**Pom.xml**

<?xml version="1.0" encoding="UTF-8"?>

<project xmlns="http://maven.apache.org/POM/4.0.0"

xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 https://maven.apache.org/xsd/maven-4.0.0.xsd">

<modelVersion>4.0.0</modelVersion>

<parent>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-parent</artifactId>

<version>2.5.0</version>

<relativePath /> <!-- lookup parent from repository -->

</parent>

<groupId>com.project</groupId>

<artifactId>sportyshoes</artifactId>

<version>0.0.1-SNAPSHOT</version>

<name>sportyshoes</name>

<description>Spring boot E-Commerce Application</description>

<dependencies>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-data-jpa</artifactId>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-oauth2-client</artifactId>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-security</artifactId>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-thymeleaf</artifactId>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-web</artifactId>

</dependency>

<dependency>

<groupId>com.h2database</groupId>

<artifactId>h2</artifactId>

<scope>runtime</scope>

</dependency>

<dependency>

<groupId>org.thymeleaf.extras</groupId>

<artifactId>thymeleaf-extras-springsecurity5</artifactId>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-devtools</artifactId>

<scope>runtime</scope>

<optional>true</optional>

</dependency>

<dependency>

<groupId>org.projectlombok</groupId>

<artifactId>lombok</artifactId>

<optional>true</optional>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-test</artifactId>

<scope>test</scope>

</dependency>

<dependency>

<groupId>org.springframework.security</groupId>

<artifactId>spring-security-test</artifactId>

<scope>test</scope>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-validation</artifactId>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-configuration-processor</artifactId>

<optional>true</optional>

</dependency>

</dependencies>

<build>

<plugins>

<plugin>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-maven-plugin</artifactId>

<configuration>

<excludes>

<exclude>

<groupId>org.projectlombok</groupId>

<artifactId>lombok</artifactId>

</exclude>

<exclude>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-configuration-processor</artifactId>

</exclude>

</excludes>

</configuration>

</plugin>

<plugin>

<artifactId>maven-compiler-plugin</artifactId>

<configuration>

<source>12</source>

<target>12</target>

</configuration>

</plugin>

</plugins>

</build>

</project>

**SportyshoesApplicationTests.java**

package com.project.sportyshoes;

import org.junit.jupiter.api.Test;

import org.springframework.boot.test.context.SpringBootTest;

@SpringBootTest

class SportyshoesApplicationTests {

@Test

void contextLoads() {

}

}

**datatables.min.css**

div.dataTables\_wrapper div.dataTables\_length select,

div.dataTables\_wrapper div.dataTables\_length input {

width: auto

}

div.dataTables\_wrapper div.dataTables\_length.d-flex.flex-row label {

margin-top: 2.2rem;

margin-right: 1.4rem

}

div.dataTables\_wrapper div.dataTables\_length.d-flex.flex-row .select-wrapper.mdb-select span,

div.dataTables\_wrapper div.dataTables\_length.d-flex.flex-row .select-wrapper.mdb-select .select-dropdown {

margin-top: 2rem

}

div.dataTables\_wrapper div.dataTables\_length label,

div.dataTables\_wrapper div.dataTables\_filter label {

padding-top: .7rem;

padding-bottom: .7rem;

font-weight: 600;

text-align: left

}

div.dataTables\_wrapper div.dataTables\_filter {

text-align: right

}

div.dataTables\_wrapper div.dataTables\_filter select,

div.dataTables\_wrapper div.dataTables\_filter input {

width: auto

}

div.dataTables\_wrapper div.dataTables\_filter input {

display: inline-block;

margin-left: .8rem

}

div.dataTables\_wrapper div.dataTables\_info,

div.dataTables\_wrapper div.dataTables\_paginate {

padding-top: 2rem;

padding-bottom: 2rem;

font-weight: 600

}

div.dataTables\_wrapper div.dataTables\_paginate {

margin: 0;

text-align: right

}

div.dataTables\_wrapper div.dataTables\_paginate ul.pagination {

-ms-flex-pack: end;

justify-content: flex-end;

