



Spring Boot Integration With Angular 14 CRUD



Trainer

Steve



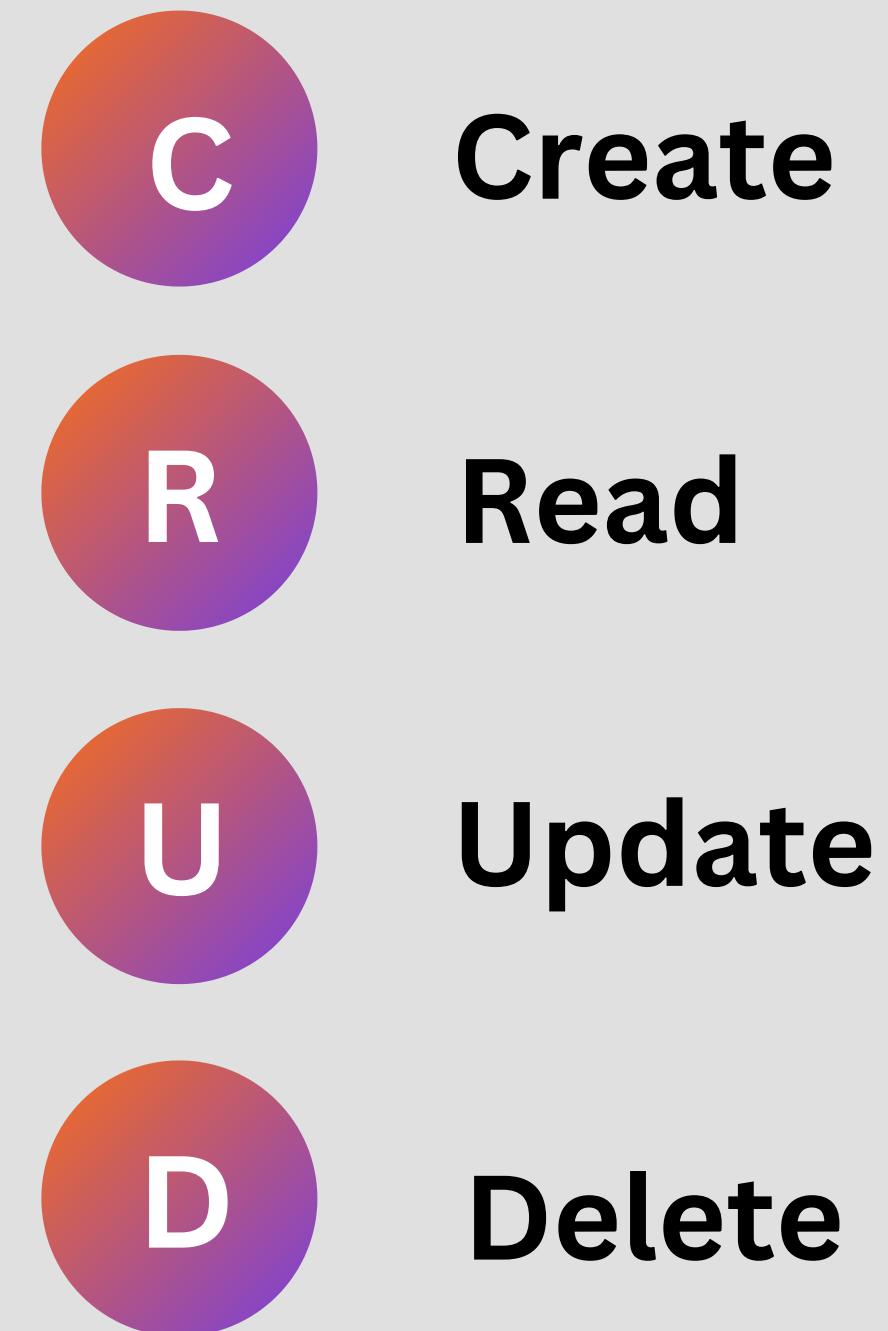
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INTRODUCTION

CRUD WEB APPLICATION

- Using Angular 14 and Spring Boot with Spring REST.
- Operations like add, view, delete, and update .



