Web Development



HTML

- HTML Introduction
- > HTML Editors
- > HTML Basic
- HTML Elements
- HTML Attributes
- HTML Headings
- HTML Paragraphs
- ➤ HTML Styles
- HTML Formatting
- > HTML Quotations
- > HTML Comments
- HTML Colors
- HTML CSS
- > HTML Links
- HTML Images

- > HTML Favicon
- > HTML Tables
- **▶** HTML Lists
- > HTML Block & Inline
- > HTML Classes
- > HTML Id
- HTML Iframes
- **▶** HTML JavaScript
- ▶ HTML File Paths
- > HTML Head
- > HTML Layout
- > HTML Responsive
- HTML Semantics
- > HTML Style Guide

CSS

- CSS Introduction
- CSS Syntax
- CSS Selectors
- CSS How To
- CSS Comments
- CSS Colors
- CSS Backgrounds
- CSS Borders
- CSS Margins
- > CSS Padding
- CSS Height/Width
- CSS Box Model

- CSS Outline
- CSS Text
- CSS Fonts
- CSS Icons
- CSS Links
- CSS Lists
- CSS Tables
- CSS Display
- CSS Max-width
- CSS Position
- CSS Z-index

- CSS Overflow
- CSS Float
- > CSS Inline-block
- > CSS Align
- CSS Combinators
- CSS Pseudo-class
- > CSS Pseudo-element
- CSS Opacity

Bootstrap

- BS Get Started
- BS Grid Basic
- BS Typography
- BS Tables
- BS Images
- BS Jumbotron
- BS Wells
- BS Alerts
- BS Buttons
- BS Button Groups
- BS Glyphicons
- **▶** BS Badges/Labels
- BS Progress Bars
- BS Pagination
- BS Pager
- **▶** BS List Groups
- BS Panels

- BS Dropdowns
- BS Collapse
- BS Tabs/Pills
- BS Navbar
- BS Forms
- BS Inputs
- **>** BS Inputs 2
- BS Input Sizing
- BS Media Objects
- BS Carousel
- BS Modal
- BS Tooltip
- BS Popover
- BS Scrollspy
- **▶** BS Affix
- BS Filters

Javascript

- JS Introduction
- JS Where To
- JS Output
- JS Statements
- JS Syntax
- JS Comments
- JS Variables
- JS Let
- JS Const
- JS Operators
- JS Arithmetic
- JS Assignment
- JS Data Types
- > JS Functions

- JS Objects
- > JS Events
- JS Strings
- JS String Methods
- JS String Search
- JS String Templates
- JS Numbers
- JS Number Methods
- JS Arrays
- JS Array Methods
- JS Array Sort
- JS Array Iteration
- JS Array Const
- JS Dates

- JS Date Formats
- > IS Date Get Methods
- JS Date Set Methods
- > JS Math
- > JS Random
- > JS Booleans

- JS Comparisons
- JS If Else
- JS Switch
- JS Loop For
- JS Loop For In
- JS Loop For Of
- JS Loop While
- JS Break
- JS Iterables
- JS Sets
- JS Maps
- JS Typeof
- JS Type Conversion
- > IS Bitwise
- JS RegExp

- > IS Errors
- JS Scope
- > JS Hoisting
- JS Strict Mode
- > JS this Keyword
- JS Arrow Function
- IS Classes
- > IS Modules
- > JS JSON
- JS Debugging
- > JS Style Guide
- JS Best Practices
- JS Mistakes
- > IS Performance
- **▶** IS Reserved Words

JQuery

- jQuery Intro
- jQuery Get Started
- jQuery Syntax
- jQuery Selectors
- jQuery Events
- jQuery Effects
- jQuery Hide/Show
- jQuery Fade
- jQuery Slide
- jQuery Animate
- jQuery stop()
- jQuery Callback
- jQuery Chaining
- jQuery HTML
- jQuery Get
- jQuery Set

- jQuery Add
- > jQuery Remove
- jQuery CSS Classes
- > jQuery css()
- jQuery Dimensions
- jQuery Traversing
- jQuery Traversing
- jQuery Ancestors
- jQuery Descendants
- jQuery Siblings
- jQuery Filtering
- jQuery AJAX
- jQuery AJAX Intro
- jQuery Load
- jQuery Get/Post

ANGULAR COURSEMAP



Module 1 – Getting Started

- Course Introduction
- What is Angular?
- Angular vs Angular 2 vs Latest Angular Version
- CLI Deep Dive & Troubleshooting
- Project Setup and First App
- Editing the First App
- What is TypeScript?
- ➤ A Basic Project Setup using Bootstrap for Styling

Module 2 - The Basics

- How an Angular App gets Loaded and Started
- Creating a New Component
- > Understanding the Role of AppModule and Component Declaration
- Using Custom Components
- > Creating Components with the CLI & Nesting Components
- Working with Component Templates
- Working with Component Styles
- Fully Understanding the Component Selector
- What is Databinding?
- String Interpolation
- Property Binding
- Property Binding vs String Interpolation
- Event Binding
- > Bindable Properties and Events
- > Passing and Using Data with Event Binding
- Two-Way-Databinding

