COURSE SYLLABUS

JavaScript Programming Bootcamp

Build a foundation in JavaScript programming. Work with variables, functions, arrays, objects, asynchronous code, APIs, and project development.

Group classes (NYC) and onsite training are available for this course. For more information, email corporate@nobledesktop.com or visit: https://training-nyc.com/courses/javascript-programming-fundamentals



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Course Outline

Variables

- Strings, numbers, booleans; var vs let
- NaN, Number() method, null, error messages
- Nested quotes string concatenation / Interpolation
- Math object, math operators, random numbers

Conditional Logic

- If / else if / else; block scoped variables
- Nested logic; truthy / falsey values
- Ternary expressions; switch-case-break
- Date-Object; the “new” keyword

Functions and the DOM (Document Object Model)

- Function parameters / arguments; return values
- DOM (Document Object Model) events
- DOM Project: Log In form
- DOM Project: Restaurant Bill Calculator form
- DOM Project: Signup form
- Hoisting; function expressions; anonymous functions
- DOM Project: Apartment Rent Estimator form
- Keyboard events; setting CSS with JS
- DOM Project: Mystery Number Guessing Game

Arrays and Objects

- Arrays: item index; nested arrays
- Objects: the “const” keyword; properties; nested objects
- Array Methods: push(), pop(), sort(), splice(), et al
- String methods: replace(), includes(), charAt(), et al

Loops

- For Loops; iterating (looping) arrays
- Looping Arrays of Objects
- While / Do While Loops, Nested Loops
- DOM Project: Making deck of cards & dealing hand
- Passing arrays to functions
- Classic Coding Interview Questions / Challenges

Creating DOM Elements Dynamically

- Creating elements: createElement(), appendChild()
- DOM Project: Chinese Zodiac Animals; Audio()
- DOM Project: Password Generator
- DOM Project: Lottery Ticket Generator
- Dynamically adding properties to Arrays of objects
- DOM Project: Sort Movies by Title, Year and Duration

Array Callbacks & Arrow Functions

- Callbacks: Functions that take functions as arguments
- Array Callback Methods: map(), filter(); method chaining
- Arrow => Functions
- forEach() method, instead of a for loop
- reduce() method

Timer for Calling Functions and Animation

- setInterval() runs a callback function repeatedly on a delay
- setTimeout() runs a callback function once only on a delay
- DOM Project: Update Digital Clock every Second
- DOM Project: Coffee Site with Animated “Clock-Guy” Hands
- DOM Project: Deal Hands of Poker & Blackjack on Timer

Asynchronous Events & APIs

- Synchronous vs Asynchronous Events
- JSON (JavaScript Object Notation); parse & stringify
- DOM Project: Lyric Search API; Promises
- DOM Project: Cryptocurrency Prices API; Async-Await
- Adding a Search Box to Website to Filter API Request

OOP (Object Oriented Programming)

- Function Objects; Prototype
- “Class” keyword; constructor() method; private vs public
- DOM Project: OOP Memory Game, Pt 1
- DOM Project: OOP Memory Game, Pt 2
- Modules: Exporting and Importing Classes