CONTEXT

FRONT END

Angular 14

Bootstrap 5

Jquery

BACK END

Spring-Boot

Hibernate 5

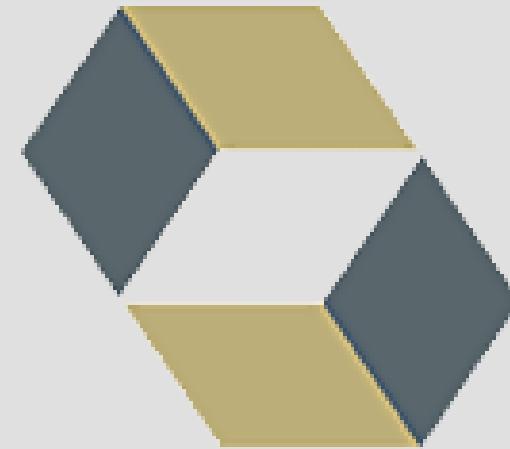
Spring Data JPA

Spring Boot Features



Spring Tools

- Open source java-based framework
- Create microservice
- Spring boot REST application
- Standalone application
- No need to configure XML file
- It provides support of embedded servers
- It offers functionality of h2 server



HIBERNATE

Dependencies



Spring Data JPA



Creating REST API :-

REST is basically a convention for building these HTTP Web Services. A REST API like Spring Boot REST API can help you retrieve information from another system.

Steps:

- **Initializing a Spring Boot Project**
- **Connecting Spring Boot to the Database**
- **Creating a User Model**
- **Creating Repository Classes**
- **Creating a Controller**
- **Compile, Build and Run**

