Check out cloud foundry and how to use.

<https://www.youtube.com/watch?v=jM2HwFbVtIg&list=PLVz2XdJiJQxzxQSRXUgyCnJGn_BmUvEov>

# <https://www.youtube.com/playlist?list=PLVz2XdJiJQxwAhzEZSpDqXlfT7XvNPDIE> JavaTechie-Angular8 [Angular-8](https://www.youtube.com/watch?v=Tf_VWOSKOQ4&list=PLVz2XdJiJQxwAhzEZSpDqXlfT7XvNPDIE)

Utilitiies :

<https://www.mockaroo.com/> allows you generate rest api’s you can test with,

<https://jsonplaceholder.typicode.com/> json placeholder api’s

<https://www.w3schools.com/bootstrap4/tryit.asp?filename=trybs_table_bordered&stacked=h>

<https://bootsnipp.com/?page=3>

Bootstrap tutorial will give you all of the bootstrp tables.

Generates following files aand updates app.module.ts with the new component.

my-component

my-component.component.css - view layer css

my-component.component.html - view layer

my-component.component.spec.ts

my-component.component.ts - bindings to obtain data and add to the view

Copy html from bootstrap striped list on w3schools and display in html portion.

Add tag to where you want to add it with just <my-component><my-component>

Create new component user to show databinding. Must create class user.ts to hold data.

Export class User{

Id : number;

Name: string;

Email: string;

Mobile : number;

}

Need to add to user.component to create the binding.

Import {User} from ‘./user’

user : User = {

Id:123456,

Name: “…”,

…..,

}

Need to add the html for table to the view component. Then add the interpolated values to the field instead ie {{user.id}} to get the binded data.

Generate product component . ngFor directive used for list of objects. Can reference in onInit at products : any which basically says it can be any type. Then need to init

products = [{“id”:1234,”brand”:”tsshirt”,”name”:”Polo 1”……},<repeat for more>}]

Then need to copy the list to the html and add directive to row <tr ngFor\*=”let product of products”>

Then need to do ng serve --open to reload changes.

Add <app-product> selector to app-component.

Use ngIf driective to conditionally show components based on data being present or now.

i.e <th \*ngIf=”products.length > 5”

Two way data binding is where the value is reflected on screen from model updateand also in the model from a screen update.

Need FormsModule

In app-module.ts add

import {AppModule} from angular/forms

Add FormsModule to @NGModule imports tag.

Add new field called message:any = “HelloThere”

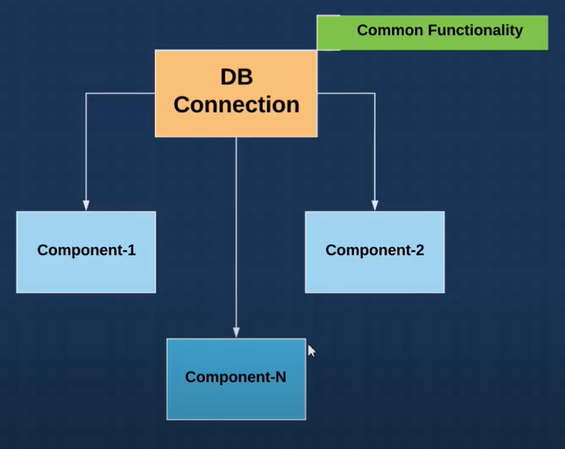
Add too new div {{message}}

Add <input type=text [value]=message> this will bind value one way to field but not update input. To update in put you need ngModel directive as follows

<input type=text [(ngModel)]=message>

Now on updating both screen and the model value get updated.

Service and dependancy injection. If angular app wants to contact a back end db andall components want to connect to the same back-end db logic can be duplicated. The ng generate servie UserService solves this by creating a class that can perform the logic and return the data to the components.



After ng g s Product must import into constructor constructor(private service: ProductsService) then can use in ngOnInit. You must add the services to the providers tag in the app.module.ts and import it into the component. It creates the service at another level outside of components.

Import httpclientmodule under browsermodule for rest requests. Create component users component for users for jsonplaceholder data. Set constructor(private http:HttpClient) to inject.

Call with http.get(url) to get resp. Then because reactive, call resp.subscribe((data)=>console.log(data)) to log the response. Include your component in the app component..

Declare user : any to replace the consolee log and assign data=users. You then open html for users get a table feo w3c schools for bootsstrap. Populate the table using the ngFor directive to list the users.

