

# Directives

Directives are classes that add additional behavior to elements in your Angular applications. Use Angular's built-in directives to manage forms, lists, styles, and what users see.

Three types of directives

- 1) Structural Directive
- 2) Attribute Directive
- 3) Custom Directive

## 1) Structural Directive

i)\*ngIf

ii)\*ngFor

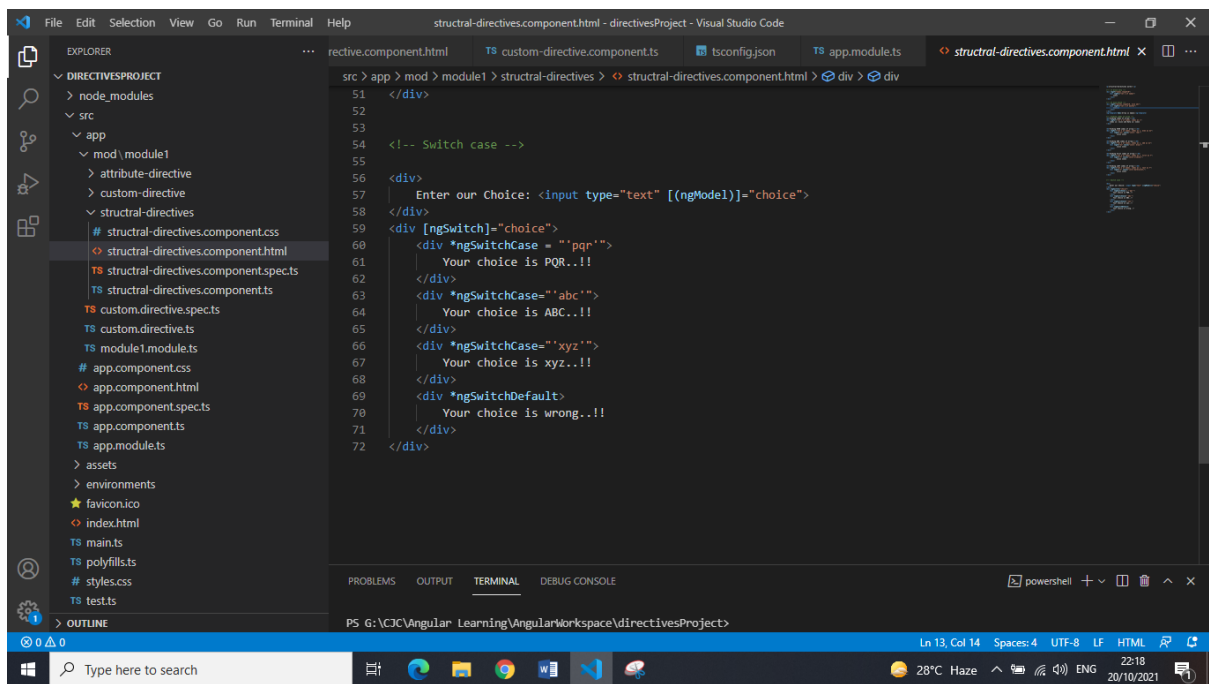
ii)\*ngSwitch

The screenshot shows the Visual Studio Code editor with a project named 'directivesProject'. The Explorer sidebar on the left shows the file structure, with 'src/app/structural-directives/structural-directives.component.ts' selected. The main editor displays the code for this component. The code imports 'Component' and 'OnInit' from '@angular/core'. It defines a component with a selector 'app-structural-directives', a templateUrl './structural-directives.component.html', and a styleUrls ['./structural-directives.component.css']. The component class 'StructuralDirectivesComponent' implements 'OnInit'. The constructor is empty. The 'ngOnInit()' method is also empty. The component has two arrays: 'names: number[]' with values [1, 2, 3, 4, 5] and 'months: number[]' which is empty. It also has a 'choice!: string;' property. The bottom status bar shows 'Ln 18, Col 18', 'Spaces: 2', 'UTF-8', 'LF', 'TypeScript', '4.4.2', and the system tray shows '28°C Haze', '22:17', and '20/10/2021'.

```
src > app > mod > module1 > structural-directives > TS structural-directives.component.ts > choice
1 import { Component, OnInit } from '@angular/core';
2
3 @Component({
4   selector: 'app-structural-directives',
