Custom Directive

Q.1) What is Custom Directive?

- When you have a custom behavior that u wants to attach the DOM element that time we can use Custom Directive.
- Command for creating custom directive: ng g d DirectiveName.
- Ng stands for : Angular
- g stands for : Generate
- d stands for : Directive
- DirectiveName: Name of Directive.
- We can apply it on particular DOM element.

Q.2) What is the difference between directive and component?

Directive	Component
Directive doesn't have html template Component.	Component have html template.
Directive create only 2 files when we give command ng g d directiveName.	Component creates 4 files when we give command ng g c componentName.
Directive doesn't have styles template.	Component have styles template.
If we want to create directive we can use ng g d directiveName.	If we want to create component we can use ng g c componentName.
In directive we have @Directive decorator.	In component we have @Component decorator.
Declare selector reference on any DOM element. <p class="text-center" customdir ></p>	Here we need to create own element and declare it. <app-root ></ app-root >
In directive decorator --> selector: '[customdir]' === customdir should be in '[]'	In component decorator --> selector: 'app-root' === app-root should be in ' '.

Date : 21/07/2023

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Q.3) How many files created when we give command to create a component ?

- By default there 4 files created namely
- app.component.ts
- app.component.css
- app.component.html
- app.component.spec.ts

Q.4) How many files created when we give command to create a directive?

- By default there 2 files created namely
- directiveName.directive.spec.ts
- directiveName.directive.ts

Q.5) Can we add directive in declaration array ?

- Yes, We can add components and directive as well in declaration array in @ngModule which is in app.module.ts

Q.6) Whenever we are giving a command ng s/ng serve what will happened ?

- When we give command ng serve this command build our application and start the web server.

Q.7) What things we need to compile angular files in typeScript ?

- All files of angular are compile into JavaScript using typeScript compiler (TSP).
- After that we need JIT Compiler to convert that JavaScript into native programming language.

Q.8) How to center any DOM element using Bootstrap ?

- We can use class="text-center".

Q.9) Why we use ElementRef ?

- If we want to access particular DOM element and native element object we can inject ElementRef.

Q.10) Why we use Renderer2 ?

- If we want custom directive compatible with server side rendering then we use Renderer2.
- It means if we want to run our angular application on different browsers
- then ElementRef should be failed for in that case hence we use Render2.

Q.11) What is client side validation ?

- Client-side validation is when the user input is validated by the browser before it is sent to the server.

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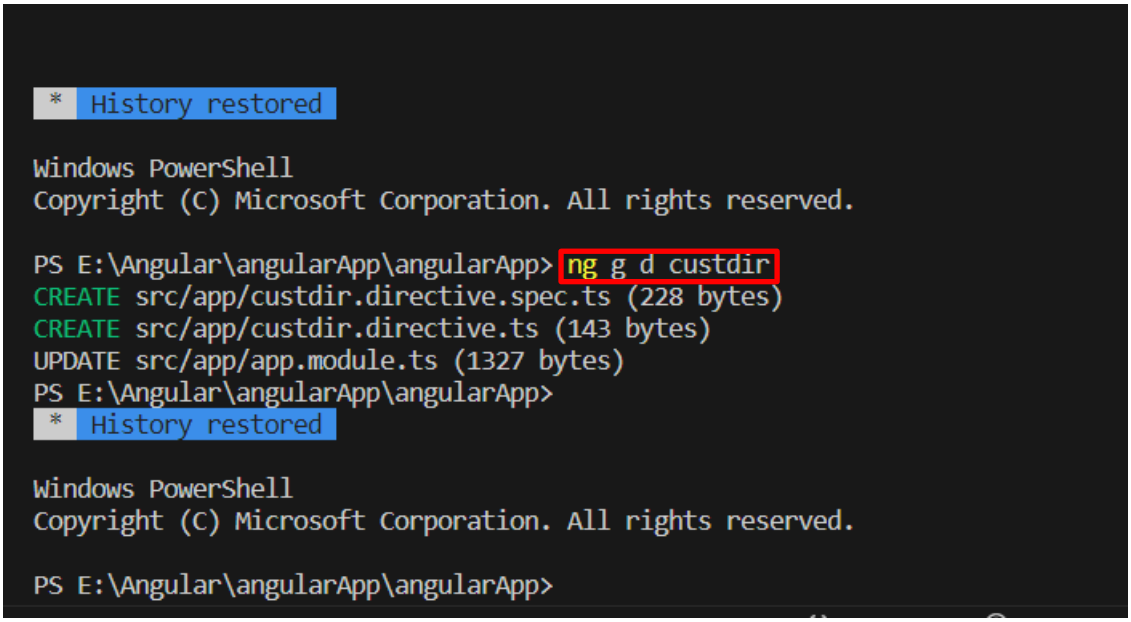
Q.12) What is server side validation ?

