Academic Year   :   2019-2020

Course Name   :   Angular and Firebase

Course Code   :   ADD-CS-04

Training Firm   :   Mr. Abey Abraham, Idea Elan

Course Outcome

- Reduce the amount of code you write to build rich user interface applications.

- Increase the reliability and maintainability of UI by using data binding.

- Retrieve data from back-end server, manipulate it and display it with ease.

- Modularise your code with the custom services and directives.

- Providing two-way binding of data.

- Create Single Page Applications (SPA).

- Understand the Firebase Web Platform.

- Understand how to simplify a database by using Firebase data modeling.

- Develop powerful applications that can process real-time data without the need to define detailed database structures.

Syllabus

Session 1: Introduction to HTML	
HTML Basics, Elements, Attributes, Styles	Forms, Form Elements, Input Element Types
Input Attributes, File Paths, Script tag	HTML & XHTML
Session 2: Introduction to CSS	
CSS Introduction, Syntax, Selectors, Styling	CSS Tables, CSS Box Models
Pseudo class, Pseudo Elements	CSS Opacity, CSS Navigation Bar, Dropdowns
Session 3: Introduction to JavaScript	
JavaScript Statements, Keywords, Functions	JavaScript Programs, Operators, Functions
Function Parameters, Function Return Types	Data Types, Primitive Types
Session 4: Working with Objects	
Object Oriented Programming, Object Creation	Adding Properties of Objects
Adding Methods of Objects	JavaScript Conditional Statements

JavaScript Loops & Iteration	Enumerating Properties, Callbacks, JSON

Session 5: Angular JS Basics

What is AngularJS?, Why AngularJS?	Features of Angular JS, Model-View-Controller
Why MVC matters, MVC-The Angular JS way	My First Angular JS app

Session 6: Angular Expressions

All about Angular Expressions	How to use expressions, Angular vs JavaScript

Session 7: Filters

Built-In Filters, Using Angular JS Filters	Creating Custom Filters

Session 8: Directives

Introduction to Directives, Directive Lifecycle	Using Angular JS built-in directives
Binding controls to data, Matching directives	Creating a custom directive

Session 9: Controllers

Role of a Controller, Controllers & Modules	Attaching Properties and functions to scope
Nested Controllers, Using Filters in Controllers	Controllers in External Files

Session 10: Angular JS Modules

Introduction to Angular JS Modules	Bootstrapping Angular JS

Session 11: Angular JS Forms

Working with Angular Forms, Model Binding	Form Controller, Validating Angular Forms
Forms Events, Updating Models with a Twist	$error object

Session 12: Scope

What is scope, Scope Lifecycle	Two-way data binding, Scope Inheritance
Scope Inheritance, Scope & Controllers	Scope & Directives, $apply and $watch
Rootscope, Scope Broadcasting	Scope Events

Session 13: Dependency Injection & Services

What is Dependency Injection	Using Dependency Injection, What are services

Creating Services, Factory, Service & Provider	Using Angular JS built in services

Session 14: Single Page Application (SPA)

What is SPA, Pros and Cons of SPA	Installing the ngRoute module, Configure route
Passing Parameters, Changing location	Resolving promises, Creating a Single Page Ap

Session 15: Firebase Introduction

Getting Setup With Firebase	Writing your first Firebase Data
How Data Works in Firebase	Reading your first Firebase Data

Session 16: ins and outs

Writing	Reading
Debugging	Lists in Firebase and Firebase UI

Session 17: Structure your Database Schema

Sorting in Firebase with orderBy	How and why to de-normalize data
Dealing with Many to Many relationships in Firebase	Using IndexOn and OrderByValue for faster searches
Range, Start At, End At and Limit queries	Basic Searching in Firebase