5   templateUrl: './structural-directives.component.html',
6   styleUrls: ['./structural-directives.component.css']
7 })
8 export class StructuralDirectivesComponent implements OnInit {
9
10  constructor() { }
11
12  ngOnInit(): void {
13  }
14
15  names: number[] = [1, 2, 3, 4, 5];
16  months: number[] = [];
17
18  choice!: string;
19 }
20
```

```
1 <p>structural-directives works!</p>
2
3 <!-- If block only -->
4 <div *ngIf="names.length>0">
5   <div *ngFor="let e of names">
6     {{e}}
7   </div>
8 </div>
9
10 <!-- If else block -->
11 <div *ngIf="months.length>0, else abc">
12   <div *ngFor="let e of months">
13     {{e}}
14   </div>
15 </div>
16 <ng-template #abc>Array is empty</ng-template>
17
18 <!-- Finding index of array -->
19 <h3>Finding index of array:</h3>
20 <div *ngFor="let e of names, index as i">
21   index is: {{i}} and Data is: {{e}}
22 </div>
23
24
25 <h3>Finding EVEN index of array:</h3>
26 <div *ngFor="let e of names, index as i, even as e1">
27   <div *ngIf="e1" style="color: red;">
28     {{i}} {{e}}
29   </div>
30 </div>
31
32 <h3>Finding ODD index of array:</h3>
33 <div *ngFor="let e of names, index as i, odd as e1">
34   <div *ngIf="e1" style="color: blue;">
35     {{i}} {{e}}
36   </div>
37 </div>
38
39 <h3>Finding First index of array:</h3>
40 <div *ngFor="let e of names, index as i, first as f">
41   <div *ngIf="f" style="color: crimson;">
42     {{i}} {{e}}
43   </div>
44 </div>
45
46 <h3>Finding LAST index of array:</h3>
47 <div *ngFor="let e of names, index as i, last as f">
48   <div *ngIf="f" style="color: darkviolet;">
49     {{i}} {{e}}
50   </div>
51 </div>
52
```

