JavaScript

CURRICULUM
Two days
8 hours/day

Master the basics of JavaScript (JS) in this 2-day bootcamp. This bootcamp takes you through the essentials of JS, and touches upon frameworks like jQuery, Node.js and Angular - skills very much in demand in the industry. From humble beginnings as a scripting language running simple code in the browser, JS has grown to be a language of choice for not only front-end development, but also server-side coding. Its ubiquitous nature has made it an essential skill for any web developer worth his salt.

PREREQUISITES
(Apart form those common to other offerings)
- Knowledge of a programming language like C, C++ or Java.
- Basic algorithms knowledge
- Comfortable with HTML

CHAPTERS AND TOPICS

LANGUAGE BASICS

Introduction to JavaScript Language Fundamentals

      Variables and Primitive Data Types

      Variable Scopes, Scope chain and Hoisting

      Using Arrays

      Expressions, Operators and Operator Precedence

      Control flow - Branching and Looping

FUNCTIONS

Introduction to Functions

      Function Declaration and Usage

      Function Hoisting

      Handling Variable Number of Arguments and Types

      Callbacks - Passing Functions as Arguments

      Returning Functions

      Closures

OBJECTS

Introduction to Objects

      Object Declaration using Literal Syntax

      Accessing Properties and Methods

      Adding and Deleting Properties

      The Module Pattern

The *"Class" in JavaScript*

      Functions context (t*his* keyword) and the Constructor Function

      Introduction to the Object Prototype and Prototype Chain

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BUILT-IN CLASSES AND OBJECTS

Introduction to Built-in Classes and Objects in the JavaScript Language

      Object

      Function - Functions as Objects

      Array

Date

JSON

Primitive Type Wrappers - Number, Boolean, String

ERROR HANDLING

Introduction to Handling error scenarios

Strict Mode Execution

Error Handling using onerror

Error Objects

Exception Handling using *try..catch..finally* and *throw*

BROWSER OBJECTS AND THE DOM

Introduction to Objects the Browser Creates

window

document

navigator

location

history

The Document Object Model (DOM)

The DOM Tree, Nodes and Node Types

Node Relationships and DOM Tree Traversal

Node properties and methods for DOM Manipulation

Event Handling

Various Browser Events

The Event Flow - Event Bubbling

Different Ways to Handle Events

Event Object Properties and Methods

ADVANCED TOPICS

Brief Introduction to Topics That Serve as Next Steps in Learning JS and Web Development

ES6 features and the Babel transpiler

jQuery

MEAN Stack for Full-stack Web Development - MongoDB, Express, Angular, Node.js