**Backend-app**

package com;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

import org.springframework.boot.autoconfigure.domain.EntityScan;

import org.springframework.data.jpa.repository.config.EnableJpaRepositories;

@SpringBootApplication(scanBasePackages = "com")

@EntityScan(basePackages = "com.onlineshop.bean")

@EnableJpaRepositories(basePackages = "com.onlineshop.repository")

public class MyAppApplication {

public static void main(String[] args) {

SpringApplication.run(MyAppApplication.class, args);

System.out.println("Server running on port number 9090");

}

}

**Com.onlineshop.bean**

**Login.java**

package com.onlineshop.bean;

import javax.persistence.Column;

import javax.persistence.Entity;

import javax.persistence.Id;

@Entity

public class Login {

@Id

private String emailid;

private String password;

@Column(name = "typeofuser")

private String typeOfUser;

public String getEmailid() {

return emailid;

}

public void setEmailid(String emailid) {

this.emailid = emailid;

}

public String getPassword() {

return password;

}

public void setPassword(String password) {

this.password = password;

}

public String getTypeOfUser() {

return typeOfUser;

}

public void setTypeOfUser(String typeOfUser) {

this.typeOfUser = typeOfUser;

}

@Override

public String toString() {

return "Login [emailid=" + emailid + ", password=" + password + ", typeOfUser=" + typeOfUser + "]";

}

}

**Product.java**

package com.onlineshop.bean;

import javax.persistence.Entity;

import javax.persistence.GeneratedValue;

import javax.persistence.GenerationType;

import javax.persistence.Id;

@Entity

public class Product {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY) // auto\_generate

private int pid;

private String pname;

private float price;

private String url;

public int getPid() {

return pid;

}

public void setPid(int pid) {

this.pid = pid;

}

public String getPname() {

return pname;

}

public void setPname(String pname) {

this.pname = pname;

}

public float getPrice() {

return price;

}

public void setPrice(float price) {

this.price = price;

}

public String getUrl() {

return url;

}

public void setUrl(String url) {

this.url = url;

}

@Override

public String toString() {

return "Product [pid=" + pid + ", pname=" + pname + ", price=" + price + ", url=" + url + "]";

}

}

**Com.onlineshop.controller**

**LoginController.java**

package com.onlineshop.controller;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.http.MediaType;

import org.springframework.web.bind.annotation.CrossOrigin;

import org.springframework.web.bind.annotation.PostMapping;

import org.springframework.web.bind.annotation.RequestBody;

import org.springframework.web.bind.annotation.RequestMapping;

import org.springframework.web.bind.annotation.RestController;

import com.onlineshop.bean.Login;

import com.onlineshop.service.LoginService;

@RestController

@RequestMapping("login")

@CrossOrigin

public class LoginController {

@Autowired

LoginService loginService;

@PostMapping(value = "signIn",consumes = MediaType.APPLICATION\_JSON\_VALUE)

public String signIn(@RequestBody Login login) {

System.out.println("I cam here");

return loginService.signIn(login);

}

@PostMapping(value = "signUp",consumes = MediaType.APPLICATION\_JSON\_VALUE)

public String signUp(@RequestBody Login login) {

System.out.println(login);

return loginService.signUp(login);

}

}

**ProductController.java**

package com.onlineshop.controller;

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.http.MediaType;

import org.springframework.web.bind.annotation.CrossOrigin;

import org.springframework.web.bind.annotation.DeleteMapping;

import org.springframework.web.bind.annotation.GetMapping;

import org.springframework.web.bind.annotation.PatchMapping;

import org.springframework.web.bind.annotation.PathVariable;

import org.springframework.web.bind.annotation.PostMapping;

import org.springframework.web.bind.annotation.RequestBody;

import org.springframework.web.bind.annotation.RequestMapping;

import org.springframework.web.bind.annotation.RestController;

import com.onlineshop.bean.Product;

import com.onlineshop.service.ProductService;

@RestController

@RequestMapping("product")

@CrossOrigin

public class ProductController {

@Autowired

ProductService productService;