-webkit-box-pack: end

}

div.dataTables\_wrapper div.dataTables\_paginate ul.pagination .page-item.active .page-link:focus {

background-color: green;

}

div.dataTables\_wrapper div.dataTables\_paginate ul.pagination .page-item .page-link:focus {

-webkit-box-shadow: none;

box-shadow: none

}

@media (max-width: 767px) {

div.dataTables\_wrapper div .dataTables\_length,

div.dataTables\_wrapper div .dataTables\_filter,

div.dataTables\_wrapper div .dataTables\_info,

div.dataTables\_wrapper div .dataTables\_paginate ul.pagination {

-ms-flex-pack: center;

justify-content: center;

text-align: center;

-webkit-box-pack: center

}

}

.bs-select select {

display: inline-block !important

}

table.dataTable thead {

cursor: pointer

}

table.dataTable thead>tr>th.sorting\_asc,

table.dataTable thead>tr>th.sorting\_desc,

table.dataTable thead>tr>th.sorting,

table.dataTable thead>tr>td.sorting\_asc,

table.dataTable thead>tr>td.sorting\_desc,

table.dataTable thead>tr>td.sorting {

padding-right: 25px

}

table.dataTable thead>tr>th:active,

table.dataTable thead>tr>td:active {

outline: none

}

table.dataTable thead .sorting,

table.dataTable thead .sorting\_asc,

table.dataTable thead .sorting\_desc,

table.dataTable thead .sorting\_asc\_disabled,

table.dataTable thead .sorting\_desc\_disabled {

position: relative;

cursor: pointer

}

table.dataTable thead .sorting:before,

table.dataTable thead .sorting:after,

table.dataTable thead .sorting\_asc:before,

table.dataTable thead .sorting\_asc:after,

table.dataTable thead .sorting\_desc:before,

table.dataTable thead .sorting\_desc:after,

table.dataTable thead .sorting\_asc\_disabled:before,

table.dataTable thead .sorting\_asc\_disabled:after,

table.dataTable thead .sorting\_desc\_disabled:before,

table.dataTable thead .sorting\_desc\_disabled:after {

position: absolute;

bottom: .7em;

display: block;

opacity: .7

}

table.dataTable thead .sorting:before,

table.dataTable thead .sorting\_asc:before,

table.dataTable thead .sorting\_desc:before,

table.dataTable thead .sorting\_asc\_disabled:before,

table.dataTable thead .sorting\_desc\_disabled:before {

right: 2em;

font-family: "Font Awesome\ 5 Free", sans-serif;

font-size: 1rem;

font-weight: 900;

content: ''

}

table.dataTable thead .sorting:after,

table.dataTable thead .sorting\_asc:after,

table.dataTable thead .sorting\_desc:after,

table.dataTable thead .sorting\_asc\_disabled:after,

table.dataTable thead .sorting\_desc\_disabled:after {

right: 20px;

font-family: "Font Awesome\ 5 Free", sans-serif;

font-size: 2rem;

font-weight: 800;

content: ''

}

table.dataTable thead .sorting\_asc:before,

table.dataTable thead .sorting\_desc:after {

opacity: 0.9

}

table.dataTable thead .sorting\_asc\_disabled:before,

table.dataTable thead .sorting\_desc\_disabled:after {

opacity: 0.3

}

**SportyshoesApplication.java**

package com.project.sportyshoes;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication

public class SportyshoesApplication {

public static void main(String[] args) {

SpringApplication.run(SportyshoesApplication.class, args);

}

}

**SecurityConfig.java**

package com.project.sportyshoes.configuration;

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

import org.springframework.context.annotation.Bean;

import org.springframework.context.annotation.Configuration;

import org.springframework.security.config.annotation.authentication.builders.AuthenticationManagerBuilder;

import org.springframework.security.config.annotation.web.builders.HttpSecurity;

import org.springframework.security.config.annotation.web.builders.WebSecurity;

import org.springframework.security.config.annotation.web.configuration.EnableWebSecurity;

import org.springframework.security.config.annotation.web.configuration.WebSecurityConfigurerAdapter;

import org.springframework.security.crypto.bcrypt.BCryptPasswordEncoder;

import org.springframework.security.web.util.matcher.AntPathRequestMatcher;

import com.project.sportyshoes.service.CustomUserDetailService;