- Combining all Forms of Databinding
- Understanding Directives
- Using ngIf to Output Data Conditionally
- ➤ Enhancing ngIf with an Else Condition
- Styling Elements Dynamically with ngStyle
- > Applying CSS Classes Dynamically with ngClassOutputting Lists with ngFor

Module 3 - Debugging

- > Understanding Angular Error Messages
- Debugging Code in the Browser Using Sourcemaps
- Using Augury to Dive into Angular Apps

Module 4 - Components & Databinding Deep Dive

- Splitting Apps into Components
- Property & Event Binding Overview
- Binding to Custom Properties
- Binding to Custom Events
- Understanding View Encapsulation
- > Using Local References in Templates
- ➤ Getting Access to the Template & DOM with @ViewChild
- Projecting Content into Components with ng-content
- Understanding the Component Lifecycle
- ➤ Lifecycle Hooks and Template Access
- Getting Access to ng-content with @ContentChild
- Recap and Section Assignment

Module 5 - Directives Deep Dive

- ngFor, ngClass, ngStyle and ngIf Recap
- > Creating a Basic Attribute Directive
- Using the Renderer to build a Better Attribute Directive
- Using HostListener to Listen to Host Events
- Using HostBinding to Bind to Host Properties
- ▶ Binding to Directive Properties
- What Happens behind the Scenes on Structural Directives
- > Building a Structural Directive
- Understanding ngSwitch

Module 6 - Using Services & Dependency Injection

- Why would you Need Services?
- Creating a Logging Service
- Injecting the Logging Service into Components
- Creating a Data Service
- Understanding the Hierarchical Injector
- ➤ How many Instances of Service Should It Be?
- Injecting Services into Services
- Using Services for Cross-Component Communication

Module 7 - Changing Pages with Routing

- ➤ Why do we need a Router?
- > Setting up and Loading Routes
- Navigating with Router Links
- Understanding Navigation Paths
- Styling Active Router Links
- Navigating Programmatically
- Using Relative Paths in Programmatic Navigation
- Passing Parameters to Routes
- > Fetching Route Parameters
- > Fetching Route Parameters Reactively
- Route Observables

- Passing Query Parameters and Fragments
- Retrieving Query Parameters and Fragments
- Setting up Child (Nested) Routes
- Using Query Parameters Practice
- Configuring the Handling of Query Parameters
- Redirecting and Wildcard Routes
- Outsourcing the Route Configuration
- An Introduction to Guards
- Protecting Routes with canActivate
- > Protecting Child (Nested) Routes with canActivateChild
- Using a Fake Auth Service
- > Controlling Navigation with canDeactivate
- > Passing Static Data to a Route
- Resolving Dynamic Data with the resolve Guard
- Understanding Location Strategies

Module 8 - Understanding Observables

- Analyzing Angular Observables
- Getting Closer to the Core of Observables
- Building a Custom Observable
- Errors & Completion
- Understanding Operators
- Subjects

Module 9 - Handling Forms in Angular Apps

- ➤ Template-Driven (TD) vs Reactive Approach
- ➤ TD: Creating the Form and Registering the Controls
- > TD: Submitting and Using the Form
- > TD: Understanding Form State
- ➤ TD: Accessing the Form with @ViewChild
- > TD: Adding Validation to check User Input
- > Built-in Validators & Using HTML5 Validation
- > TD: Using the Form State
- TD: Outputting Validation Error Messages
- > TD: Set Default Values with ngModel Property Binding
- TD: Using ngModel with Two-Way-Binding
- ➤ TD: Grouping Form Controls
- > TD: Handling Radio Buttons
- TD: Setting and Patching Form Values
- > TD: Using Form Data
- ➤ TD: Resetting Forms
- ➤ Introduction to the Reactive Approach
- > Reactive: Setup
- Reactive: Creating a Form in Code
- Reactive: Syncing HTML and Form
- ➤ Reactive: Submitting the Form
- > Reactive: Adding Validation
- ➤ Reactive: Getting Access to Controls
- Reactive: Grouping Controls
- Reactive: Arrays of Form Controls (FormArray)
- ➤ Reactive: Creating Custom Validators
- > Reactive: Using Error Codes
- ➤ Reactive: Creating a Custom Async Validator
- Reactive: Reacting to Status or Value Changes
- ➤ Reactive: Setting and Patching Values

Module 10 - Using Pipes to Transform Output

- ▶ Introduction & Why Pipes are Useful
- Using Pipes
- Parametrizing Pipes
- Where to learn more about Pipes
- Chaining Multiple Pipes
- > Creating a Custom Pipe
- Parametrizing a Custom Pipe
- Example: Creating a Filter Pipe
- > Pure and Impure Pipes (or: How to "fix" the Filter Pipe)
- Understanding the "async" Pipe