@PostMapping(value = "storeProduct",consumes = MediaType.APPLICATION\_JSON\_VALUE)

public String storeProduct(@RequestBody Product product) {

return productService.storeProduct(product);

}

@PatchMapping(value = "updateProduct",consumes = MediaType.APPLICATION\_JSON\_VALUE)

public String updateProduct(@RequestBody Product product) {

return productService.updateProduct(product);

}

@GetMapping(value="findAllProduct",produces = MediaType.APPLICATION\_JSON\_VALUE)

public List<Product> getAllProduct() {

return productService.getAllProducts();

}

@GetMapping(value="findProductByPrice/{price}",produces = MediaType.APPLICATION\_JSON\_VALUE)

public List<Product> findProductByPrice(@PathVariable("price") float price) {

return productService.findProductByPrice(price);

}

@GetMapping(value="findAllProduct/{pid}")

public String findProductById(@PathVariable("pid") int pid) {

return productService.findProductById(pid);

}

@DeleteMapping(value="deleteProduct/{pid}")

public String deleteProductUsingId(@PathVariable("pid") int pid) {

return productService.deleteProduct(pid);

}

}

com.onlineshop.repository

LoginRepository.java

package com.onlineshop.repository;

import org.springframework.data.jpa.repository.JpaRepository;

import org.springframework.stereotype.Repository;

import com.onlineshop.bean.Login;

@Repository

public interface LoginRepository extends JpaRepository<Login, String>{

}

ProductRepository.java

package com.onlineshop.repository;

import java.util.List;

import org.springframework.data.jpa.repository.JpaRepository;

import org.springframework.data.jpa.repository.Query;

import org.springframework.data.repository.query.Param;

import org.springframework.stereotype.Repository;

import com.onlineshop.bean.Product;

@Repository

public interface ProductRepository extends JpaRepository<Product, Integer>{

//JPQL

@Query("select p from Product p where p.price > :price")

public List<Product> findProductByPrice(@Param("price") float price);

}

com.onlineshop.servic

LoginService.java

package com.onlineshop.service;

import java.util.Optional;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Service;

import com.onlineshop.bean.Login;

import com.onlineshop.repository.LoginRepository;

@Service

public class LoginService {

@Autowired

LoginRepository loginRepository;

public String signIn(Login login) {

Optional<Login> result = loginRepository.findById(login.getEmailid());

if(result.isPresent()) {

Login ll = result.get();

if(ll.getPassword().equals(login.getPassword())) {

if(login.getTypeOfUser().equals(ll.getTypeOfUser()) && login.getTypeOfUser().equals("admin")) {

return "Admin sucessfully login";

}else if(login.getTypeOfUser().equals(ll.getTypeOfUser()) && login.getTypeOfUser().equals("user")){

return "User successfully login";

}else {

return "Invalid details";

}

}else {

return "InValid password";

}

}else {

return "InValid emailId";

}

}

public String signUp(Login login) {

Optional<Login> result = loginRepository.findById(login.getEmailid());

if(result.isPresent()) {

return "Email Id alreay exists";

}else {

if(login.getTypeOfUser().equals("admin")) {

return "You can't create admin account";

}else {

loginRepository.save(login);

return "Account created successfully";

}

}

}

}

ProductService

package com.onlineshop.service;

import java.util.List;

import java.util.Optional;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Service;

import com.onlineshop.bean.Product;

import com.onlineshop.repository.ProductRepository;

@Service

public class ProductService {

@Autowired

ProductRepository productRepository;

public String storeProduct(Product product) {

productRepository.save(product);

return "Product details stored";

}

public List<Product> getAllProducts() {

return productRepository.findAll();

}

public String findProductById(int pid) {

Optional<Product> result = productRepository.findById(pid);

if(result.isPresent()) {

Product p = result.get();

return p.toString();

}else {

return "Product not present";

}

}

public List<Product> findProductByPrice(float price){

return productRepository.findProductByPrice(price);

