**<https://youtu.be/rtYzt5iWjGs?si=h5M2XkLC-kLy1an4>**

**<https://youtu.be/mDoHtD1hI3I?si=AFgwAXjfRjmBWtJA>**

**<https://youtu.be/RmKnHsUGpPY?si=sk2-rhY0smo9Oykl>**

Introduction -

What is Angular?

Diff bt AngularJS and Angular

Version history of Angular

Prerequites

Dev env

Basic commands of angular

Create an angular app and run show the result in browser

Folder structure

Show the flow from main.ts -> app.module.ts -> app.component.ts ( selector, html and css files)

Show app-root is used in index.html file

Delete everything except below lines in app.component.html file and show the result

<h1>Hello, {{ title }}</h1>

      <p>Congratulations! Your app is running. 🎉</p>

Change the title in app.component.ts file and show the result

Create a new module

Create a new component and explain how to change the bootstrap from this module and component

Newly created module.ts file,

Add the new component name under declarations

Add BrowserModule in imports

Add bootstrap:[ new component name]

main.ts file comment 2 lines of bootstrap code and rewrite it,

Change the module name to newly created module name

Index.html file comment <app-root> and use <app-new-component- name>

Restart the app the show the result

Architecure of Angular

Modules ( demo already covered )

Components

Services

Components

Explain manual way of creating a component ( only ts file, html and css inline ) - @Component decorator, selector, template, styles

Naming best practice for file and selector

File - <<comp-name>>.component.ts

Selector - app-<<comp-name>>

Explain how to use it in app.component.html file

Explain how to create other files html and css manually

Use of templateUrl and stylesUrl

Naming best practice for file

<<comp-name>>.component.html

<<comp-name>>.component.css

Explain all 3 files are related by adding some property in ts file, display that in html file using <p> tag and {{}}, appy some style p{color:red}

Data Binding

What is data binding?

4 types 2 categories - one-way and two-way

Interpolation

Property binding

Event binding

Two-way binding

Structural directives

Parent and child communication using @input and @output decorator

How to use bootstrap

npm install bootstrap

Angular.json file

"styles": [

              "node\_modules/bootstrap/dist/css/bootstrap.min.css",

              "src/styles.css"

            ],

Demo app - todo-list

Services

Explain a situation where same code is repeated in multiple components

Explain solution by creating a class and writing the function in the class, create an object of this class in all components and use the function

Explain the problem we change the implementation of the class ( constructor ) then all compomnents should also be changed

Forms

Template driven approach

Reactive forms

Template driven approach - implemented using template ( html file )

Create a html form - then to convert this to angular form explain below steps

Import FormsModule in app.module.ts file also add it to imports array

Add name and ngModel property to all the input fields of the form ( ngModel is not two way data binding here, ngModel and name is required so that angular can register all the input fields with ngform and can capture the data )

Also explain @ViewChild option

@ViewChild('userForm') f!: NgForm;

The ! is the non-null assertion operator, which tells TypeScript that this property will be initialized by the time it's accessed, even if TypeScript cannot verify this at compile time

Two way binding - [(ngModel)]

Explain the req - user data should be showed on the form

Create a class called User ( ng g class user )

In ts file create a user as below

user = new User("test user","test@test.com")

Now in html file of the form use property binding to ngModel - [ngModel ] to all the input fields and show data is prepopulated.

Now try to change the data in the form, show that only form data gets changed, not the ts file data

Now change property binding to two way binding [(ngModel)], now change the data both form data and ts file data gets changed

Routing in Angular

What is routing

<http://localhost:4200> - home component

<http://localhost:4200>/departments - departments component

<http://localhost:4200>/students - students component

Base for routing configuration - Show the file app.routing.module.ts file

This file should be imported and added to imports array of app.module.ts file

Wild card route and redirecting routes

Routing programatically

Create a constructor and inject Router in the ts file of the component in which we want to navigate programatically

Define a method and use navigate or navigateByUrl

onClick(){

// ‘’ represents home path

// this.router.navigate([''])

this.router.navigateByUrl('')

}

Route Parameters

We have a list of depatments and when we click on each dept route should happen as below

httt://localhost:4200/depatment/1 and so on…

Create a comp called department-detail

Config route in app-routing.module.ts file

Write logic to navigate when we click on the dept

Activated Route - to read and display route parameter

Drawback of snapshot approach - this doesn’t work when we navigate from a comp to the same comp with new data

Fullstack app demo - crud-json-api

Will be using <https://jsonplaceholder.typicode.com/>

Dev steps

Create new project demo-crud-json-api -

ng new demo-crud-api --no-standalone

Install bootstrap

npm install bootstrap

( update angular.json )

Create a model class called Post

ng g class post

Create a service

ng g s services/post

<input

placeholder="Enter your task here"

[(ngModel)]="newTask"

/>