IBM SKILLS ACADEMY

Angular TRAINING MODULE

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Angular is one of the most widely used single-page application development frameworks in the industry. It makes it easier than ever to create efficient and production-ready single-page applications.

In this Angular training module, you will learn the core concepts of Angular including components, directives, Services & dependency injection, pipes, views, forms and tables, Animation, Angular with SQL. The course will guide you through creating Angular components. As you advance, you'll get to grips with developing and using pipes to format data effectively. The course will later take you through creating custom directives and using them. Toward the concluding sections, you'll learn how to do end to end testing. It also covers how to use boilerplate components.

By the end of this course, you'll have explored the essential Angular features and have gained the skills you need to build robust single-page applications.

LEARNING OBJECTIVES

- Provides introduction about JavaScript & Angular.
- Provide hands on core Angular concepts including components, Modules & Directive.
- Provide hands on Services, Animation, forms & tables, Events
- Provides hands on Angular using SQL
- Understand how to use Karma and Jasmine for E2E testing
- Introduces how to use boilerplate components.

PREREQUISITES SKILLS

- Understanding of JavaScript and HTML.

DURATION

32 Hours

SKILL LEVEL

Basic - Intermediate

HARDWARE REQUIREMENTS

Processor	2 GHz or Higher
GB RAM	8 GB
GB Disk Free	80 GB
Network Requirements	Yes

SOFTWARE REQUIREMENTS

Operating System	Windows / Linux
Other essential software	Postman, npm 6.9.0, Angular 7,
DB	MySQL
Editor	Visual Studio Editor
Browser	Chrome

The following chapter and exercise durations are estimated and might not reflect every class experience. The estimates do not include the duration of additional exercises or sections. Students in this course to have setup the software requirement as stated. The course contains test your knowledge after each chapter.

COURSE AGENDA

Chapter 1. Introduction to JavaScript

Duration: 2 Hrs.

Overview	This chapter introduces to JavaScript and JavaScript function, with hands on exercise to better understand DOM HTML
Learning Objectives	After completing this unit, you should be able to: • Clearly understand JavaScript functions. • Do hands on to understand better on DOM. • Understand the difference between Angular and React.

Chapter 2. Introduction to Angular 7

Duration: 4 Hrs.

Overview	This chapter provides introduction to Angular followed by covering Angular architecture and lifecycle core features
Learning Objectives	After completing this unit, you should be able to: • Explain why Angular is best to create Single page application • Understand Angular architecture • Setup Angular environment and complete the sample Hello world application.

Chapter 3. Angular 7 core modules

Duration: 12 Hrs.

Overview	This chapter provides an introduction along with hands on exercise to Angular 7 core concepts. We will have hands on to create components, modules, services, Pipes, Custom pipes, Events, Forms, Tables, DOM, Directives, Views, Routing and Animations, Angular with SQL, Angular with Server and Angular Material Design for Mobile
Learning Objectives	After completing this unit, you should be able to: • Understand what the purpose of each module is • Hands-on example to implement each of the modules • As of Angular with SQL, we have hands on example to set up backend service using Express framework of Node JS and learn how to set up Mongo DB and use our backend service to perform CRUD operations. • For Angular with Server, we have hands on example to build a Inventory Management Application • For Mobile, we have hands on example to build an application using Angular Material design component.

Chapter 4. Testing Angular Apps

Duration: 7 Hrs.

Overview	This chapter gives an overview of Karma and Jasmine and provides hands on how to use Karma
Learning Objectives	After completing this unit, you should be able to: • Better Understanding on Karma and Jasmine testing framework • Do hands on exercise using Karma / Jasmine to perform end to end automated testing

Chapter 5. Introduction to Boilerplate

Duration: 7 Hrs.

Overview	In this topic we will explain what a boilerplate code is and why we use it. We will also see what a boilerplate component is and how it is different from boiler plate code.
Learning Objectives	After completing this unit, you should be able to: • Understand what boiler plate code and component is. • We will have hands on to understand how to Initialize a boilerplate to kickstart a project.