}

public String deleteProduct(int pid) {

Optional<Product> result = productRepository.findById(pid);

if(result.isPresent()) {

Product p = result.get();

productRepository.delete(p);

return "Product deleted successfully";

}else {

return "Product not present";

}

}

public String updateProduct(Product product) {

Optional<Product> result = productRepository.findById(product.getPid());

if(result.isPresent()) {

Product p = result.get();

p.setPrice(product.getPrice());

p.setUrl(product.getUrl());

productRepository.saveAndFlush(p);

return "Product updated successfully";

}else {

return "Product not present";

}

}

}

**Frontend-app**

**App.component.html**

<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <meta http-equiv="X-UA-Compatible" content="IE=edge">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>Document</title>

</head>

<body>

  <div align="center" class="a">

    <h1>Drive Your way</h1>

    <!-- <h2> Admin Login</h2> -->

    <!-- <hr/> -->

    <router-outlet></router-outlet>

  </div>

</body>

</html>

**App.component.ts**

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

@Component({

  selector: 'app-root',

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

  styleUrls: ['./app.component.css']

})

export class AppComponent {

  title = 'frontend-app';

}

**App.component.css**

body{

    background: rgb(238,174,202);

    background: radial-gradient(circle, rgba(238,174,202,1) 0%, rgba(148,187,233,1) 100%);

height: 100vh;

padding: 0px;

margin: 0px;

}

.a{

    padding-top: 10px;

    color: crimson;

}

**Login.service.ts**

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

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

import { Observable } from 'rxjs';

@Injectable({

  providedIn: 'root'

})

export class LoginService {

  baseURL:string ="http://localhost:9090/login";

  constructor(public http:HttpClient) { }

  signIn(login:any):Observable<string> {

    return this.http.post(this.baseURL+"/signIn",login,{responseType:"text"});

  }

  signUp(login:any):Observable<string> {

    return this.http.post(this.baseURL+"/signUp",login,{responseType:"text"});

  }

}

**Login.ts**

// map to entity class or json data.

export class Login {

    constructor(public emailid:string,

        public password:string,

        public typeOfUser:string){}

}

**Product.service.ts**

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

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

import { Observable } from 'rxjs';

import { Product } from './product';

@Injectable({

  providedIn: 'root'

})

export class ProductService {

  baseUrl:string ="http://localhost:9090/product"

  constructor(public http:HttpClient) { }

  storeProduct(product:any):Observable<string> {

    return this.http.post(this.baseUrl+"/storeProduct",product,{responseType:"text"});

  }

  updateProduct(product:any):Observable<string> {

    return this.http.patch(this.baseUrl+"/updateProduct",product,{responseType:"text"});

  }

  findAllProduct():Observable<Product[]> {

    return this.http.get<Product[]>(this.baseUrl+"/findAllProduct");

  }

  findAllProductByPrice(price:number):Observable<Product[]> {

    return this.http.get<Product[]>(this.baseUrl+"/findProductByPrice/"+price);

  }

  findAllProductById(pid:number):Observable<string> {

    return this.http.get(this.baseUrl+"/findAllProduct/"+pid,{responseType:"text"});

  }

  deleteProductById(pid:number):Observable<string> {

    return this.http.delete(this.baseUrl+"/deleteProduct/"+pid,{responseType:"text"});

  }

}

**Login.component.html**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta http-equiv="X-UA-Compatible" content="IE=edge">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Document</title>

</head>

<body>

    <div  class="admin">

        <div class="signIn">

            <h2>Login Page</h2>

            <form [formGroup]="loginRef" (ngSubmit)="signIn()">

                <div class="form-container-t3">

                <label>EmailId</label>

                <input type="email" formControlName="emailid" placeholder="enter email"/><br/>

                <label>Password</label>

                <input type="password" formControlName="password" placeholder="enter password"/><br/>

                <label>TypeOfUser</label>

                <input type="radio" id="admin1" name="typeOfUser" value="admin" formControlName="typeOfUser"/>admin

