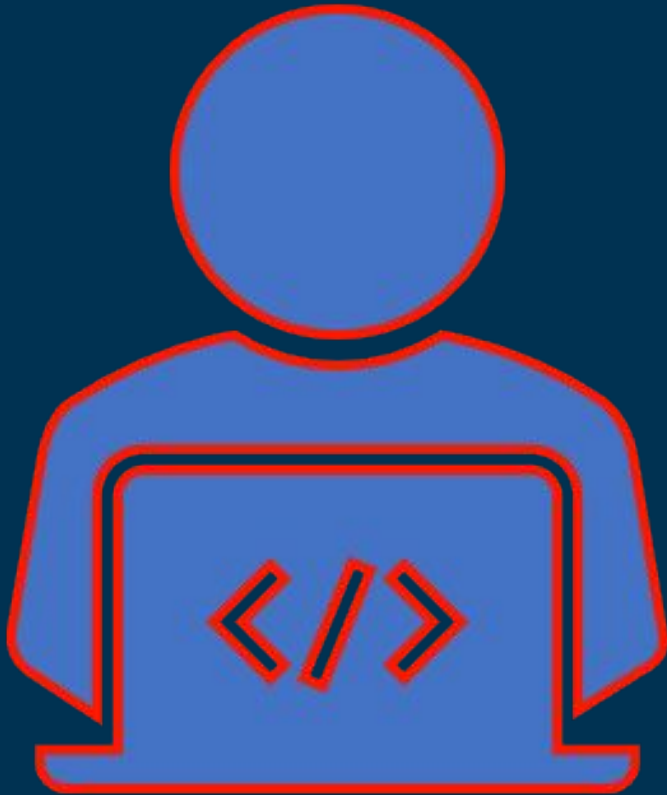# JavaScript

Operators, Types, & Variables

The REPL

- REPL: Read-Eval-Print-Loop
- It's a common feature of interpreted languages
- It allows us to write code and see results line-by-line
- It's great for experimentation and debugging
- Available via the node terminal command or in the browser's console

Basic Syntax and Types

"Primitives" and Objects

"Primitive" Types

- Boolean
- Number
- String
- Undefined
- Null

Object Types

- Object
- Function
- All user-defined classes

The typeof Operator

Used to check the general type of an expression

Returns a String representation of the type   For example, "boolean", "number", "undefined", or "object"

Cannot be used to check the inheritance from a class – all objects are simply "object"

Boolean Expressions

Literal values:	
true	false

Operators:				
|| (or)	&& (and)	! (not)	== and ===	? : (ternary)

Short-circuit evaluation, just like Java

Booleans: Truthy and Falsy Values

Falsy:

- false (boolean literal)
- 0 (numeric literal)
- NaN (numerical literal)
- "" (empty string literal)
- undefined
- null

Truthy:

- Every other value

== vs ===

- == is called loose equality
  - JavaScript will convert compared values
  - 1 == "1" is true
- === is called strict equality
  - JavaScript compares values and types
  - 1 === "1" is false

Numeric Expressions

Literals:

- Decimal, octal, hexadecimal, and binary integers
- Decimal floating-point numbers: 0.0, .005, 3.14
- Exponent: 1.0e10, -.324e-23

Operators:

- +, -
- *, /
- %
- **

Special Values:

- +/- Infinity
- NaN

String Expressions

Literals:

- Single- and double-quote Strings
- Template Strings (backtick Strings)

Operators:

- + (concatenation)
- Dot-method calls (Strings are objects)