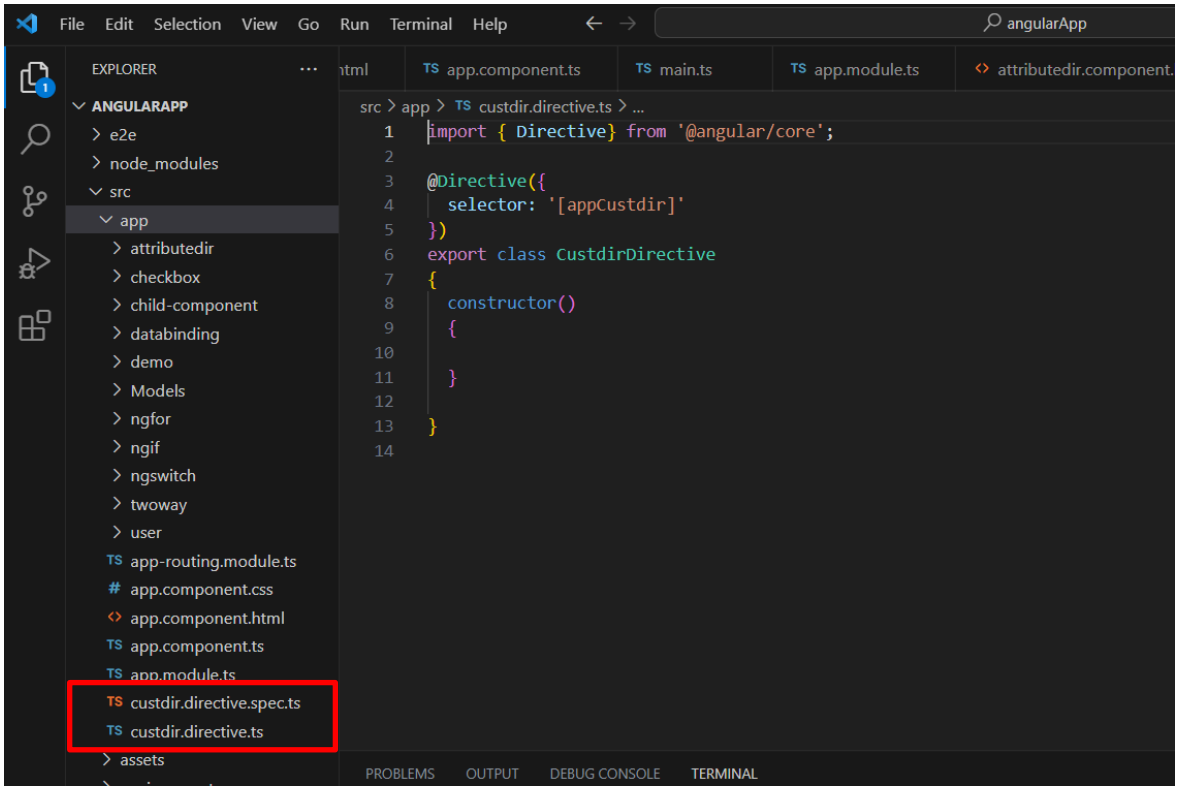
- The user input validation that takes place on the server side during a post back session.

Q.13) How to create custom directive ?

- First we do ng g d customdir (customdir is a Directive Name).



- By default it create 2 files as shown in above image.