@Configuration

@EnableWebSecurity

public class SecurityConfig extends WebSecurityConfigurerAdapter {

@Autowired

CustomUserDetailService customUserDetailService;

@Override

protected void configure(HttpSecurity http) throws Exception {

http

.authorizeRequests()

.antMatchers("/" , "/shop/\*\*" , "/forgotpassword" , "/register" , "/h2-console/\*\*" ).permitAll()

.antMatchers("/admin/\*\*").hasRole("ADMIN")

.anyRequest()

.authenticated()

.and()

.formLogin()

.loginPage("/login")

.permitAll()

.failureUrl("/login?error=true")

.defaultSuccessUrl("/")

.usernameParameter("email")

.passwordParameter("password")

.and()

.logout()

.logoutRequestMatcher(new AntPathRequestMatcher("/logout"))

.logoutSuccessUrl("/login")

.invalidateHttpSession(true)

.deleteCookies("JSESSIONID")

.and()

.exceptionHandling()

.and()

.csrf()

.disable();

http.headers().frameOptions().disable();

}

@Override

protected void configure(AuthenticationManagerBuilder auth) throws Exception {

auth.userDetailsService(customUserDetailService);

}

@Override

public void configure(WebSecurity web) throws Exception {

web.ignoring().antMatchers("/resources/\*\*" , "/static/\*\*" , "/images/\*\*" , "/productImages/\*\*" , "/css/\*\*" , "/js/\*\*")

;

}

@Bean

public BCryptPasswordEncoder bCryptPasswordEncoder() {

return new BCryptPasswordEncoder();

}

}

**AdminController.java**

package com.project.sportyshoes.controller;

import java.io.IOException;

import java.nio.file.Files;

import java.nio.file.Path;

import java.nio.file.Paths;

import java.util.ArrayList;

import java.util.List;

import java.util.Optional;

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

import org.springframework.stereotype.Controller;

import org.springframework.ui.Model;

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

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

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

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

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

import org.springframework.web.multipart.MultipartFile;

import com.project.sportyshoes.dto.ProductDTO;

import com.project.sportyshoes.global.PurchaseReport;

import com.project.sportyshoes.model.Category;

import com.project.sportyshoes.model.Product;

import com.project.sportyshoes.model.Purchase;

import com.project.sportyshoes.model.User;

import com.project.sportyshoes.repository.UserRepository;

import com.project.sportyshoes.service.CategoryService;

import com.project.sportyshoes.service.ProductService;

import com.project.sportyshoes.service.PurchaseService;

@Controller

public class AdminController {

public static String uploadDir = System.getProperty("user.dir") + "/src/main/resources/static/productImages";

@Autowired

PurchaseService purchaseService;

@Autowired

UserRepository userRepository;

@Autowired

CategoryService categoryService;

@Autowired

ProductService productService;

@GetMapping("/admin")

public String adminHome() {

return "adminHome";

}

@GetMapping("/admin/categories")

public String getCat(Model model) {

model.addAttribute("categories" , categoryService.getAllCategories());

return "categories";

}

@GetMapping("/admin/categories/add")

public String getCatAdd(Model model) {

model.addAttribute("category" , new Category());

return "categoriesAdd";

}

@PostMapping("/admin/categories/add")

public String postCatAdd(@ModelAttribute("category") Category category) {

categoryService.addCategory(category);

return "redirect:/admin/categories";

}

//Purchase Report

@GetMapping("/admin/purchaseReport")

public String purchaseReport(Model model) {

List<Purchase>purchaseList = purchaseService.getAllPurchases();

List<PurchaseReport>purchaseReportList = new ArrayList<PurchaseReport>();

for(Purchase pur : purchaseList) {

Product product = new Product();

User user = new User();

Category category = new Category();

PurchaseReport purchaseReport = new PurchaseReport();

