

# Angular



## Session Plan

- ✓ Getting Started
- ✓ Angular Introduction
- ✓ Components and DataBinding
- ✓ Directives
- ✓ Debugging and Error handling
- ✓ Life Cycle Hooks
- ✓ Pipes
- ✓ Using Services & Dependency Injection
- ✓ Forms Programming
- ✓ RXJS and Http Programming
- ✓ Routing



Day 1

# Getting Started with Angular



# Getting Started with Angular

- What are Single Page Applications (SPA)
- Characteristics of Single Page Applications
- JavaScript Frameworks used to design and develop SPA.
- What is Angular?
- Angular Environment and IDEs
- Installing Angular CLI and Creating a sample project
- Directory structure and various configuration files



# Getting Started with Angular

- Bootstrapping Angular Application
- Understanding the Role of AppModule and Component Declaration
- Angular CLI commands
- Installing Bootstrap and styling your application
- Decorators in Angular



Day 2

# Components, DataBinding Directives



# Components and DataBinding

- What are Components?
- Manually Creating Components
- Working with Component Templates and Component Styles
- Data Databinding
- String Interpolation
- Property Binding
- One Way Binding
- Two Way Binding
- Event Binding
- Passing Data between Components



## Directives

- Understanding Directives
- Structural Directives and Attribute Directives
- ngIf to Output Data Conditionally
- ngIf with an Else Condition
- Styling Elements Dynamically with ngStyle





Day 3

# Debugging and Error handling, Life Cycle Hooks



## Directives

- CSS Classes Dynamically with ngClass
- Outputting Lists with ngFor
- Getting the Index when using ngFor
- Understanding ngSwitch
- HostListener to Listen to Host Events
- HostBinding to Bind to Host Properties



## Debugging and Error handling

- Understanding Angular Error Messages
- Using VS Code to debug Angular Applications
- Using Angular DevTools to Dive into Angular Apps
- Creating and using Global Custom ErrorHandlers
- Using the new ng Object



## Life Cycle Hooks

- Understanding the Component Lifecycle
- Seeing Lifecycle Hooks in Action
- Tracking Changes
- Lifecycle Hooks and Template Access
- @ViewChild()



Day 4

# Life Cycle Hooks, Pipes



## Life Cycle Hooks

- Getting Access to the Template & DOM with @ViewChild
- Projecting Content into Components with ng-content
- @ContentChild() decorator
- Getting Access to ng-content with @ContentChild



# Pipes

- Pure and Impure Pipes
- Using Built in Pipes
- The PipeTransform Interface
- Creating Custom Pipes
- Performance implications of Impure Pipes



Day 5

# Services in Angular





## Using Services & Dependency Injection

- Understanding DI in Angular
- Constructor based hierarchical Injector
- Singleton and non-Singleton Objects
- Using Service Classes
- Working with various Decorators in DI
- @Injector()
- @Injectable()



Day 6

# Forms Programming



## Forms Programming

- Building Template Forms and Reactive Forms
- Understanding FormBuilder, FormGroup, FormControl classes
- Validating Forms
- Creating Custom Validators
- Implementing Asynchronous Validations
- Submitting form data to the server



Day 7

# RXJS and Http Programming



## RXJS and Http Programming

- RXJS Introduction
- Observables, Observers and Subjects
- Consuming Web Services
- Passing parameters using HTTP Headers
- Creating custom Http Interceptors
- Error handling in RXJS



Day 8

Routing



# Routing

- Routing Introduction
- Route Definition Object
- Router Outlets
- Passing Parameters to Routes
- Life cycle of Router
- Implementing Guards and Resolvers



## THANK YOU

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