Create new app

* Ng new myapp
* Create new file named as **ChangeColorDirective.ts** by right clicking app

import { Directive, ElementRef } from "@angular/core";

@Directive({

    selector:'[changeColor]'

})

export class ChangeColorDirective{

    constructor(er:ElementRef){

        er.nativeElement.style.color="green";

    }

}

Register this directive on **app.module.ts**import { NgModule } from '@angular/core';

import { BrowserModule } from '@angular/platform-browser';

import { AppRoutingModule } from './app-routing.module';

import { AppComponent } from './app.component';

import { ChangeColorDirective } from './ChangeColorDirective';

import { HighlightDirective } from './HighlightDirective';

@NgModule({

  declarations: [

    AppComponent,

    ChangeColorDirective,

    HighlightDirective,

  ],

  imports: [

    BrowserModule,

    AppRoutingModule

  ],

  providers: [],

  bootstrap: [AppComponent]

})

export class AppModule { }

**now go to any html file and use it as mentioned below**

<h1 changeColor>Welcome to Custom Directive</h1>

**This can be also done by using elementref and render2**

**Let’s prepare another file as mentioned above**

**HighlightDirective**

import { Directive, ElementRef, Renderer2 } from "@angular/core";

@Directive({selector :'[highlight]'})

export class HighlightDirective

{

    constructor(er:ElementRef,render:Renderer2){

        render.setStyle(er.nativeElement,'background-color','aqua')

    }

}

**And register in app.module.ts and use it as below**

<h1 highlight>Welcome to my Custom Directive for highlight</h1>

**Pipes in Angular(inbuilt pipes)**

**Prepare new component named as pip-demo**

**Ng g c pipe-demo**

**Got o pipe.component.ts**

import { Component, OnInit } from '@angular/core';

@Component({

  selector: 'app-pipe-demo',

  templateUrl: './pipe-demo.component.html',

  styleUrls: ['./pipe-demo.component.css']

})

export class PipeDemoComponent implements OnInit {

  constructor() { }

  ngOnInit(): void {

  }

  name:string ="My Name is Nikunj And i am Trainer";

  pi:number=3.1415927;

  a=0.12345;

  b=9876.5432;

  today=new Date();

  object={name:"nikunj",email:"nikunj@gmail.com",address:"mumbai"};

  cust:string ="welcome to the world of custom pipe";

}

**Now go to pipe.component.html file**

<h1>UpperLowerCase Demo</h1>

<hr>

<p>{{name | uppercase}}</p>

<p>{{name | lowercase}}</p>

<h1> Number Pipes</h1>

<hr>

<p> pi: {{pi | number:'5.5-5'}}</p>

<p> pi: {{pi | number:'.3-3'}}</p>

<p> pi: {{pi | number:'.10-10'}}</p>

<h1> Currency Pipes</h1>

<hr>

<p>{{a | currency: 'USD':true:'3.3-3'}}</p>

<p>{{a | currency: 'EURO':false}}</p>

<p>{{a | currency: 'INR':true:'5.4-4'}}</p>

<h1> Date pipes</h1>

<hr>

<p>Today is {{today}}</p>

<p>Today is {{today | date}}</p>

<p>Today is {{today | date:'dd/MM/yyyy'}}</p>

<p>without json pipe {{object}}</p>

<p>with json pipe {{object | json}}</p>

**Custom Pipe Demo**

**Prepare a new file class by right clicking on app with name**

**CustomPipe.ts**

import { Pipe, PipeTransform } from "@angular/core";

@Pipe({name:'changeString'})

export class CustomPipe implements PipeTransform

{

    transform(value: string, character:string) {

        return value.split(character).join("-")

    }

}

**Register it in app.module.ts**

import { NgModule } from '@angular/core';

import { BrowserModule } from '@angular/platform-browser';

import { AppRoutingModule } from './app-routing.module';

import { AppComponent } from './app.component';

import { ChangeColorDirective } from './ChangeColorDirective';

import { CustomPipe } from './CustomPipe';

import { HighlightDirective } from './HighlightDirective';

import { PipeDemoComponent } from './pipe-demo/pipe-demo.component';