Long productId = pur.getProductId();

int userId = pur.getUserId();

product = productService.getProductById(productId).get();

user = userRepository.findById(userId).get();

category = product.getCategory();

purchaseReport.setEmail(user.getEmail());

purchaseReport.setName(user.getFirstName());

purchaseReport.setProductId(product.getId());

purchaseReport.setProductName(product.getName());

purchaseReport.setPrice(product.getPrice());

purchaseReport.setDate(pur.getOrderDate().toString());

purchaseReport.setCategory(category.getName());

//Check the output on the console

System.out.println(purchaseReport.getName() + " " + purchaseReport.getEmail() + " " + purchaseReport.getProductId() + " " + purchaseReport.getPrice() + " " + purchaseReport.getCategory());

purchaseReportList.add(purchaseReport);

}

model.addAttribute("puchaseList" , purchaseReportList);

return "purchaseReport";

}

@GetMapping("/admin/product/update/{id}")

public String updateProd(@PathVariable long id , Model model) {

Product product = productService.getProductById(id).get();

ProductDTO productDTO = new ProductDTO();

productDTO.setId(product.getId());

productDTO.setName(product.getName());

productDTO.setCategoryId(product.getCategory().getId());

productDTO.setPrice(product.getPrice());

productDTO.setWeight(product.getWeight());

productDTO.setDescription(product.getDescription());

productDTO.setImageName(product.getImageName());

model.addAttribute("productDTO" , productDTO);

model.addAttribute("categories" , categoryService.getAllCategories());

return "productsAdd";

}

@GetMapping("/admin/categories/delete/{id}")

public String deleteCat(@PathVariable int id) {

categoryService.removeCategoryById(id);

return "redirect:/admin/categories";

}

@GetMapping("/admin/users")

public String listUsers(Model model) {

List<User>userList = userRepository.findAll();

model.addAttribute("userlist" , userList);

return "userList";

}

@GetMapping("/admin/categories/update/{id}")

public String updateCat(@PathVariable int id , Model model) {

Optional<Category> category = categoryService.getCatById(id);

if(category.isPresent()) {

model.addAttribute("category" , category.get());

return "categoriesAdd";

}else {

return "404";

}

}

// Product Section

@GetMapping("/admin/product/delete/{id}")

public String deleteProd(@PathVariable long id) {

productService.removeProductById(id);

return "redirect:/admin/products";

}

@GetMapping("/admin/products")

public String showProducts(Model model) {

model.addAttribute("products" , productService.getAllProducts());

return "products";

}

@GetMapping("/admin/products/add")

public String addProduct(Model model) {

model.addAttribute("productDTO" , new ProductDTO());

model.addAttribute("categories" , categoryService.getAllCategories());

return "productsAdd";

}

@PostMapping("/admin/products/add")

public String productAddPost(@ModelAttribute ("productDTO") ProductDTO productDTO ,

@RequestParam("productImage") MultipartFile file,

@RequestParam("imgName") String imgName) throws IOException {

Product product = new Product();

product.setName(productDTO.getName());

product.setCategory(categoryService.getCatById(productDTO.getCategoryId()).get());

product.setDescription(productDTO.getDescription());

product.setId(productDTO.getId());

product.setPrice(productDTO.getPrice());

product.setWeight(productDTO.getWeight());

String imageUUID;

if (!file.isEmpty()) {

imageUUID = file.getOriginalFilename();

Path fileNameAndPath = Paths.get(uploadDir, imageUUID);

Files.write(fileNameAndPath, file.getBytes());

}else {

imageUUID = imgName;

}

product.setImageName(imageUUID);

productService.addProduct(product);

return "redirect:/admin/products";

}

}

**CartController.java**

package com.project.sportyshoes.controller;

import java.time.LocalDate;

import java.util.ArrayList;

import java.util.List;

import java.util.Random;

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

import org.springframework.security.core.Authentication;

import org.springframework.security.core.context.SecurityContextHolder;

import org.springframework.stereotype.Controller;

import org.springframework.ui.Model;

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

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

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

import com.project.sportyshoes.global.GlobalData;

import com.project.sportyshoes.model.Product;

import com.project.sportyshoes.model.Purchase;

import com.project.sportyshoes.model.User;

import com.project.sportyshoes.repository.PurchaseRepository;

import com.project.sportyshoes.repository.UserRepository;

import com.project.sportyshoes.service.ProductService;

