JavaScript with AngularJS and NodeJS Advance Training

Curriculum 4 Days

Day - 1

- Introduction - JavaScript
  - Why Study JavaScript
  - Application and Feature of Java Script
  - Java Script Code Editor with Example
  - Java Script Output
  - Java Script Placement
- Java Script Variable
  - Variable Declaration Syntax
  - Expression, Keyword. Identifier
  - Operator: Arithmetic, Assignment, String, Comparison, Logical, Type, Bitwise
  - Ternary Operator.
  - Data Type:String,Number,Boolean,Array,Typeof

- Decision Control and Loop Structure
  - Condition Statement
  - Switch Statement
  - Loop Structure: While, do-while, For.
  - Control Flow: Break, Continue, goto Statement
- Function
  - Function Definition, Prototype and Types.
  - Anonymous and Callback Function
  - Call by Value and Call by Reference
  - Apply and Bind Method ()
  - Function Scope: local and global
  - Recursive Function

- Array and String
  - Creating and Accessing Array Elements
  - Array Type: Single, Associative, Multidimensional.
  - Array Method For Sorting and Reversing:
  - concat(),filter(),foreach(),reverse(),join(),splice(),sort(),toString().
  - String Properties and Method
- Java Script Object and Class
  - Object Properties and Method
  - Accessing and Displaying the Object
  - Primitive and Reference Type and Primitive Wrapper Type
  - Class, Constructor and new Operator
  - Inheritance
  - Getter and Setter Method
  - Static Class

- Modules
  - Overview
  - Identifying a Module
  - Creating an Internal Module
  - Internal Module Accessibility and IIFE
  - Named Modules
  - Extending Modules and Importing Shortcuts
  - Organizing Internal Modules
  - Separating Internal Modules
  - External Modules and Dependency Resolution
  - Module Dependencies
  - Importing External Modules Using AMD
  - Importing 3rd Party Libraries Using AMD
  - Modules Recap

Day - 2

- **Java Script Regular Expression**
  - Object Properties and Method
  - Accessing and Displaying the Object
  - Primitive and Reference Type and Primitive Wrapper Type
  - Class, Constructor and new Operator
  - Inheritance
  - Getter and Setter Method
  - Static Class
- **Java Script Error**
  - Handling Error Using Try and Catch Statement
  - Error Object Properties and Error Name value.
  - Regular Expression and Pattern.
- **JS Dom Method and Element**
  - Dom Structure.
  - Dom method and properties with Programming Interface
  - Finding Html Element By: id, tag name, classname, css selector, object collection.
  - Changing Html Content, value of attribute and Style
- **Java Script DOM Event and Event Listener**
  - Event Type: Keyboard, Form, Document, Click Event
  - AddEventListener Method and RemoveEventListener
  - Adding Single and Many Event handler to element and window object
- **Java Script DOM Nodes and Navigation**
  - Retrieving Node Element Using Node Properties
  - Node Value and Type Properties
  - Creating, Removing, Replacing HTML Node Element: append,remove and replace method
- **Java Script DOM Collection and Node List**
  - HTML Collection Object and Length
  - HTML NodeList Object
  - Difference between an HTMLCollection and a Node List
- **Web ApI Introduction and Web History API**
  - What is Web API
  - Browser API and Third-Party API
  - History Object and Properties: back,forward and go method();
- **Web Storage API**
  - Web Storage Concept and Usage
  - Local Storage Object: (i) How to saving data to Local Storage, (ii) How to reading and removing data from local Storage
  - Session Storage Object: (i) How to saving data to Session Storage, (ii) How to reading and removing data from Session Storage
  - Storage Object Properties and Method

Day - 3

- **Web Fetch API**
  - Sending a Request: uploading single and Multiple File
  - Reading Response
  - Handling Status Code of Response
  - Java script Fetch API Example
- **Geolocation Web API**
  - Concept and Usage
  - Interfaces
  - Geolocation Object Properties and Method
- **Introduction - AngularJS**
  - Course Introduction
  - Angular Architecture
  - Demo: Hello World in Angular
  - The Angular Event Reg Application
  - Angular Version
  - Tools Used
  - Summary
- **Angular Controllers & Markup**
  - Introduction
  - Demo: Creating the Node Server
  - Demo: Creating the ASP.NET Server
  - Angular Controllers & Scope
  - Demo: Controllers
  - Demo Handling Events
  - Built-in Directives
  - Event Directives
  - Other Directives - Part 1
  - Other Directives - Part 2
  - IE Restrictions with Angular
  - Expressions
  - Filters
  - Built-in Filters
  - Writing Custo