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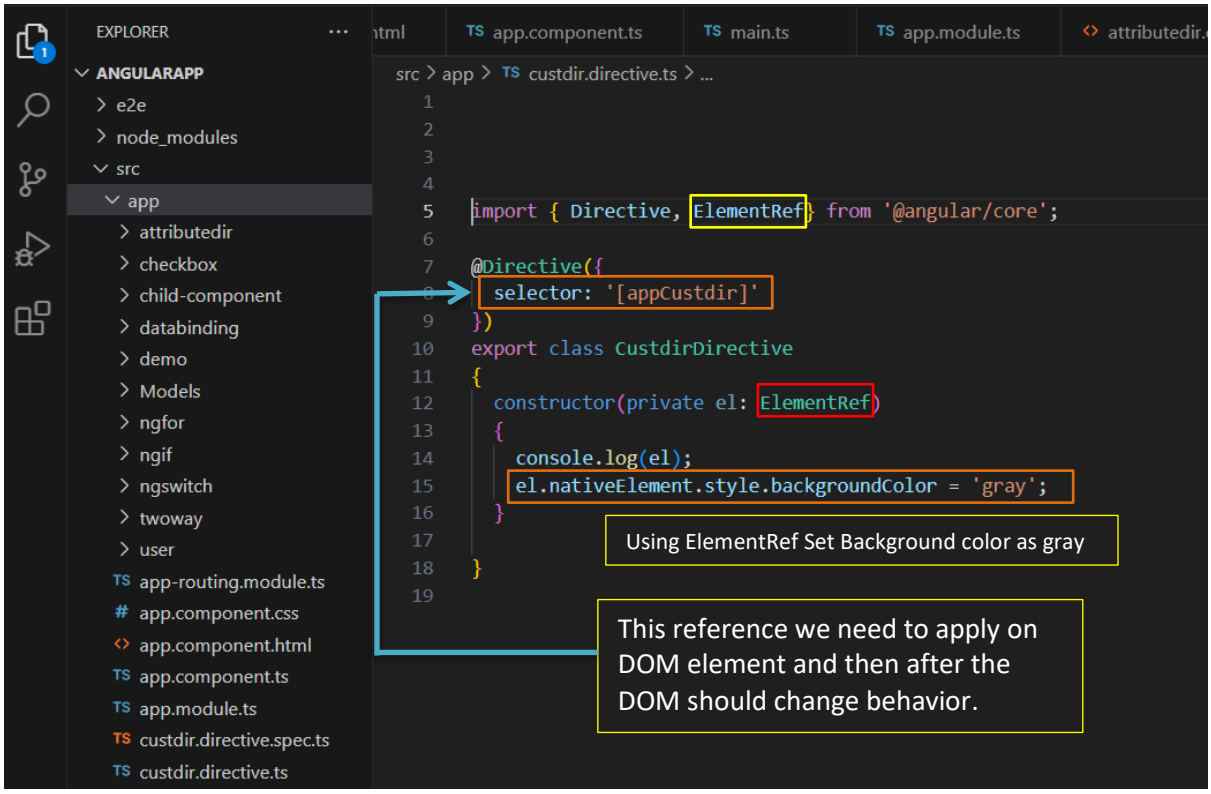
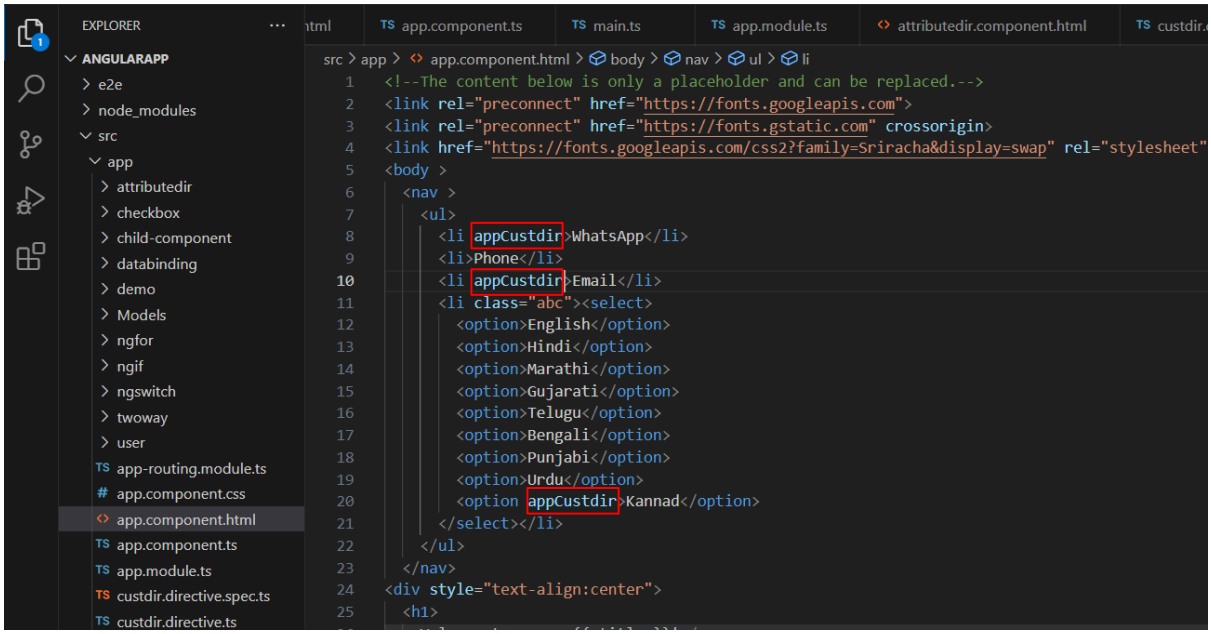
- If we want to access particular DOM element and native element object we can inject ElementRef also we need to give access specifier private.
- Using ElementRef create el element and access nativeElement
- Using nativeElement we can access style property and set Background color as gray.