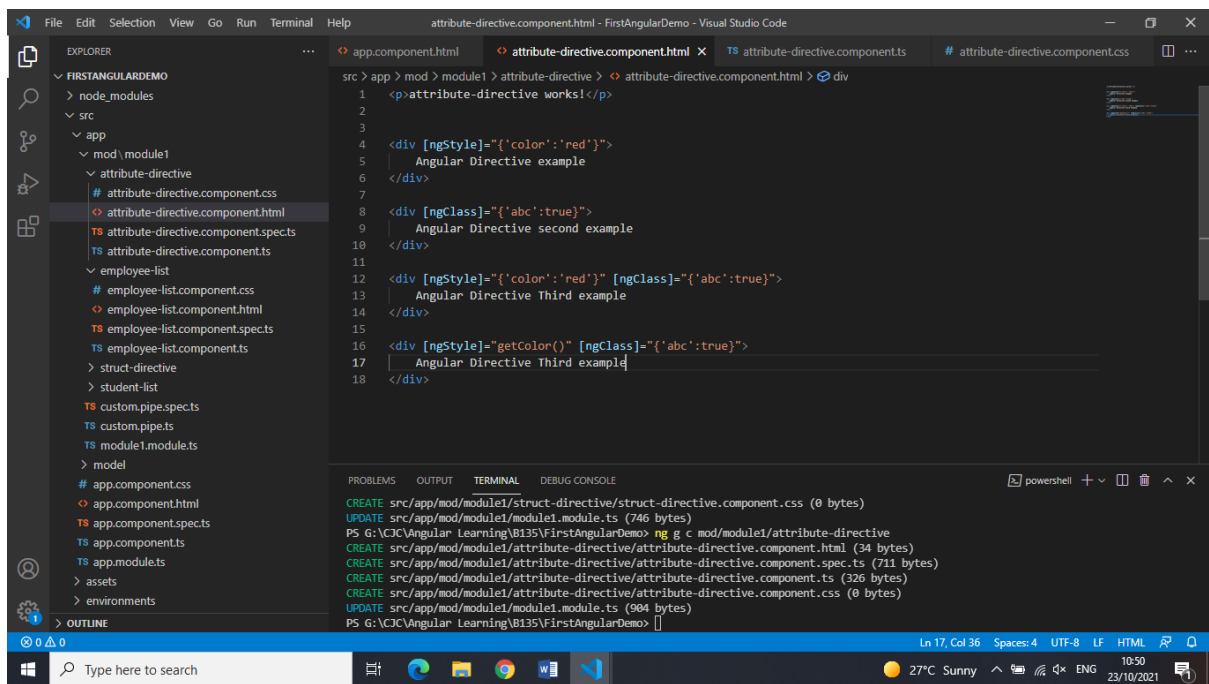
```
25 <h3>Finding EVEN index of array:</h3>
26 <div *ngFor="let e of names, index as i, even as e1">
27   <div *ngIf="e1" style="color: red;">
28     {{i}} {{e}}
29   </div>
30 </div>
31
32 <h3>Finding ODD index of array:</h3>
33 <div *ngFor="let e of names, index as i, odd as e1">
34   <div *ngIf="e1" style="color: blue;">
35     {{i}} {{e}}
36   </div>
37 </div>
38
39 <h3>Finding First index of array:</h3>
40 <div *ngFor="let e of names, index as i, first as f">
41   <div *ngIf="f" style="color: crimson;">
42     {{i}} {{e}}
43   </div>
44 </div>
45
46 <h3>Finding LAST index of array:</h3>
47 <div *ngFor="let e of names, index as i, last as f">
48   <div *ngIf="f" style="color: darkviolet;">
49     {{i}} {{e}}
50   </div>
51 </div>
52
```