Create bookservice boot microservice, use initializer. Select web and lombox only for time being. Create packages controller and model. Create book in model along with Data noArgsConstructor and AllArgsContructor annotations. Create BookController and annotate wit @RestController. Creat single getBooks and point that returns a list of books. Hardcode return list of books. Set @GetMapping(‘/findAllBooks’). Add application.yaml and set server port o 9090. Start the service and then call under <http://localhost:9090/findAllBooks.>

Create book-client using ng new or webstorm. In app run ng g c book to create a component fot the book.Open app component html and add app-book somewhere. Import HttpClientModule into app.module to make http request. Wire http constructor(http: HttpClient){

Then in ngOnInt Let reponse = http.get(urlBoot)

Response.subscribe(data=>console.log(data))

Run angular client and boot service and notice blocked by CORS when no console log. Add @CrossOrigin(bootRestUrl) above the get mapping. Try again to see the books loaded. Now time to display on screen.

Go to book html page and add w3c bootstrap list for books id,name,price using \*ngFor=”let book of books” then interpolate the values {{book.id}} etc. In your rest call change from log to books:any….subscribe(data=>this.books=data). Now your component will list the books.

Because others may need books, change this to a service. Ng generate service book. In the service injectable inject the httpclient in constructor as before. Then inject the service instead of the client into the book component constructor(service:BookService)

Move the http call to a getBooks method on the book service. Call the book service in th ebook component service.getBooks().subscribe(data => this.books = data)

Now boot service and angular client is complete.

ngSwicth directive allows you avoid multiple ngIf. See app todo

<td <div [ngSwitch]=”todo.completed”>

<span \*ngSwitchCase=”true”>Completed</span>

<span \*ngSwitchCase=”false”>Completed</span>

<span \*ngSwitchDefault=”true”>Completed</span>

</div>

</td>

Pipes allow you format the data in the html.

ie <span \*ngSwitchCase=”true”>Completed | lowercase</span>

You have lowercase, uppercase, and titlecase for camelCase. You can pipe dates with mydate | date : “short” or shortTime/shortDate. Currrency : “USD” for money and | json for full body

Custom pipes can hae one param or multiple params. See Overdue for single param exmapl.e. Use ng generate pipe overdue….Creates the pipe it’s spec and updates app module to reference the pipe.

Then use pipie as normal <td>{{dueDate | overdue}}</td> Modify the transform function to return the days overdue. Set all unknowm types to any

Cusom pipe can accept second argument. Create filter pipe. Add <input type=”text” [(NgModel)]=”searchTerm”> …SearchTerm needs to ne specified as on component.

Add pipe as follows <tr \*ngFor=”let todo of todos | filter : serachTerm”>

This passes whole array in along with fiter term. See pipe for more info on how the data is filtered.

Create thrid pipe called score that totals multiple fields.

export class ScorePipe implements PipeTransform {  
  
 transform(score3: number, score1: number, score2: number): number {  
 const totalScore: number = (3 \* score3) + (2 \* score2) + (1 \* score1);  
 return totalScore;  
 }  
  
}

<td>{{***todo***.dueDate | date : "short"}}  
<td>{{***todo***.dueDate | overdue}}</td>  
<td>{{***todo***.score1}}</td>  
<td>{{***todo***.score2}}</td>  
<td>{{***todo***.score3}}</td>  
<td>{{***todo***.score3 | score : ***todo***.score1 : ***todo***.score2}}</td>

Routing When using ng new you are asked if you want to use routing. Select yes to use it. In web storm create s usual but unselect default option checkbox to get prompted for routing.Create all your components. You can add these to a module of your choice and include that module. This gives you app.routing.ts to whic you add routes as map.

const routes: Routes = [  
 {path: '', redirectTo: 'home', pathMatch: 'full'},  
 {path: 'home', component: HomeComponent},  
 {path: 'payroll', component: PayrollComponent},  
 {path: 'learning', component: LearningComponent},  
 {path: 'hrhelpdesk', component: HrhelpdeskComponent},  
 {path: 'profile', component: ProfileComponent}  
  
];