@Controller

public class CartController {

@Autowired

UserRepository userRepository;

@Autowired

PurchaseRepository purchaseRepository;

@Autowired

ProductService productService;

@GetMapping("/cart/removeItem/{index}")

public String cartItemRemove(@PathVariable int index) {

GlobalData.cart.remove(index);

return "redirect:/cart";

}

@GetMapping("/checkout")

public String checkout(Model model) {

model.addAttribute("total" , GlobalData.cart.stream().mapToDouble(Product::getPrice).sum());

return "checkout";

}

@PostMapping("/payNow")

public String orderConfirmation(Model model) {

model.addAttribute("total" , GlobalData.cart.stream().mapToDouble(Product::getPrice).sum());

Authentication auth = SecurityContextHolder.getContext().getAuthentication();

String currentPrincipalName = auth.getName();

List<Purchase>purchaseList = new ArrayList<Purchase>();

//System.out.println(currentPrincipalName);

User user = userRepository.findUserByEmail(currentPrincipalName).get();

for(Product product: GlobalData.cart) {

Purchase purchase = new Purchase();

//System.out.println(product.getId() + " " + product.getName());

purchase.setProductId(product.getId());

purchase.setUserId(user.getId());

purchase.setOrderDate(LocalDate.now());

purchaseList.add(purchase);

}

int n = 10000 + new Random().nextInt(90000);

model.addAttribute("Reciept" , n);

//System.out.println(purchaseList.toString());

model.addAttribute("products" , GlobalData.cart);

purchaseRepository.saveAll(purchaseList);

return "orderPlaced";

}

@GetMapping("/addToCart/{id}")

public String addToCart(@PathVariable int id) {

GlobalData.cart.add(productService.getProductById(id).get());

return "redirect:/shop";

}

@GetMapping("/cart")

public String cartGet(Model model) {

model.addAttribute("cartCount" , GlobalData.cart.size());

model.addAttribute("total" , GlobalData.cart.stream().mapToDouble(Product::getPrice).sum());

model.addAttribute("cart" , GlobalData.cart);

return "cart";

}

}

**HomeController.java**

package com.project.sportyshoes.controller;

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

import org.springframework.stereotype.Controller;

import org.springframework.ui.Model;

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

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

import com.project.sportyshoes.global.GlobalData;

import com.project.sportyshoes.service.CategoryService;

import com.project.sportyshoes.service.ProductService;

@Controller

public class HomeController {

@Autowired

ProductService productService;

@Autowired

CategoryService categoryService;

@GetMapping({"/" , "/home"})

public String home(Model model) {

model.addAttribute("cartCount" , GlobalData.cart.size());

return "index";

}

@GetMapping("/shop")

public String shop(Model model) {

model.addAttribute("cartCount" , GlobalData.cart.size());

model.addAttribute("categories" , categoryService.getAllCategories());

model.addAttribute("products" , productService.getAllProducts());

return "shop";

}

@GetMapping("/shop/category/{id}")

public String shopByCategory(Model model , @PathVariable int id) {

model.addAttribute("cartCount" , GlobalData.cart.size());

model.addAttribute("categories" , categoryService.getAllCategories());

model.addAttribute("products" , productService.getAllProductsByCategoryId(id));

return "shop";

}

@GetMapping("/shop/viewproduct/{id}")

public String viewProduct(Model model , @PathVariable long id) {

model.addAttribute("product" , productService.getProductById(id).get());

model.addAttribute("cartCount" , GlobalData.cart.size());

return "viewProduct";

}

}

**LoginController.java**

package com.project.sportyshoes.controller;

import java.util.ArrayList;

import java.util.List;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServletRequest;

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

import org.springframework.security.crypto.bcrypt.BCryptPasswordEncoder;

import org.springframework.stereotype.Controller;

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

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

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

import com.project.sportyshoes.global.GlobalData;

import com.project.sportyshoes.model.Role;

import com.project.sportyshoes.model.User;

import com.project.sportyshoes.repository.RoleRepository;

import com.project.sportyshoes.repository.UserRepository;