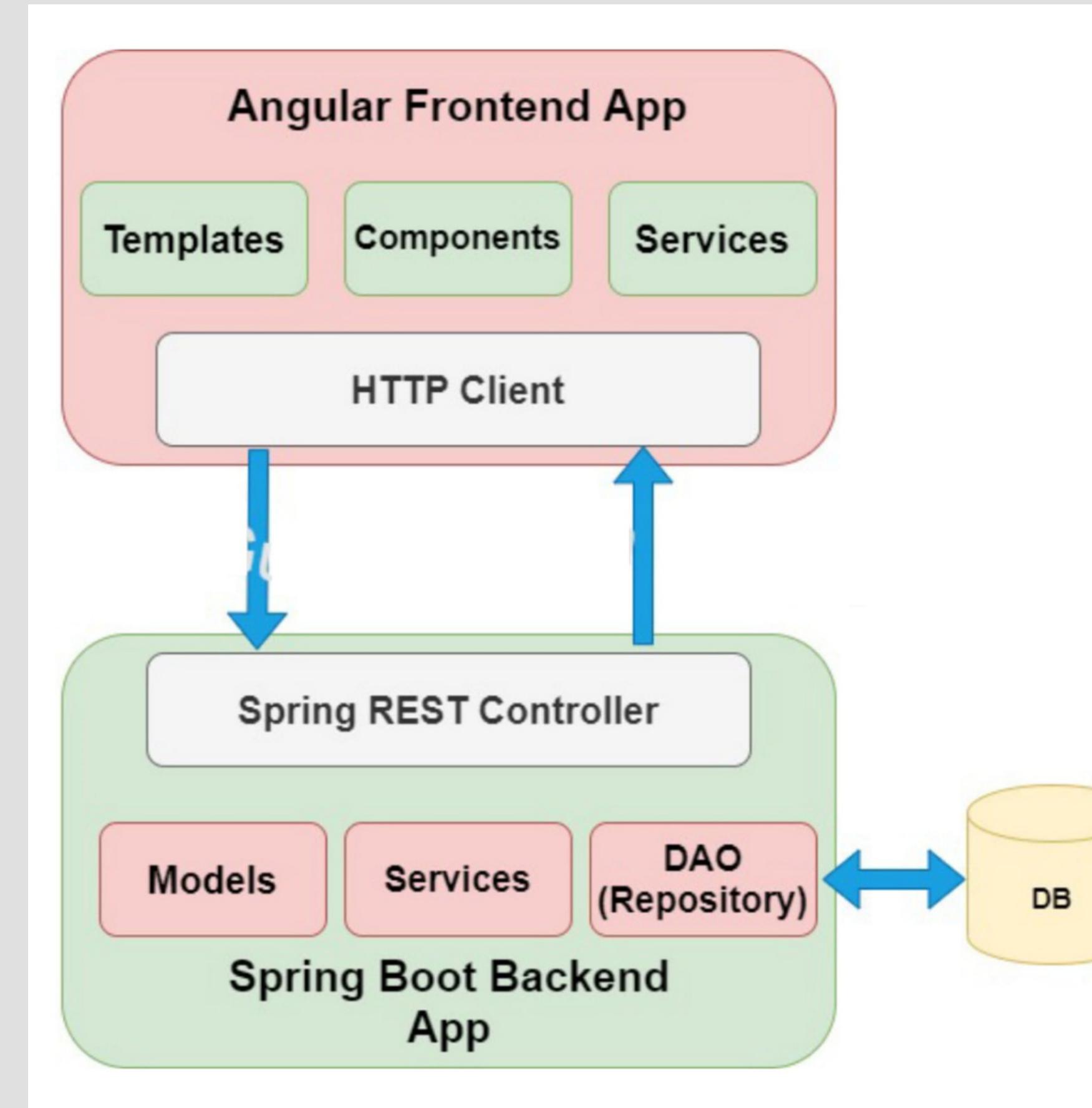
List of Annotations Used:-

1. **@Entity**
2. **@Table**
3. **@Id**
4. **@GeneratedValue**
5. **@Repository**
6. **@CrossOrigin**
7. **@Override**
8. **@RestController**
9. **@ControllerAdvice**
10. **@Exceptionhandler**
11. **@Request/post/get/put/delete Mapping**
12. **@ResponseStatus etc...**



@annotations

Spring Boot Angular CRUD App Architecture



Angular14

Angular 14 is TypeScript-based web application framework. It has capabilities like stand-alone components. And its simple and rapid.

Features of Angular14

- Standalone Components
- Offline Angular DevTools
- Angular CLI Enhancements
- Unit testing ready

Extended Developer Diagnostics



Create an Angular App

- The Angular CLI is a command-line interface tool that you use to initialize, develop, and maintain Angular applications.

Commands:-

```
npm install -g@angular/cli
```

```
ng new angular14-springboot-client
```

```
cd angular14-springboot-client
```

```
npm install
```

```
npm start
```

- Now we need to list out components, services, and modules that we are going to create in this application.
- We will use Angular CLI to generate components, services.

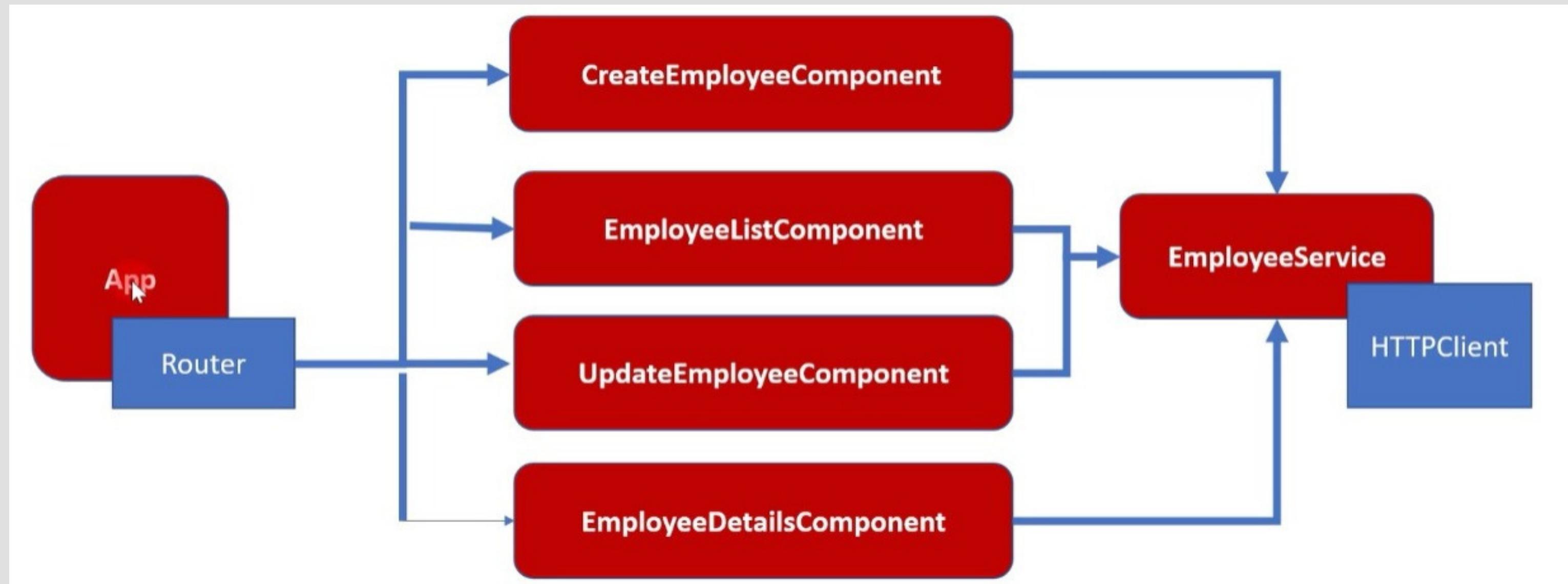
service

Employee service will contain all the methods and provide data to all the components. The EmployeeService will be used to fetch the data from the Spring Boot local server (backend)