<router-outlet></router-outlet>

Above gets add to appcomponent.html and AppRouter gets imported in app.module.ts

Params needed for rest calls can be paassed in as follows

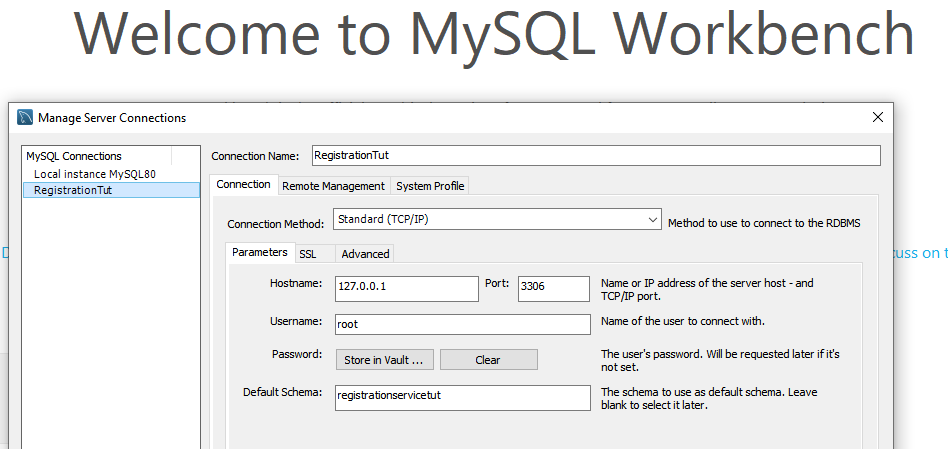
{path: 'learning/:technology', component: TechComponent}

They can then be picked up from the acitivated route in the component

export class TechComponent implements OnInit {  
  
 technology: string;  
 constructor(private route : ActivatedRoute) { }  
  
 ngOnInit(): void {  
 this.route.paramMap.subscribe(data => {  
 this.technology = data.get('technology');  
 ***console***.log(this.technology);  
 });  
 }

Create CRUD. First didregistration boot rest end point

Donwload MySql server and login to it.



Log in as default local first then run CREATE SCHEMA RegistrationServiceTut (Schema is synonymous with DATABASE in mysql)

Then update connection details as shown above to verify you can log into your new dtabase.

Set up boot end point, with jpa,web and lombok dependancies only. Add following to yaml to connect to database

server:  
 port: 9093  
spring:  
 datasource:  
 driverClassName: com.mysql.jdbc.Driver  
 url: jdbc:mysql://localhost:3306/RegistrationServiceTut  
 username: root  
 password: system  
 jpa:  
 hibernate.ddl-auto: update  
 generate-ddl: true  
 show-sql: true

Create User entity, jpa repository interface and servic for calling the jpa repository. Finally create the controller with t he endpoints that calll the service class. GET findAllUsers, POST register, DELETE cancel and GET findUser.

You have to create a JPA query for additional lookups. In this case lookup by email requires a method signature to defined in the JPA interface.

Start the service and you should see the user table getting created in the log files.

After,You also need to configur datasource and peristence unit on intellij. To do this use View/ToolWindows/Persistence and Viee/Tool Windows/Datbase

This will allow youload and the new table in intellij.

See the collection in POST man for all the requests. Each work at time of writing. SQL and requests are also stored in the project.

Downloaded complete code from <https://github.com/Java-Techie-jt/springboot-angular8-crud-example> for front-end html code.

Set up app modules to use the FormModules and the HttpClientModue as before.Create two compoonents usuing ng g c, one for registration and one for search and delete.When generating angular cli project, uncheck use defaults and specify routing. Add routes for the components as with the ng-routing example.

Copy html and javascript into the register component

Create user model class. This is bound using two way binding [ngModel]. Must be instantiated in the rergister component. Then create a user registration service injecting the http cliet into the constructor. Give the call the name doRegister and it takes user object. Makes same call as before. It calls this.http.post(url,user,{responseType : ‘text’ as ‘json’}) Need to get back the text as this doesn’t return a json object.

Create a registerNow() function in the register componenet to match the one called by the (click) event on the submit button. Inject the register service in the constructor for use. Call the service with the user to doRegister and subscribe result to be message as before.

See code fro remainder.

Routing. Simply ass ne ng g c home component and add w3c nav bar to it. Update href to point to your pages then update href to be routerLink to eliminate whole page being loaded.

Spring scurity basic auth with angular. Create the two components login and home and create the rest api service (ng g s restapiservice) ng g c login…Create the service login method.

public login(username: string , password: string){  
 const headers = new HttpHeaders({Authorization: 'Basic '+btoa(username + ':' + password)});  
 return this.http.get("http://localhost:9097/",{headers, responseType: 'text' as 'json'});

Add second getUsers endpointwithnhardcoded username and password to getlist of users.

Write loging componentn ts. Injuetcs the servive. It then declares username/password and messsage. New doLogin method that calls the service callla dn subscribes to the result I.e subscribe(data => data)