@Controller

public class LoginController {

@Autowired

UserRepository userRepository;

@Autowired

RoleRepository roleRepository;

@Autowired

private BCryptPasswordEncoder bCryptPasswordEncoder;

@PostMapping("/register")

public String registerPost(@ModelAttribute("user") User user , HttpServletRequest request) throws ServletException {

String passoword = user.getPassword();

user.setPassword(bCryptPasswordEncoder.encode(passoword));

List<Role>roles = new ArrayList<Role>();

roles.add(roleRepository.findById(2).get());

user.setRoles(roles);

userRepository.save(user);

request.login(user.getEmail(), passoword);

return "redirect:/";

}

@GetMapping("/login")

public String login() {

GlobalData.cart.clear();

return "login";

}

@GetMapping("/register")

public String registerGet() {

return "register";

}

}

**ProductDTO.java**

package com.project.sportyshoes.dto;

public class ProductDTO {

private int categoryId;

private double price;

private double weight;

private String description;

private String imageName;

private Long id;

private String name;

public int getCategoryId() {

return categoryId;

}

public void setCategoryId(int categoryId) {

this.categoryId = categoryId;

}

public double getPrice() {

return price;

}

public void setPrice(double price) {

this.price = price;

}

public double getWeight() {

return weight;

}

public void setWeight(double weight) {

this.weight = weight;

}

public String getDescription() {

return description;

}

public void setDescription(String description) {

this.description = description;

}

public String getImageName() {

return imageName;

}

public void setImageName(String imageName) {

this.imageName = imageName;

}

public Long getId() {

return id;

}

public void setId(Long id) {

this.id = id;

}

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

}

**PurchaseReport.java**

package com.project.sportyshoes.global;

import org.springframework.stereotype.Component;

@Component

public class PurchaseReport {

private String productName;

private double price;

private String date;

private String category;

private String email;

private String name;

private Long productId;

public String getProductName() {

return productName;

}

public void setProductName(String productName) {

this.productName = productName;

}

public double getPrice() {

return price;

}

public void setPrice(double price) {

this.price = price;

}

public String getDate() {

return date;

}

public void setDate(String date) {

this.date = date;

}

public String getCategory() {

return category;

}

public void setCategory(String category) {

this.category = category;

}

public String getEmail() {

return email;

}

public void setEmail(String email) {

this.email = email;

}

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public Long getProductId() {

return productId;

}

public void setProductId(Long productId) {

this.productId = productId;

}

}

**Model Classes:**

**Category.java**

package com.project.sportyshoes.model;

import javax.persistence.Column;

import javax.persistence.Entity;

import javax.persistence.GeneratedValue;

import javax.persistence.GenerationType;

import javax.persistence.Id;

@Entity

public class Category {

@Id

@GeneratedValue(strategy = GenerationType.AUTO)

@Column(name = "category\_id")

private int id;

private String name;

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public int getId() {

return id;

}

public void setId(int id) {

this.id = id;

}

}

**CustomUserDetail.java**

package com.project.sportyshoes.model;

import java.util.ArrayList;

import java.util.Collection;

import java.util.List;

import org.springframework.security.core.GrantedAuthority;

import org.springframework.security.core.authority.SimpleGrantedAuthority;

import org.springframework.security.core.userdetails.UserDetails;

public class CustomUserDetail extends User implements UserDetails {

@Override

public String getPassword() {

// TODO Auto-generated method stub

return super.getPassword();

}

@Override

public String getUsername() {

// TODO Auto-generated method stub

return super.getEmail();

}

@Override

public boolean isAccountNonExpired() {

// TODO Auto-generated method stub

return true;

}

@Override

public boolean isAccountNonLocked() {

// TODO Auto-generated method stub

return true;

}

@Override

public boolean isCredentialsNonExpired() {

// TODO Auto-generated method stub

return true;

}

@Override

public boolean isEnabled() {

// TODO Auto-generated method stub

return true;

}

public CustomUserDetail(User user) {

super(user);

}

@Override

public Collection<? extends GrantedAuthority> getAuthorities() {

List<GrantedAuthority>authorityList = new ArrayList<GrantedAuthority>();

super.getRoles().forEach(role -> {

authorityList.add(new SimpleGrantedAuthority(role.getName()));