                <input type="radio" id="user1" name="typeOfUser" value="user" formControlName="typeOfUser"/>user<br/>

                <input type="submit"  id="signIn12" class="btn" value="signIn"/>

                <input type="reset" class="btn" value="reset"/>

            </div>

            </form>

            <br/>

            <span style="color:red">{{msg}}</span><br/>

            <a routerLink="/signUp">SignUp</a>

        </div>

    </div>

</body>

</html>

**Login.component.ts**

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

import {FormGroup,FormControl} from '@angular/forms';

import { Router } from '@angular/router';

import { LoginService } from '../login.service';

@Component({

  selector: 'app-login',

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

  styleUrls: ['./login.component.css']

})

export class LoginComponent implements OnInit {

  loginRef = new FormGroup({

    emailid:new FormControl(),

    password:new FormControl(),

    typeOfUser:new FormControl()

  });

  msg:string=""

  constructor(public ls:LoginService,public router:Router) { }

  ngOnInit(): void {

  }

  signIn(){

    let login = this.loginRef.value;

    console.log(login);

    this.ls.signIn(login).subscribe({

      next:(result:any)=>{

        console.log(result);

        if(result=="Admin sucessfully login"){

            sessionStorage.setItem("userDetails",login.emailid);

            this.router.navigate(["adminHome"])

        }else if(result=="User successfully login"){

          sessionStorage.setItem("userDetails",login.emailid);

          this.router.navigate(["userHome"])

        }else {

            this.msg=result;

        }

      },

      error:(error:any)=>console.log(error),

      complete:()=>console.log("completed")

    })

  }

}

**Signup.component.html**

<div class="user">

    <div class="signUp">

        <h2>Account Create</h2>

        <form [formGroup]="loginRef" (ngSubmit)="signUp()">

            <label>EmailId</label>

            <input type="email" formControlName="emailid"/><br/>

            <label>Password</label>

            <input type="password" formControlName="password"/><br/>

            <label>TypeOfUser</label>

            <input type="radio" name="typeOfUser" value="admin" formControlName="typeOfUser"/>admin

            <input type="radio" name="typeOfUser" value="user" formControlName="typeOfUser"/>user<br/>

            <input type="submit"  class="btn"value="signUp"/>

            <input type="reset" class="btn" value="reset"/>

        </form>

        <br/>

        <span style="color:red">{{msg}}</span><br/>

        <a routerLink="/login">login</a>

    </div>

</div>

**Signup.component.ts**

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

import {FormGroup,FormControl} from '@angular/forms';

import { LoginService } from '../login.service';

@Component({

  selector: 'app-signup',

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

  styleUrls: ['./signup.component.css']

})

export class SignupComponent implements OnInit {

  loginRef = new FormGroup({

    emailid:new FormControl(),

    password:new FormControl(),

    typeOfUser:new FormControl()

  });

  msg:string=""

  constructor(public ls:LoginService) { }

  ngOnInit(): void {

  }

  signUp() {

    let login = this.loginRef.value;

    this.ls.signUp(login).subscribe({

      next:(result:any)=>this.msg=result,

      error:(error:any)=>console.log(error),

      complete:()=>console.log("completed")

    })

  }

}

**Admindashboard.component.html**

<div>

    <h2>Welcome to home page admin {{user}}</h2>

    <a  id="add1" routerLink="addProduct">Add Product</a> |

    <a routerLink="findAllProduct">View Product</a>

    <br/>

    <hr/>

        <router-outlet></router-outlet>

    <hr/>

    <br/>

    <input type="button" value="logout" (click)="logout()"/>

</div>

**Admindashboard.component.ts**

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

import { Router } from '@angular/router';

@Component({

  selector: 'app-admindashboard',

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

  styleUrls: ['./admindashboard.component.css']

})

export class AdmindashboardComponent implements OnInit {

  user:string ="";

  constructor(private router:Router) { }

  ngOnInit(): void {

    let obj = sessionStorage.getItem("userDetails");

    if(obj!=null){

      this.user=obj;