- **Creating and Using Angular Services**
    - Introduction to Angular Services
    - Creating Your First Custom Service
    - Another Custom Service Example
    - Introduction to Built-In Angular Services
    - Using Angular's $http Service
    - Updating a Node Server for JSON Requests
    - Updating an IIS Server for JSON Requests
    - Using $http Promises
    - Using Angular's $resource Service
    - Saving Data with $resource
    - Using Angular's $anchorScroll Service
    - Using Angular's $cacheFactory Service
    - Using Angular's $compile Service
    - Using Angular's $parse Service
    - Using Angular's $locale Service
    - Using Angular's $timeout Service
    - Using Angular's $exceptionHandler Service
    - Using Angular's $filter Service
    - Using Angular's $cookieStore Service
    - Overview of Less Common Angular Services

- **Angular Routing**
    - Introduction to Angular Routing
    - Websites of Yore
    - Single Page Applications
    - Adding Your First Angular Route
    - More Routing and Browser History
    - Creating a Default Route
    - Accessing Parameters from the Route
    - Using Angular's $route Service
    - Enabling HTML5 Routing
    - Template and Resolve Properties
    - Using Angular's $location Service

- **Testing Angular**
  - Introduction
  - Installing Karma
  - Karma with Webstorm
  - Testing Controllers in Angular
  - Testing Controllers in Angular Part 2
  - Testing Services in Angular
  - Testing Services with Dependencies
  - Testing AJAX Services in Angular
  - Testing AJAX Services in Angular Part 2
  - Testing Filters in Angular
  - Testing Directives - Overview
  - Setting up Karma for testing Directives
  - Testing Directives in Angular
  - End to End testing - Overview
  - Setting up Protractor
  - Setting up Protractor with Webstorm
  - Angular End to End testing - Part 1
  - Angular End to End testing - Part 2
  - Summary

- **Creating Custom Angular Directives**
  - Introduction to Angular Directives
  - Creating Your First Angular Directive
  - Domain-Specific Language via Custom Elements
  - Isolating Directive Scope
  - Exploring Isolate Scope Bindings
  - Handling Events with Directives
  - Observing and Responding to Changes
  - Using Controllers within Directives
  - Sharing Directive Controllers via Require
  - Directive Priority and using Terminal
  - Using Require with Nested Directives
  - Understanding Transclusion
  - Using Compile to Transform the DOM
  - Making jQuery More Explicit with Directives
  - Summary

Day - 4

- **Introduction - NodeJS**
  - Course Introduction
  - What Is Node?
  - Why Node?
  - Some Analogies About Node
  - What You Get When You Install Node
  - Example Files
- **Getting Started with Node**
  - Node’s REPL Mode
  - TAB and Underscore
  - Executing Scripts
  - Working with Timers
  - Node’s Command Line Interface
  - The “process” Object
  - Wrap Up

- **Modern JavaScript**
  - EcmaScript and TC39
  - Variables and Block Scopes
  - Arrow Functions
  - Object Literals
  - Destructuring and Rest/Spread
  - Template Strings
  - Classes
  - Promises and Async/Await
- **NPM: Node Package Manager**
  - What Exactly Is NPM?
  - The NPM Command
  - The package.json and package-lock.json Files
  - Semantic Versioning (SemVer)
  - Installing and Using NPM Packages
  - Creating and Publishing an NPM Package
  - NPX and the NPM Run Scripts
  - Updating NPM Packages

- **Modules and Concurrency**
  - Introduction
  - Defining and Using Node Modules
  - Examples of Module APIs
  - Node's Global Object
  - The Event Loop
  - Errors vs. Exceptions
  - Node Clusters
  - Node’s Asynchronous Patterns
  - Event Emitters
- **Working with Web Servers**
  - Hello World… The Node’s Version
  - Monitoring Files for Changes
  - The “req” and “res” Objects
  - Node Web Frameworks
  - Using Template Languages
- **Working with the Operating System**
  - Introduction
  - The os Module
  - The fs Module
  - The child_process Module
  - Debugging Node Applications