- Now need to apply it on DOM element.
- Here I'm using Selector Reference and apply it on DOM element.



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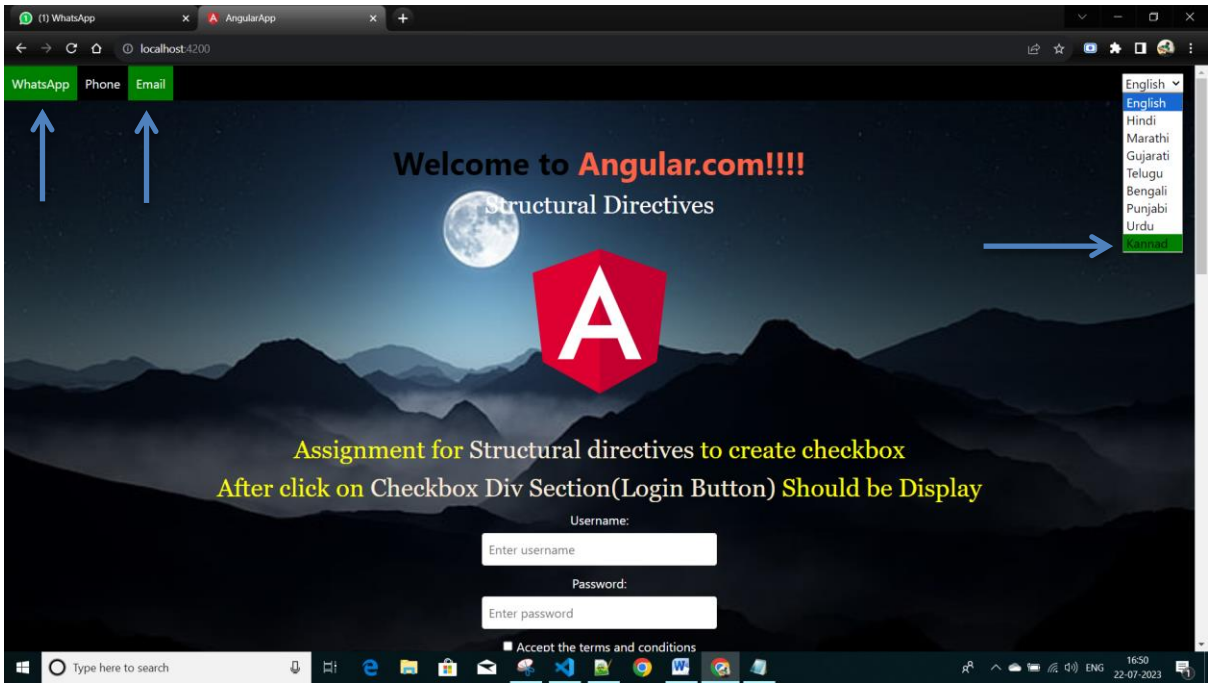
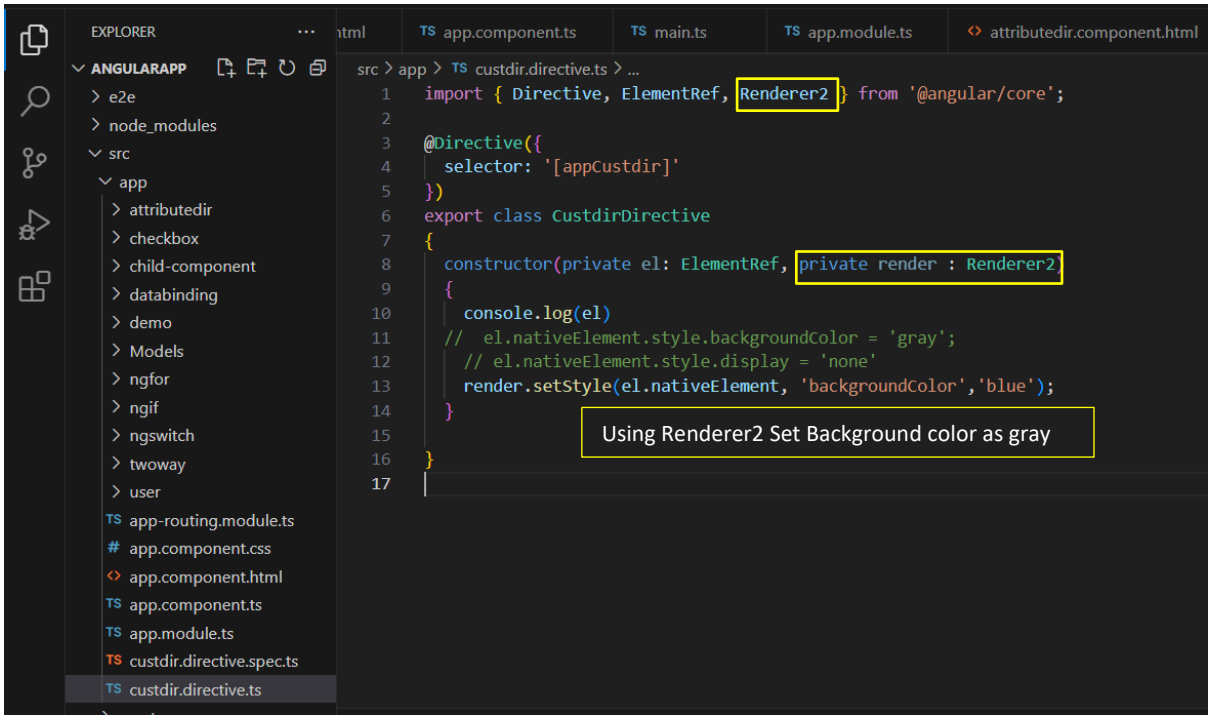
- It will reflect on my browser and output showing like this.



Above image u can see green color is applied on nav bar section.

If we want custom directive compatible with server side rendering then we use Renderer2. Process is same just I use there render: Renderer2



- Render the style and using el reference access the native element and set background color as blue.
- Now apply it on DOM element.

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Output is same just I change the color using Renderer2.

Q.14) What is Form ?

- Using form we can handle user input in angular and we can send that information to the server.

Q.15) How many types of Forms in Angular? Explain?

- There are two types of forms :
- **Template Driven Form :**
  - If we have a simple form we use Template Driven Form.
  - It Support Two way data binding. [{ngModule}] = 'variableName'.
  - We need to imports FormsModule in Declaration Array.
  - It is Asynchronous.
  - Most of the code we write in HTML side.
  - If we want to use Template Driven Form then we need to use ngModel with form tag and also we need to use **ngForm** with name attribute to register forms control.

- **Reactive Form :**
  - If we have a complex form we use Reactive Form.
  - Does not support Two way data binding.
  - We need to imports ReactiveFormsModule in Declaration Array
  - It is Synchronous.
  - Most of the code we write in typeScript side.

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Form Group: A collection of Form Controls known as Form Group.