

# JavaScript

## Fundamentals



### Who is This Course For?

This course assumes you have no knowledge of any other programming language and are a new comer to JavaScript. It teaches you the basics of the syntax, how to declare variables, write functions, and looping statements.



## Learn how to develop dynamic Web pages using JavaScript

This hands-on JavaScript training course teaches you the knowledge necessary to develop dynamic Web pages using JavaScript. It introduces client-side JavaScript and how the language can be used to turn static HTML pages into dynamic, interactive Web pages. You will be taught the concepts needed to begin building world-class web applications.

### Class Outline

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- What Is JavaScript?
- Development Tools
- Web Browsers
- Linking to an External JavaScript File
- Advantages of Using an External File
- Writing your first JavaScript program
- Browsers and Compatibility Problems
- Types of Data in JavaScript
  - Numerical Data
  - String Data
  - Boolean Data
- Variables
  - Creating Variables and Giving Them Values
  - Assigning Variables with the Value of Other Variables
- Using Data & String Manipulation
  - Operator Precedence
  - Basic String Operations
  - Mixing Numbers and Strings
- Data Type Conversion
- Interacting with the User
  - alert
  - prompt
  - confirm
- Implementing Functions
  - Declaring Functions
  - Invoking Functions
  - Named and Anonymous Functions
  - Passing Arguments
  - Local vs. Global Variables
  - Returning Values from a Function
  - The this Keyword
  - Explaining Closures
- Programming the Browser
  - Overview of the Browser Object Model
  - window Object
  - history Object
  - location Object
  - navigator Object
  - geolocation Object
  - screen Object
  - document Object
  - images Collection
  - links Collection
- Determining the User's Browser
  - Feature Detection
  - Browser Sniffing

- Using Strict Mode
- Arrays
  - A Multi-Dimensional Array
- Decision Making Statements
  - Comparison Operators
    - Precedence
    - Assignment versus Comparison
  - The if Statement
  - Logical Operators
    - AND
    - OR
    - NOT
  - Multiple Conditions Inside an if Statement
  - else and else if
  - Comparing Strings
  - The switch Statement
- Looping
  - The for Loop
  - The for...in Loop
  - The while Loop
  - The do...while loop
  - The break and continue Statements
- The Document Object Model
- The Core DOM Objects
- DOM Objects, Properties and Methods
- Manipulating the DOM
  - Accessing Elements
  - Changing Appearances
    - Using the style Property
    - Changing the class Attribute
- Positioning and Moving Content
- Event Handling in JavaScript
  - Connecting Code to Events
  - Handling Events via HTML Attributes
  - Handling Events via Object Properties
- The Standard Event Model
  - Connecting Code to Events
  - Using Event Data
- Working with Forms
  - Accessing Forms from JavaScript
  - Working with Form Elements
    - Validating Form Fields
    - Checking Required Fields
  - Checking Length of Input
  - Cancelling Form Submission

## Course Requirements

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Basic computer skills and HTML.