});

return authorityList;

}

}

**Product.java**

package com.project.sportyshoes.model;

import javax.persistence.Entity;

import javax.persistence.FetchType;

import javax.persistence.GeneratedValue;

import javax.persistence.GenerationType;

import javax.persistence.Id;

import javax.persistence.JoinColumn;

import javax.persistence.ManyToOne;

@Entity

public class Product {

@Id

@GeneratedValue(strategy = GenerationType.AUTO)

private Long id;

private String name;

private double price;

private double weight;

private String description;

private String imageName;

@ManyToOne(fetch = FetchType.LAZY)

@JoinColumn(name = "category\_id" , referencedColumnName = "category\_id")

private Category category;

public double getPrice() {

return price;

}

public void setPrice(double price) {

this.price = price;

}

public double getWeight() {

return weight;

}

public void setWeight(double weight) {

this.weight = weight;

}

public String getDescription() {

return description;

}

public void setDescription(String description) {

this.description = description;

}

public String getImageName() {

return imageName;

}

public void setImageName(String imageName) {

this.imageName = imageName;

}

public Long getId() {

return id;

}

public void setId(Long id) {

this.id = id;

}

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public Category getCategory() {

return category;

}

public void setCategory(Category category) {

this.category = category;

}

}

**Purchase.java**

package com.project.sportyshoes.model;

import java.time.LocalDate;

import javax.persistence.Column;

import javax.persistence.Entity;

import javax.persistence.GeneratedValue;

import javax.persistence.GenerationType;

import javax.persistence.Id;

@Entity

public class Purchase {

@Id

@GeneratedValue(strategy = GenerationType.SEQUENCE)

private long id;

@Column(name = "order\_date")

private LocalDate orderDate;

private int userId;

private Long productId;

public int getUserId() {

return userId;

}

public void setUserId(int userId) {

this.userId = userId;

}

public Long getProductId() {

return productId;

}

public void setProductId(Long productId) {

this.productId = productId;

}

public LocalDate getOrderDate() {

return orderDate;

}

public void setOrderDate(LocalDate orderDate) {

this.orderDate = orderDate;

}

public long getId() {

return id;

}

public void setId(long id) {

this.id = id;

}

}

**Role.java**

package com.project.sportyshoes.model;

import java.util.List;

import javax.persistence.Column;

import javax.persistence.Entity;

import javax.persistence.GeneratedValue;

import javax.persistence.GenerationType;

import javax.persistence.Id;

import javax.persistence.ManyToMany;

import javax.persistence.Table;

import javax.validation.constraints.NotEmpty;

@Entity

@Table(name = "roles")

public class Role {

@Id

@GeneratedValue(strategy = GenerationType.AUTO)

private Integer id;

@Column(nullable = false , unique = true)

@NotEmpty

private String name;

@ManyToMany(mappedBy = "roles")

private List<User>users;

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public List<User> getUsers() {

return users;

}

public void setUsers(List<User> users) {

this.users = users;

}

public Integer getId() {

return id;

}

public void setId(Integer id) {

this.id = id;

}

}

**User.java**

package com.project.sportyshoes.model;

import java.util.List;

import javax.persistence.CascadeType;

import javax.persistence.Column;

import javax.persistence.Entity;

import javax.persistence.FetchType;

import javax.persistence.GeneratedValue;

import javax.persistence.GenerationType;

import javax.persistence.Id;

import javax.persistence.JoinColumn;

import javax.persistence.JoinTable;

import javax.persistence.ManyToMany;

import javax.persistence.Table;

import javax.validation.constraints.Email;

import javax.validation.constraints.NotEmpty;

@Entity

@Table(name = "users")

public class User {

@Id

@GeneratedValue(strategy = GenerationType.AUTO)

private Integer id;

private String lastName;

private String password;

@NotEmpty

@Column(nullable = false)

private String firstName;

@NotEmpty

@Column(nullable = false , unique = true)

@Email(message = "{errors.invalid\_email}")

private String email;

@ManyToMany(cascade = CascadeType.MERGE , fetch = FetchType.EAGER)