Module 11 - Making Http Requests

- ➤ How Does Angular Interact With Backends?
- ➤ The Anatomy of a Http Request
- Backend (Firebase) Setup
- Sending a POST Request
- ➤ GETting Data
- ➤ Using RxJS Operators to Transform Response Data
- Using Types with the HttpClient
- Outputting Posts
- Showing a Loading Indicator
- Using a Service for Http Requests
- > Services & Components Working Together
- Sending a DELETE Request
- Handling Errors
- Using Subjects for Error Handling
- Using the catchError Operator
- ➤ Error Handling & UX
- Setting Headers
- Adding Query Params
- Observing Different Types of Responses
- > Changing the Response Body Type
- Introducing Interceptors
- Manipulating Request Objects
- Response Interceptors
- Multiple Interceptors

Module 12 - Authentication & Route Protection in Angular

- How Authentication Works
- Adding the Auth Page
- Switching Between Auth Modes
- Handling Form Input
- Preparing the Backend
- Make sure you got Recipes in your backend!
- Preparing the Signup Request
- Sending the Signup Request
- Adding a Loading Spinner & Error Handling Logic
- Improving Error Handling
- Sending Login Requests
- Login Error Handling
- Creating & Storing the User Data
- Reflecting the Auth State in the UI
- Adding the Token to Outgoing Requests
- Attaching the Token with an Interceptor
- Adding Logout
- Adding Auto-Login
- Adding Auto-Logout
- Adding an Auth Guard

Module 13 - Dynamic Components

- ➤ Adding an Alert Modal Component
- Understanding the Different Approaches
- Using ngIf
- > Preparing Programmatic Creation
- > Creating a Component Programmatically
- Understanding entryComponents
- Data Binding & Event Binding

Module 14 - Angular Modules & Optimizing Angular Apps

- ➤ What are Modules?
- Analyzing the AppModuleGetting Started with Feature Modules
- Splitting Modules Correctly
- Adding Routes to Feature Modules
- Component Declarations
- > Understanding Shared Modules
- Understanding the Core Module
- > Adding an Auth Feature Module
- > Understanding Lazy Loading
- Implementing Lazy Loading
- ➤ Alternative Lazy Loading Syntax
- More Lazy Loading
- > Preloading Lazy-Loaded Code
- Modules & Services
- > Loading Services Differently
- ➤ Ahead-of-Time Compilation

Module 15 - Deploying an Angular App

- Deployment Preparation & Steps
- Using Environment Variables
- ➤ Deployment Example: Firebase Hosting
- Server Routing vs Browser Routing

Module 16 - Angular Changes & New Features

- ➤ What's New with Angular Current Version?
- ➤ A First Look At Angular Elements
- > What's New & How to Update

Node JS



Introduction

Understating what is node, why and its features

Javascript Basics

ES6, Array Object and its methods, Async/Await, Promise etc

Node Introduction & Server Setup

Creating node server, understanding Lifecycle and event loop Request/Response routing and redirecting Blocking/Non-Blocking code

NPM & Nodemon

Understanding NPM, Global and local npm install Using Nodemon for autorestart, debugging etc.

Working with Express

Understanding Express.js
Adding middleware
Handling routes
Creating and serving html pages
error pages

Understanding MVC

MVC Application Architecture Creating the first MVC Application CRUD Operations

Dynamic Routes

- > Extracting dynamic params, Parsing data with POST request,
- > Query params, REST operations

SQL Introduction

Comparing SQL and NoSQL, Understanding basics of SQL like
 CRUD operation in DB

Using Sequelize

Connecting to SQL DB and doing CRUD operations

NoSQL and MongoDB

Understanding NoSQL and MongoDB

Mongoose

> Using mongoose for doing CRUD in MongoDB

Authentication

- Adding user authentication
- Encrypting password
- route protection etc

Email Sending

- > Setting up a Local SMTP Server
- > Sending a Plain-Text Email
- > Sending Fancy Emails using HTML
- Adding Attachments

Advanced Authentication and validation

- Using Tokens
- Authorization
- > Input validations

Error Handling

- Error object
- > Try...catch
- > Throw
- Call stack
- Effective function naming
- Asynchronous paradigms like promise

File Uploads and Downloads

- ▶ Introduction to File Upload
- > File Uploads Modules
- How to use Upload Modules
- Hands On File Upload and Download

Working with REST api

- Support for REST (Representational State Transfer)
- ➤ GET,POST,PUT,DELETE Methods
- POSTMAN Tool
- JSON Structure
- How to enable Web Service
- Authentication in Node Js
- CRUD Operations API
- Understanding Websockets and Socket.io
- Deploying App

Additional Features

- > certification support and production support
- > Jasmine frame work- Unit testing frame work

Industry Induction

- Project methods
- > SDLC, Agile
- Scrum basics
- **▶** GIT
- > company selection



