Welcome to Ashok IT........

My name is Ashok (having 8+ yrs experience as a java developer, currently i am working as Technical Lead in Usa based banking company (product based).

I am having 5+ years of experience in teaching.....

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Today : First Session for Angular -11 with TypeScript

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Pre-Requesities

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HTML, CSS and Basics of Java Script

Course Content

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Part-1

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What is a web application

Multi Page web application

Single Page Web Application (SPA)

Angular Introduction

Angular JS vs Angular Framework

Angular Framework Version History

Advantages of Angular

Angular Architecture

Part-2

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TypeScript Introduction

Advantages of TypeScript

Java Script vs TypeScript

Environment Setup to work TypeScript

Variables

DataTypes

OOPS

Class

Object

Constructor

Inheritence

Access Modifiers

Interfaces (Contracts)

Enumerations

Modules

Examples Using TypeScript

Part-3

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Revise Angular Introduction

Revise Angular Architecture

Environment Setup (NPM, Angular CLI, VS Code IDE)

First Application Creation Using Angular

Understanding Angular Application Folder Structures

Live Server to run Angular apps

Components in Angular

Modules

Data Bindings

Login App using Angular

Registration App using Angular

Directives

Pipes

Form Based Applications using Angular

- Template driven forms

- Reactive Forms

Form validations

Routings

Part-4

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Http Client

2 or 3 REST APIS using Spring Boot

Consuming Backend Rest Apis using Angular

Spring Boot with Angular Integration

Interview Questions

Duration : 30 classes

Timings: 11:30 AM IST - 1:00 PM IST

Course FEE : FREE

Trainer: Mr. Ashok

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Lot of demand is there for Full Stack Developers

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Backend Development : Spring Boot & Microservices

Frontend Development : Angular or React

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Course Name : Angular 11 with TypeScript

Start Date : 19-Apr-2021

Class Timings : 11:30 AM - 1:00 PM IST (Mon-Sat)

Duration : 30 classes

Course FEE : 0 INR (FREE COURSE)

Trainer : Mr. Ashok (8+ yrs experience, working professional)

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Pre-Requisites : HTML, CSS and Java Script (Basics)

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19-Apr-2021 : Class Recording: https://www.youtube.com/watch?v=VgWl5QzJwHo

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Today's session : Full Stack Development, MPA and SPA

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-> Now a days in the industry companies are following Microservices architecture to develop the applications.

-> Microservices is an Architectural Design Pattern which is used to develop our applications with loosely coupling and easy maintenence.

-> As part of this Microservices architecture we will develop business logics as Rest Apis.

-> REST APIS are for B 2 B communication (Business to Business Communication).

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Fullstack Development :Backend Development (REST apis) + Frontend Development (UI)

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-> As a fullstack developer we are going to develop web applications.

What is a web application?

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-> The application which runs in server is called as web application.

-> Multiple users can access web applications at a time by using internet.

Ex: Facebook, Gmail, IRCTC etc.....

-> We can see 2 types of web applications

1) Multi page web applications

2) Single page web applications

-> In Multi page web applications for every request new web page will be loaded at client side. Here everytime entire page will be reloaded.

-> In Single page web application web page will be loaded only for first request. From second request onwards only content will be updated without reloading the entire page.

19-Apr (Session-1) - Pre Requisites for Angular-11 and Course Content

20-Apr (Session-2) - Multi Page Web App vs Single Page Web app

Last two sessions videos available in our YouTube Channel

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YouTube Channel URL : http://www.youtube.com/c/AshokIT

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What is Fullstack Development?

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-> As part of fullstack development we should develop backend Rest Apis and Front End user Interface.

-> To develop backend rest apis we will use "Spring Boot & Microservices"

-> To develop frontend user interface we will use below technologies

HTML

CSS

Java Script

BootStrap

Angular or React JS

-> The resouce who can develop both fronend and backend logics is called as Fullstack developer.

-> Fullstack developers are having lot of demand in the market and companies are providing high packages for full stack developers.

What is Web Application?

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-> The application which runs in the server is called as Web Application.

-> Multiple users can access web applications at a time.

Ex : Gmail, Facebook, IRCTC, Net Banking etc...

-> Now a days web applications are divided into 2 types

1) Multi Page Web applications (MPA)

2) Single Page Web applications (SPA)

-> In Multi Page Web Application for every request new web page will be loaded at the client side.

-> In Single Page web application only one web page will be available for every request just content will be updated without reloading the entire page.

Ex : Gmail, angular.io etc....

Advantages of SPA

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-> Development will be easy

-> Maintenence will be simple

-> Good Performance

Note: In single page application common content will be loaded only one time.

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Angular Introduction

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-> Angular is a client side framework

-> Angular is used to create Web Applications

-> Angular is mainly used for Single Page Applications Development.

-> Angular supports all platforms (Desktop and Mobile)

-> Angular is free & open source

-> Angular is having cross-browser compatability

-> Angular developed by Google.