    }

  }

  logout() {

    sessionStorage.removeItem("userDetails");

    this.router.navigate(["login"]);

  }

}

**Add-product.component.html**

<div>

    <h2>Add Product</h2>

    <form [formGroup]="productRef" (ngSubmit)="storeProduct()">

        <label>PName</label>

        <input  id ="pname11" type="text" formControlName="pname"><br/>

        <label>Price</label>

        <input  id="price11" type="number" formControlName="price"><br/>

        <label>URL</label>

        <input id="url11" type="url" formControlName="url"><br/>

        <input  id="submit11" type="submit" value="store Product"/><br/>

        <input  type="reset" value="reset"/><br/>

    </form><br/>

    <span style="color:red">{{storeMsg}}</span>

</div>

**Add-product.component.ts**

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

import {FormGroup,FormControl} from '@angular/forms'

import { ProductService } from '../product.service';

@Component({

  selector: 'app-add-product',

  templateUrl: './add-product.component.html',

  styleUrls: ['./add-product.component.css']

})

export class AddProductComponent implements OnInit {

  productRef = new FormGroup({

    pname:new FormControl(),

    price:new FormControl(),

    url:new FormControl()

  })

  storeMsg :string =""

  constructor(public ps:ProductService) { }

  ngOnInit(): void {

  }

  storeProduct() {

    let product = this.productRef.value;

    this.ps.storeProduct(product).subscribe({

      next:(result:any)=>this.storeMsg=result,

      error:(error:any)=>console.log(error),

      complete:()=>console.log("completed")

    })

    this.productRef.reset();

  }

}

**Admin-product-retrieve.component.html**

<div>

    <h2>Add Product Details</h2>

    <div \*ngIf="flag">

            <h2>Update Product</h2>

            <form (ngSubmit)="updateDataFromDb()">

                <label>PId</label>

                <input type="number" name="pid" [(ngModel)]="pid" readonly/><br/>

                <label>Price</label>

                <input type="number" name="price" [(ngModel)]="price"/><br/>

                <label>URL</label>

                <input type="URL" name="url" [(ngModel)]="url"/><br/>

                <input type="submit" value="update data"/>

                <input type="reset" value="reset"/>

            </form>

    </div>

    <span \*ngFor="let p of products">

        <img src={{p.url}} width="300px" height="300px"/>

        <span>{{p.pname}} {{p.price}}</span>

        <input type="button" value="delete" (click)="deleteProduct(p.pid)"/>

        <input type="button" value="update" (click)="updateProduct(p)"/>

    </span>

</div>

**Admin-product-retrieve.component.ts**

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

import { Product } from '../product';

import { ProductService } from '../product.service';

@Component({

  selector: 'app-admin-product-retrieve',

  templateUrl: './admin-product-retrieve.component.html',

  styleUrls: ['./admin-product-retrieve.component.css']

})

export class AdminProductRetrieveComponent implements OnInit {

  products:Array<Product>=[];

  constructor(public ps:ProductService) { }

  ngOnInit(): void {

    this.findAllProduct();

  }

  flag:boolean = false;

  pid:number =0;

  price:number =0;

  url:string ="";

  findAllProduct() {

    this.ps.findAllProduct().subscribe({

      next:(result:any)=>this.products=result,

      error:(error:any)=>console.log(error),

      complete:()=>console.log("completed")

    })

  }

  deleteProduct(pid:number){

    //console.log(pid)

    this.ps.deleteProductById(pid).subscribe({

      next:(result:any)=>console.log(result),

      error:(error:any)=>console.log(error),

      complete:()=>{

          this.findAllProduct();

      }

    })

  }

  updateProduct(product:any){

      this.flag= true;

      this.pid=product.pid;

      this.price=product.price;

      this.url=product.url;

  }

  updateDataFromDb(){

    let product = {pid:this.pid,price:this.price,url:this.url};

    this.ps.updateProduct(product).subscribe({

      next:(result:any)=>console.log(result),

      error:(error:any)=>console.log(error),

      complete:()=>{

          this.findAllProduct();

