Introduction to TypeScript and ES6

- Introduction to TypeScript
- Typescript datatypes
- Arrow functions and functions in typescript
- Defining class and interface
- Defining a module
- Importing a module
- Generics

Introduction to Angular

- What is Angular
- Why Angular
- What is Transpiling and its importance
- Bundling tools and what they do
- Installing and using Angular 4
- About Angular CLI
- Creating Application using Angular CLI
- Application Structure and

Configuration files **Hands-on:** Creating first

angular app and test running it.

Components

- What is a component?
- Component decorator
- Component architecture
- Component state & behaviour
- Component template
- Styling a component
- Interpolation and the expression context

Templates

- Inline vs External
- Template Expressions
- Data Bindings
- Built-in Structural Directives
- Built-in Attribute Directive

Hands-on: Creating a component and exploring interpolation, structural and attribute directives

- Component Communication and Hierarchy
- Component hierarchy
- Child Components
- Calling one component in another
- Input and Output
- Parent Child component communication
- Component life cycle hooks

Hands-on: A Simple application to explore component life cycle and parent child component communication. Planning and starting single page application to be built throughout the course.

Dependency Injection and Services

- Introduction to Services
- Building a Service
- Introduction to Dependency Injection
- Injectors & Providers
- Registering Providers
- Injecting a service to a component
- Application wide dependency injection

Hands-on: Adding required services to the Single page application built as part of course

Http and Observables

- ☐ The HTTP providers
- ☐ Injecting the providers
- ☐ Making a GET call
- ☐ Handling error
- ☐ More about Observables
- ☐ Making a POST request
- ☐ Working with headers

Hands-on: Write services to consume rest-api by using angular HTTP

Session

7: Pipes

- ☐ Built-in Pipes
- ☐ Custom Pipes

Custom Directives

- ☐ Building attribute directives
- ☐ Building structural directives

Hands-on: building pipes and custom directives for the single page application

Routing

- o Why use routing?
- o Defining a route table
- o Route configuration
- o Router outlets

- o Navigation using hyperlink
- o Navigation using code
- o Supplying parameters to a route URL

Hands-on: establishing route for your single page application

Form Handling

- o Template driven vs. model driven form handling
- o Inbuilt form validation
- o Custom form validation

Hands-on: creating forms and validating and adding them to single page application

I n t e r n a t i o n a l i z a t i o n

- ☐ Pre-compiled and runtime
- ☐ Using ng2-Translate

Security

- o Security threats
- o Best practices
- o Prevent cross site scripting
- o Sanitization
- o Auditing your application

Hands-on: Localizing your applications and applying security principles

Testing your application

- ☐ What is client side unit testing
- ☐ The Jasmine framework
- ☐ Installation & configuration
- ☐ A simple jasmine test case
- ☐ Testing components, services
- ☐ Running test cases

Hands-on: Writing unit test cases for your application and deploying your application