

Web Technologies Boot Camp

NCG 2019 - Course outline

Course Description:

The next major version of HTML introduces a number of new elements and attributes that reflects the typical usage of modern websites. In addition to the mark up enhancements, it also proposes a range of powerful APIs to be implemented by browsers that can aid the development of Rich Internet Applications (RIA) using open standards.

Duration:

5 Days

Pre-requisites:

- Good to have basic understandings of any scripting language

Machine Configuration:

- Pentium Processor
- 2 GB RAM or greater
- 10 G Hard Drive or greater
- Networked with TCP/IP (required)
- Internet connection

Software requirement:

- NodeJS Latest LTS
- VsCode Editor or Sublime or Atom ...
- Few Browsers

Technologies/languages covered

- HTML5
- CSS3
- ReactJS
- Jest
- Java Script

Course Contents

- **Overview of HTML5**
 - DOM level3
 - XHR2
 - CSS3
 - HTML5 Canvas
 - WebSockets
 - HTML5 Forms
 - HTML5 Messaging APIs
 - Web Workers
 - Web Storage
 - Audio And Video
 - HTML5 Geolocation
 - Drag And Drop In HTML5
 - HTML5 Offline Web Applications
- **CSS 3.0**
 - CSS3 Rounded Corners
 - CSS3 Border Images
 - CSS3 Backgrounds
 - CSS3 Colors
 - CSS3 Gradients
 - CSS3 Shadows
 - CSS3 Text
 - CSS3 Fonts
 - CSS3 2D Transforms
 - CSS3 3D Transforms
 - CSS3 Transitions
 - CSS3 Animations
 - CSS3 Multiple Columns
 - CSS3 User Interface
 - CSS3 Box Sizing

- **Introduction to ES6**
 - Setting Up a Babel Project
 - Using Destructuring
 - Using Arrow Functions
 - Setting Up Webpack
 - Using Modules
 - Using Classes
 - Using Promises
 - The 'forEach' Helper
 - The 'map' Helper
 - The 'filter' Helper
 - The 'find' Helper
 - The 'every' and 'some' Helper
 - The 'reduce' Helper
 - Template Strings
 - Enhanced Object Literals
 - Default Function Arguments
 - Rest and Spread Operator

ReactJS

- **Introduction to ReactJS**
 - Javascript MVC
 - View Technology
 - Introduction to ReactJS
 - React and SPA
 - Basic Setup
- **React Basics**
 - React Concepts
 - JSX
 - Render Elements
 - Components and Props
 - State and Lifecycle

- Handling Events
- **React Key features**
 - Conditional Rendering
 - Lists and Keys
 - Forms
 - Lifting State Up
 - Composition vs Inheritance
 - Thinking in React
- **Redux introduction**
 - Core Concepts
 - Three Principles
 - Legacy of Redux
 - Redux Setup
 - First example
- **Redux basics**
 - Action
 - Action Creators
 - State Shape
 - Handling Actions
 - Handling more actions
 - Splitting Reducers
 - Store
 - Dispatch Actions
- **Data Flow and Usage with React**
 - Data Flow
 - Install React Redux
 - Presentational and Container Components
 - Design Component Hierarchy
 - Implementing Components
 - Passing the Store

- **Async Actions and Async Flow in Redux**

- Actions
- Synchronous Action Creators
- Design State Shape
- Handle Actions
- Async Action Creators
- Async Flow

- **Middleware and React Router**

- Middleware
- Middleware Applicability
- React Router Overview
- React Router Configuration
- React Router with Redux
- Navigate with React Router