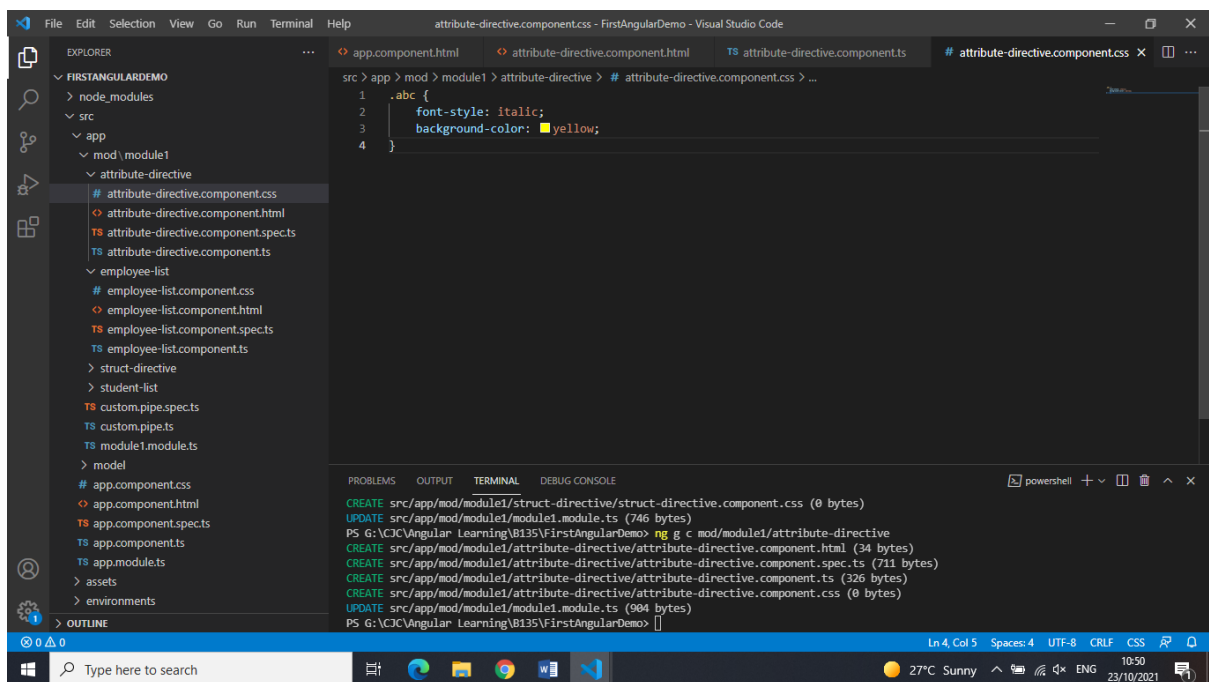
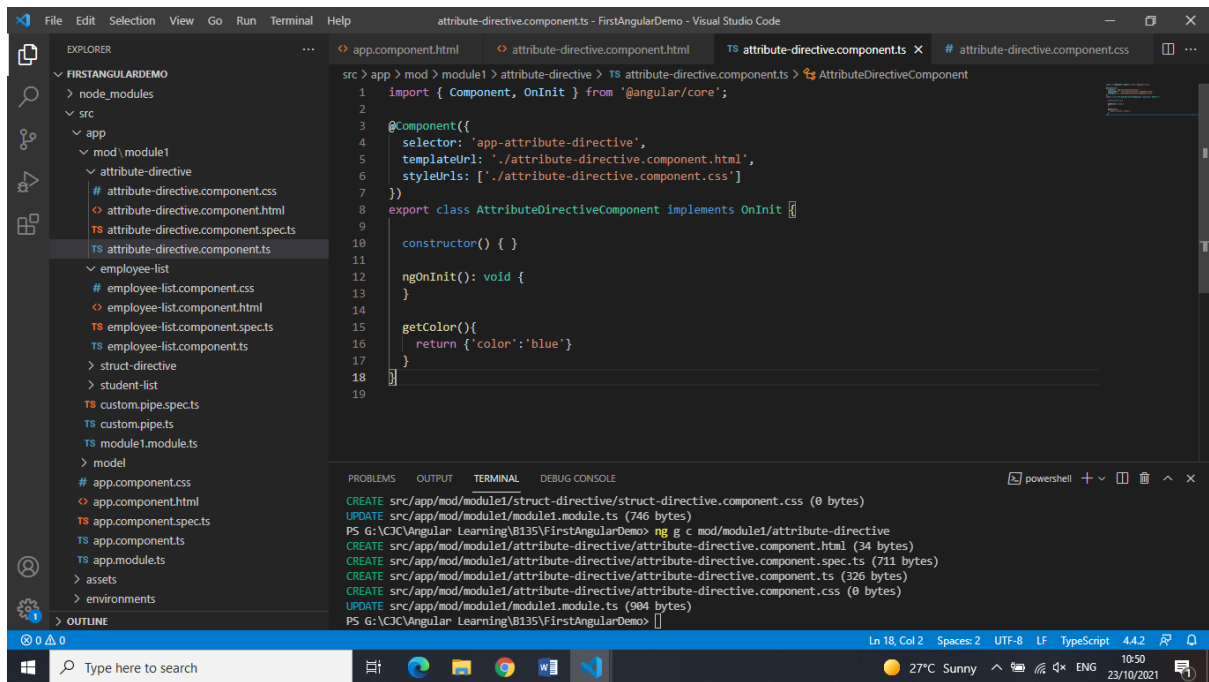


## 2) Attribute Directive

i)ngStyle

ii)ngClass





Task1:

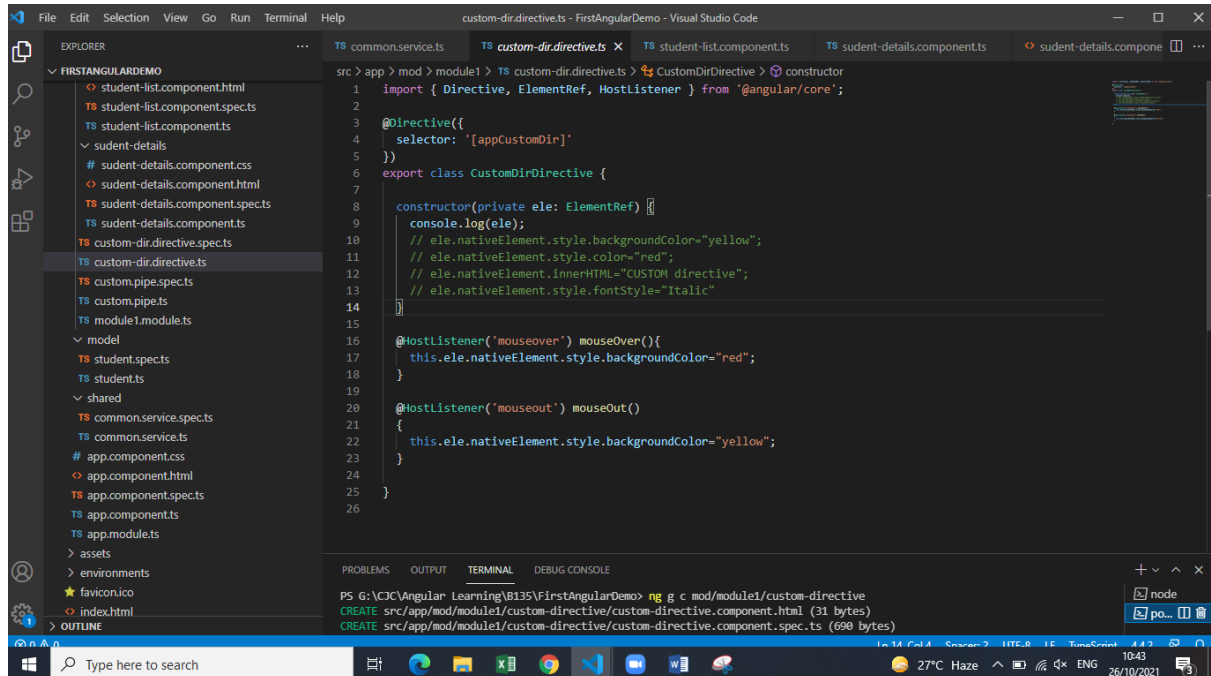
Depends on Country you have to change the background of div like as below image,

attribute-directive works!

ID:- 1	NAME:- A	COUNTRY:- INDIA
ID:- 2	NAME:- B	COUNTRY:- USA
ID:- 3	NAME:- C	COUNTRY:- CHINA
ID:- 4	NAME:- D	COUNTRY:- PARIS

### 3) Custom Directives

```
PS G:\CJC\Angular Learning\B135\FirstAngularDemo> ng g d mod/module1/customDir
CREATE src/app/mod/module1/custom-dir.directive.spec.ts (237 bytes)
CREATE src/app/mod/module1/custom-dir.directive.ts (147 bytes)
UPDATE src/app/mod/module1/module1.module.ts (1137 bytes)
```



```
PS G:\CJC\Angular Learning\B135\FirstAngularDemo> ng g c mod/module1/custom-directive
CREATE src/app/mod/module1/custom-directive/custom-directive.component.html (31 bytes)
CREATE src/app/mod/module1/custom-directive/custom-directive.component.spec.ts (690 bytes)
CREATE src/app/mod/module1/custom-directive/custom-directive.component.ts (314 bytes)
CREATE src/app/mod/module1/custom-directive/custom-directive.component.css (0 bytes)
UPDATE src/app/mod/module1/module1.module.ts (1052 bytes)
```