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Angular JS and Angular Framework

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-> The intial version of Angular is called as Angular JS (Angular 1.x verions) which is developed by using Java Script.

-> After few days Google realized the problems with Angular JS then they started developing one new framework to develop web applications thats where Angular Famework came into Market. This Angular framework is developed by using Type Script.

-> From Version 2.0 onwards it is called as Angular Framework

-> Angular 2.0 is not enhancement for Angular 1.0 because in 2.0 version Google Developers completley re-written Angular framework by using TypeScript.

-> TypeScript developed by Microsoft Company.

-> Angular 2+ versions are extensions for Angular 2.0 version

-> Angular 1.x versions are called as Angular JS

-> Angular 2.0 and later versions are called as Angular Framework versions

-> The current version of Angular is 11 (Latest version released in Nov-2020)

Angular Architecture

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1) Components

2) Meta Data

3) Services

4) Templates

5) Directives

6) Pipes

Today : 04-Session on Angular - 11

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-> In last session we discussed about Angular Introduction

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-> Angular is a client side framework

-> Angular is used to create Web Applications

-> Angular is mainley used to develop Single Page Applications

-> Angular framework is free and open source

-> Angular framework developed by Google.

-> There are 2 flavours of Angular

1) Angular JS (Angular 1.x)

2) Angular (Angular 2+ versions)

-> Angular JS is developed using Java Script

-> Angular framework is developed by using Type Script

Note: Angular framework is completley re-written by google in Angular 2.0 version

-> Angular is not extension for Angular JS (Angular is completley different from Angular JS)

Angular Architecture

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1) Component

2) Meta Data

3) Service

4) Data Bindings

5) Template

6) Directives

7) Pipes

-> Component is a TypeScript class which acts as Request Handler

-> Meta Data Describes Component and Template mapping

-> Service is a TypeScript Class which is used to write business logics

-> Data Bindings are used for tranferring the data from component to template and from template to component.

-> Template is a HTML file which contains presentation logic

-> Directives are used for DOM manipulations

-> Pipes are used to transforming the data from one format to another format.

Last session : Angular Architecture

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1) Component

2) Service

3) Meta Data

4) Data Bindings

5) Template

6) Directives

7) Pipes

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-> Angular is a client side framework

-> Angular is used to develop single page applications

Ex : gmail, angular.io

-> Angular is free & open source

-> Angular is Developed By Google

-> The current version of Angular is Angular-11

-> Angular framework is developed by using TypeScript

-> Angular JS is developed by using Java Script

-> Angular framework is not extension for Angular JS

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Today's session : TypeScript

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-> TypeScript is a programming language which is developed by using Java Script.

-> TypeScript is superset of java scirpt which adds data types + classes + Interfaces etc...

-> TypeScript can be used for both client side programming and server side programming.

-> TypeScript developed by Microsoft company in 2012.

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Features of TypeScript

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-> TypeScript is general purpose programming language

-> TypeScript built on top of java script

-> TypeScript supports all features of java script and it is providing some additional features (data types, classes, objects, interfaces, modules etcc).

Note: Java Script can be executed in browser directley where as Browser can't execute TypeScript Directley.

-> Typescript files should be converted into java script.

-> The process of converting TypeScript file into JavaScript is called as "Transpilation".

file.ts -----> tsc ----> file.js ---> browser ---> output

TypeScript Versions

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TypeScript 0.8 : 2012 (Intial Version)

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TypeScript 4.x : 2020

Static Typing & Dynamic Typing

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-> Whenver we can fix a data type for the variable while declaration of the variable and we can't change its datatype throughout the program then it is called as "Static Typing"

int age = 20; //valid

age = "20 Years" ; //in-valid

Ex : C, C++, Java, C#.Net are the examples for Static Typing languages

-> If we can't fix data type for the variable while declaration and the data type will be automatically taken by the runtime engine at the time of program execution then it is called as "Dynamic Typing".

var age;

age = 20 ; //valid

age = "20 Years" ; //valid

Ex : JavaScript and Python are examples for Dynamic Typing Languages

-> TypeScript supports "Optional Static Typing". It supports both 'Static Typing' and 'Dynamic Typing'.

-> TypeScript maintains Type Safety. If we specify data type while declaring the variable and if we assign wrong type of value into variable then compiler shows error.

TypeScript Installation

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1) Install Node JS (nodejs.org)

2) Install TypeScript (in command prompt -> npm install -g typescript)

TypeScript First Example

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-> Create TypeScript file with .ts extension and add below code

var s:string = "Hello World"; // String s = "Hello World";

console.log(s); //System.out.println(s);

-> Open Cmd and compile typescript file

tsc <filename>.ts

Note: Tsc compiler will covert ts file into js file (Transpilation)

-> Run js file using node with below command

node <filename>.js

-> The above program should print Hello World in console