AngularJS Syllabus

Overview: AngularJS is a structural framework for creating dynamic web applications. HTML is a great declarative language for static pages. It does not contain much for creating a dynamic applications. So Angular will be filling that gap. Angular's data binding and dependency injection eliminate much of the code than we would actually write. The best part is that it all happens in the browser by making it an ideal partner with any server technology.

Course objectives:

- ❖ 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).

Pre-requisite / Target Audience:

Working knowledge of HTML and JavaScript.

Module 1: Introduction

In this module you will learn brief introduction to angular js and MVC pattern i.e. used in angular. And you will learn how to setup angular framework in local environment. You can also learn how to create your first application using angular framework.

- ❖ Introduction to AngularJS
- ❖ MVC Architecture
- ❖ Conceptual Overview
- ❖ Setting up the Environment
- ❖ First Application
- ❖ Understanding ng attributes

Module 2: Expressions and Data Biding

In this module you will learn what expressions are and how to implement expressions , and what are the different types expressions In angular like Number and String Expressions, Object Binding and Expressions, and also use arrays and understanding data binding .

- ❖ Number and String Expressions
- ❖ Object Binding and Expressions
- ❖ Working with Arrays
- ❖ Forgiving Behavior
- ❖ Understanding Data binding

Module 3: Working with Directives

In this module you will learn how to make use of built-in elements of angular Core Directives, how to use directives and different types of directives like styles directives,,mouse and keyboard events directives .

- ❖ Conditional Directives
- ❖ Styles Directives
- ❖ Mouse and Keyboard Events Directives

Module 4: Controllers

In this module you will learn about $scope context and controllers and how to use controllers and $scope object ,passing parameters to the methods and also we will learn how to create nested controllers and Scope Inheritance , Multiple Controllers and their scopes.

- ❖ Understanding Controllers
- ❖ Programming Controllers & $scope object
- ❖ Adding Behavior to a Scope Object
- ❖ Passing Parameters to the Methods
- ❖ Having Array as members in Controller Scope.
- ❖ Nested Controllers and Scope Inheritance.
- ❖ Multiple Controllers and their scopes

Module 5: Filters

In this module you will learn what are pipes ,what is the use of pipes ,and also we will learn built-in pipes In angular,how to create custom pipes and how to use those custom pipes in our code.

- ❖ Built-In Filters
- ❖ Uppercase and Lowercase Filters
- ❖ Currency and Number Formatting Filters
- ❖ OrderBy Filter

❖ Filter Filter

❖ Creating Custom Filter

Module 6: Forms

In this module you will learn how to deal with forms and its controls using angular framework, you will learn how to perform validations using HTML5 attributes (minlength, maxlength, pattern etc...) and how to make use of javascript events.

❖ Using Simple Form

❖ Working with Select and Options

❖ Input Validations

❖ Using CSS classes

❖ Form Events

❖ Custom Model update triggers

❖ Custom Validations

Module 7: Modules

In this module you will learn what are modules an why they are used. And also what is the Module Loading and Dependencies ,how to setup of application , and also we going to learn what is creation and retrievel.

❖ Why Module?

❖ Module Loading and Dependencies

❖ Recommended Setup of Application

❖ Creation vs Retrieval.

Module 8: Services

In this module you will learn about services and Dependency Injection (DI). And also we will learn how to creating services , and advantages of services , how to inject dependencies in a service.

❖ Understanding Services

❖ Developing Creating Services

❖ Using a Service

❖ Injecting Dependencies in a Service

Module 9: Ajax in AngularJS

In this module you will learn how to use built in services of angular framework and ajax implementation using $http and $q services. And also we will learn Ajax Implementation using $http and $q Service.

- ❖ $http Service
- ❖ $q Service
- ❖ Ajax Impl using $http and $q Service

Module 10: Routing

In this module you will learn and introduction to SPA (Single page application) and how to perform routing in angular framework.

- ❖ Introduction to SPA
- ❖ Creating HTML Templates
- ❖ Configuring Route Provider.

Real-time Project involving most of the above concepts with following will be provided

- • Product Abstract Document
- • Requirement Specification Document
- • **Step-by-Step procedure for building the project from ground up**
- • Complete Source Code
- • Database Script with Sample data
- • Instructions to Setup the Project on a Development box
- • Instruction to Deploy the project on Production Box / Microsoft Azure

At the end of the course participants will be able to

1. Build native mobile apps for Android, iOS and using Angular 1.x
2. Understand the fundamentals of Angular Forms and its architecture
3. Present data in beautiful, interactive lists
4. Build forms and setting pages
5. Implement Single page application(SPA)