      }

    })

    this.flag=false;

  }

}

**Selenium with test ng**

**package** com.simplilearn;

**import** org.testng.annotations.Test;

// import org.testng.annotations.AfterClass;

// import org.testng.annotations.Test;

// import org.testng.AssertJUnit;

// import org.testng.annotations.Test;

**import** org.testng.asserts.SoftAssert;

// import java.util.concurrent.TimeUnit;

**import** org.openqa.selenium.By;

//import org.openqa.selenium.By.ById;

//import org.openqa.selenium.By.ByXPath;

////import org.openqa.selenium.JavascriptExecutor;

// import org.openqa.selenium.NoSuchElementException;

**import** org.openqa.selenium.WebDriver;

**import** org.openqa.selenium.WebElement;

**import** org.openqa.selenium.chrome.ChromeDriver;

// import org.openqa.selenium.support.ui.FluentWait;

// import org.openqa.selenium.support.ui.Wait;

// import org.testng.annotations.AfterClass;

// import org.testng.annotations.AfterMethod;

**public** **class** driver\_your\_way\_test {

// Step 1: Initialize the webdriver

WebDriver driver = **null**;

SoftAssert soft = **new** SoftAssert();

@Test

**public** **void** initialization\_T0() {

// Step 2: Declare a path and set property for google chrome driver

String path = "C:\\Users\\Prateek\\Phase 5 Workspace\\chromedriver\_win32\\chromedriver.exe";

System.*setProperty*("webdriver.chrome.driver", path);

driver = **new** ChromeDriver();

}

@Test(groups = "Chrome", dependsOnMethods = { "initialization\_T0" })

**public** **void** cross\_T1() {

System.***out***.println("Testcases Starting...");

System.***out***.println();

// starting chrome

driver.get("http://localhost:4200/login");

**try** {

Thread.*sleep*(5000);

} **catch** (InterruptedException e) {

e.printStackTrace();

}

WebElement email=driver.findElement(By.*xpath*("/html/body/app-root/html/body/div/app-login/html/body/div/div/form/div/input[1]"));

email.sendKeys("admin@gmail.com");

WebElement password=driver.findElement(By.*xpath*("/html/body/app-root/html/body/div/app-login/html/body/div/div/form/div/input[2]"));

password.sendKeys("admin@123");

WebElement admin=driver.findElement(By.*id*("admin1"));

admin.click();

WebElement signIn=driver.findElement(By.*id*("signIn12"));

signIn.submit();

**try** {

Thread.*sleep*(5000);

} **catch** (InterruptedException e) {

e.printStackTrace();

}

}

@Test(groups = "Chrome", dependsOnMethods = {"cross\_T1"})

**public** **void** cross\_T2() {

**try** {

Thread.*sleep*(5000);

} **catch** (InterruptedException e) {

e.printStackTrace();

}

// Clicking Search Button

WebElement addproduct11=driver.findElement(By.*xpath*("//\*[@id=\"add1\"]"));

addproduct11.click();

WebElement pname=driver.findElement(By.*id*("pname11"));

pname.sendKeys("I10");

**try** {

Thread.*sleep*(3000);

} **catch** (InterruptedException e) {

e.printStackTrace();

}

WebElement price=driver.findElement(By.*id*("price11"));

price.sendKeys("500000");

**try** {

Thread.*sleep*(3000);

} **catch** (InterruptedException e) {

e.printStackTrace();

}

WebElement url=driver.findElement(By.*id*("url11"));

url.sendKeys("https://upload.wikimedia.org/wikipedia/commons/thumb/4/44/Hyundai\_i10\_1.0\_Intro\_%28III%29\_%E2%80%93\_f\_03012021.jpg/640px-Hyundai\_i10\_1.0\_Intro\_%28III%29\_%E2%80%93\_f\_03012021.jpg");

WebElement store=driver.findElement(By.*id*("submit11"));

**try** {

Thread.*sleep*(5000);

} **catch** (InterruptedException e) {

e.printStackTrace();

}

store.submit();

}

}