@NgModule({

  declarations: [

    AppComponent,

    ChangeColorDirective,

    HighlightDirective,

    PipeDemoComponent,

    CustomPipe

  ],

  imports: [

    BrowserModule,

    AppRoutingModule

  ],

  providers: [],

  bootstrap: [AppComponent]

})

export class AppModule { }

**now got to pipe-demo.component.html**

<h1>Custom Pipe Demo</h1>

<p>{{cust | changeString:' '}}</p>

<app-pipe-demo></app-pipe-demo>

**in app.component.html**

**routing mechanism**

**write all compopents inside the array of routes in app.routing.module.ts**

import { NgModule } from '@angular/core';

import { RouterModule, Routes } from '@angular/router';

import { AboutusComponent } from './aboutus/aboutus.component';

import { HomeComponent } from './home/home.component';

import { PipeDemoComponent } from './pipe-demo/pipe-demo.component';

const routes: Routes = [

  //path to redirect

  {"path":"about",component:AboutusComponent},

  {"path":"pipe",component:PipeDemoComponent},

  {"path":"home",component:HomeComponent},

];

@NgModule({

  imports: [RouterModule.forRoot(routes)],

  exports: [RouterModule]

})

export class AppRoutingModule { }

**remove the tags from app.component.html and add**

<ul  class="nav">

  <li class="nav-item">

    <a class="nav-link" routerLink="home" >Home</a>

  </li>

  <li class="nav-item">

    <a class="nav-link" routerLink="pipe" >Pipes</a>

  </li>

  <li class="nav-item">

    <a class="nav-link" routerLink="about" >AboutUs</a>

  </li>

</ul>

<router-outlet></router-outlet>

**Here I have added bootstrap class so import bootstrap in index.html from bootstrap website with documentation 4.6**

**Let’s prepare http service**

**In any existing app prepare one component**

* **Ng g c user**

**Generate service**

* **Ng g s dataService**

**Inside data service**

import { Injectable } from '@angular/core';

import{HttpClient} from '@angular/common/http';

import { Observable } from 'rxjs';

import { UserClass } from './userclass';

@Injectable({

  providedIn: 'root'

})

export class DataService {

  //url: "https://jsonplaceholder.typicode.com/users"

  url:string = "https://jsonplaceholder.typicode.com/users";

  //inject the dependency

  constructor(private http: HttpClient) { }

  getAllUsers():Observable<UserClass[]>{

    return this.http.get<UserClass[]>(this.url);

  }

}

**User component.ts**

import { Component, OnInit } from '@angular/core';

import { DataService } from '../data.service';

import { UserClass } from '../userclass';

@Component({

  selector: 'app-user',

  templateUrl: './user.component.html',

  styleUrls: ['./user.component.css']

})

export class UserComponent implements OnInit {

  //inject service

  constructor( private service:DataService) { }

  users:UserClass[];

  ngOnInit(): void {

    this.service.getAllUsers().subscribe(result=>this.users=result);

  }

}

now goto app-routing.module.ts

import { NgModule } from '@angular/core';

import { RouterModule, Routes } from '@angular/router';

import { AboutusComponent } from './aboutus/aboutus.component';

import { HomeComponent } from './home/home.component';

import { PipeDemoComponent } from './pipe-demo/pipe-demo.component';

import { UserComponent } from './user/user.component';

const routes: Routes = [

  //path to redirect

  {"path":"about",component:AboutusComponent},

  {"path":"pipe",component:PipeDemoComponent},

  {"path":"home",component:HomeComponent},

  {"path":"user",component:UserComponent},

];

@NgModule({

  imports: [RouterModule.forRoot(routes)],

  exports: [RouterModule]

})

export class AppRoutingModule { }