Model

model class also allows you adding custom accessors and methods, as well as properties that are added automatically during instantiation

Creating Components, Service and Model Files in angular



Commands:-

ng g c create-employee

CreateEmployeeComponent is used to create and handle a new employee form data.

ng g c employee-list

EmployeeListComponent component will be used to display a list of employees, update employee, delete an employee and also allows us to view each employee detailst

Commands:-

ng g c update-employee

- UpdateEmployeeComponent is used to update an existing employee.
- UpdateEmployeeComponent, we first get the employee object using REST API and populate in HTML form via data binding.

ng g c employee-details

The EmployeeDetailsComponent component is used to display a particular employee detail.

Bootstrap :-



- Bootstrap is the most popular HTML, CSS, and JavaScript framework for developing responsive, mobile-first websites.
- Bootstrap also gives you the ability to easily create responsive designs.
- It makes it possible for a web page or app to detect the visitor's screen size and orientation and automatically adapt the display accordingly.
- One of the prominent advantages of Bootstrap is you can design landing pages complementing the audience's requirements.
- The most crucial advantage of using Bootstrap is its widespread presence.
- Bootstrap satiates this requirement by providing easy-to-read and efficient documentation on the Bootstrap website.

App Routing:-

- A single-page application (SPA) the control moves from one view (expense list) to another view.
- For this we need navigation.
- The process of defining the navigation element and associated view is called the routing in Angular.
- Angular provides a separate module, the Router module, for setting up navigation in an Angular application.
- Router module and route @angular/router package.
- RouterModel gives functionality to configure actual navigation rules of the application.

App Component:-

- The app component is the root component of the application, it defines the root tag of the app as with the selector property of the `@Component` decorator.
- After that Defines the HTML template associated with the root AppComponent.
- And Finally, AppModule, that tells Angular how to assemble the application.
- Initially declares only the AppComponent

Create Employee

[Employee List](#) [Add Employee](#)

Angular14-springboot-client

Create Employee

First Name

Last Name

Email

Submit

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Employee List

Employee List Add Employee

Angular14-springboot-client

Employee List

| Firstname | Lastname | Email | Actions | | |
|------------------|----------|-------------------------------|---------|--------|---------|
| ALAPATI THEERTHA | GOPAL | venugopalalapati123@gmail.com | Delete | Update | Details |
| mani | kiran | manikiran@gmail.com | Delete | Update | Details |
| vaishnavi | mukhala | vaishnavimukhala@gmail.com | Delete | Update | Details |
| akhila | badavath | akhilabadavath@gmail.com | Delete | Update | Details |
| Megha | koshy | Meghakoshy@gmail.com | Delete | Update | Details |
| sharon | abraham | sharonabraham@gmail.com | Delete | Update | Details |

Update Employee

[Employee List](#) [Add Employee](#)

Angular14-springboot-client

Update Employee

First Name

Last Name

E mail

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Updated Employee List

Employee List Add Employee

Angular14-springboot-client

Employee List

| Firstname | Lastname | Email | Actions | | |
|------------------|----------|-------------------------------|---------|--------|---------|
| ALAPATI THEERTHA | GOPAL | venugopalalapati123@gmail.com | Delete | Update | Details |
| mani | kiran | manikiran@gmail.com | Delete | Update | Details |
| vaishnavi | mukhala | vaishnavimukhala@gmail.com | Delete | Update | Details |
| akhila | badavath | akhilabadavath@gmail.com | Delete | Update | Details |
| Megha | koshy | Meghakoshy@gmail.com | Delete | Update | Details |
| sharon | abraham | sharonabraham@gmail.com | Delete | Update | Details |

Employee Details

Employee List Add Employee

Angular14-springboot-client

Employee Details

First Name: ALAPATI THEERTHA

Last Name: GOPAL

Email Id: venugopalalapati123@gmail.com

[Back to Employee List](#)

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DEMO



<https://github.com/venu2000/SpringBootIntegrationWithAngular14CRUD>