

POWER ACADEMY

Angular 4.0

OVERVIEW

Angular is a JavaScript Client Side Framework. Angular maintain compatibility with web standards and it is easy to learn. Angular 4.0 will allow you to reuse your code in any deployment target such as web, mobile web, and native mobile and native desktop. Angular is using the popular reactive programming library RxJS and allow you to build very fast applications with the maximum speed possible on the Web Platform today. Angular is coming with a great set of tooling helping you to write good code, test it and efficiently move it from development to production.

On Completion, Delegates will be able to

- Build Single Page Application with Angular 4
- Understand how Angular 4 works
- Use best practices for testing, app structure and performance.

Who should attend

This course intends to front-end developers who wish to work with the best framework.

Prerequisites

Before attending this course, students must have:

- Previous experience in Object Oriented Programming (Java, C++, C#)
- Basic understanding of the HTTP protocol
- Basic knowledge of HTML, CSS and JavaScript

Duration

40 Academic hours

Course contents

Module 1 - Introduction to Angular

- Single Page Applications (SPA)
- The need for javascript framework
- Reactive Programing and the future of Web Applications
- Setting up the environment
- "Hello Angular 4" - your first app.

Module 2 - Type Script

- Angular is built on Type Script
- JavaScript, ECMAScript5, ECMAScript 6 and Type Script
- Understanding the JavaScript Closures
- Types
- Classess
- Inheritance
- Generics Modules
- Tools

Module 3 - Angular 4 behind the hood

- Angular architecture
- How Angular works
- The application
- The model
- The components
- The component decorator
- Putting it all together

Module 4 – Angular Components

- NgFor
- NgIf
- NgSwitch
- NgStyle
- NgClass

Module 5 - Angular Forms

- Forms in Angular
- Using controls in forms
- Using Control Groups
- Constructing a Form using a FormBuilder
- Input Validations
- Watchers
- The NgModel

Module 6 - Routing

- What is Routing
- The need for routing
- Routing options
- Path Location
- Passing parameters
- Nested routes
- Lazy Loading and Performance

Module 7 - Services, Observers and the RxJS library

- Understanding Reactive Programming
- Working with the RxJS library
- Working with data Observables
- Promises vs. Observables
- Implementing custom services

Module 8 - Data Model

- The importance of a solid data model
- Constructing your Data Models
- Validating data in the model
- Sharing data model with the server

Module 9 - Views, Directives and responsive design

- Creating views and html templates
- Creating Directives
- Responsive design and your template layout
- Using themes
- Working with Angular Material
- Working with Angular Bootstrap

Module 10 - communicating with the server

- XHR and AJAX
- Working with Angular http
- Basic get request
- Using REST
- Http and promises
- Http API

Module 11 – What`s new in Angular 4

- View engine
- Ng-if else
- Angular animations
- New pipes and http features
- Forms, validation and select new features

Module 12 - Testing

- Testing overview
- End-to-End vs. Unit Testing
- Jasmine testing
- Class testing
- Pipe testing
- Async Service Testing
- The Angular Test Environment
- Component Testing
- Testing tools