@JoinTable(

name = "user\_role",

joinColumns = {@JoinColumn( name = "USER\_ID" , referencedColumnName = "ID" )},

inverseJoinColumns = {@JoinColumn( name = "ROLE\_ID" , referencedColumnName = "ID" )}

)

private List<Role>roles;

public String getEmail() {

return email;

}

public void setEmail(String email) {

this.email = email;

}

public String getPassword() {

return password;

}

public void setPassword(String passsword) {

this.password = passsword;

}

public List<Role> getRoles() {

return roles;

}

public void setRoles(List<Role> roles) {

this.roles = roles;

}

public Integer getId() {

return id;

}

public void setId(Integer id) {

this.id = id;

}

public String getFirstName() {

return firstName;

}

public void setFirstName(String firstName) {

this.firstName = firstName;

}

public String getLastName() {

return lastName;

}

public void setLastName(String lastName) {

this.lastName = lastName;

}

public User(User user) {

super();

this.firstName = user.getFirstName();

this.lastName = user.getLastName();

this.email = user.getEmail();

this.password = user.getPassword();

this.roles = user.getRoles();

}

public User() {}

}

**CategoryRepository.java**

package com.project.sportyshoes.repository;

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

import com.project.sportyshoes.model.Category;

public interface CategoryRepository extends JpaRepository<Category, Integer> {

}

**ProductRepository.java**

package com.project.sportyshoes.repository;

import java.util.List;

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

import com.project.sportyshoes.model.Product;

public interface ProductRepository extends JpaRepository<Product, Long> {

List<Product> findAllByCategory\_Id(int id);

}

**PurchaseRepository.java**

package com.project.sportyshoes.repository;

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

import com.project.sportyshoes.model.Purchase;

public interface PurchaseRepository extends JpaRepository<Purchase, Long> {

}

**RoleRepository.java**

package com.project.sportyshoes.repository;

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

import com.project.sportyshoes.model.Role;

public interface RoleRepository extends JpaRepository<Role, Integer> {

}

**UserRepository.java**

package com.project.sportyshoes.repository;

import java.util.Optional;

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

import com.project.sportyshoes.model.User;

public interface UserRepository extends JpaRepository<User, Integer> {

Optional<User>findUserByEmail(String email);

}

**Service classes**

**CategoryService.java:**

package com.project.sportyshoes.service;

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

import org.springframework.stereotype.Service;

import com.project.sportyshoes.model.Category;

import com.project.sportyshoes.repository.CategoryRepository;

import java.util.List;

import java.util.Optional;

@Service

public class CategoryService {

@Autowired

CategoryRepository categoryRepository;

public void removeCategoryById(int id) {

categoryRepository.deleteById(id);

}

public Optional<Category> getCatById(int id) {

return categoryRepository.findById(id);

}

public List<Category> getAllCategories(){

return categoryRepository.findAll();

}

public void addCategory(Category category) {

categoryRepository.save(category);

}

}

**CustomUserDetailService.java**

package com.project.sportyshoes.service;

import org.springframework.security.core.userdetails.UsernameNotFoundException;

import org.springframework.stereotype.Service;

import com.project.sportyshoes.model.CustomUserDetail;

import com.project.sportyshoes.model.User;

import com.project.sportyshoes.repository.UserRepository;

import java.util.Optional;

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

import org.springframework.security.core.userdetails.UserDetails;

import org.springframework.security.core.userdetails.UserDetailsService;

@Service

public class CustomUserDetailService implements UserDetailsService {

@Autowired

UserRepository userRepository;

@Override

public UserDetails loadUserByUsername(String username) throws UsernameNotFoundException {

Optional<User> user = userRepository.findUserByEmail(username);

user.orElseThrow(() -> new UsernameNotFoundException("User Not Found"));

return user.map(CustomUserDetail::new).get();

}

}

**ProductService.java**

package com.project.sportyshoes.service;

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

import org.springframework.stereotype.Service;

import com.project.sportyshoes.model.Product;

import com.project.sportyshoes.repository.ProductRepository;

import java.util.List;

import java.util.Optional;

@Service

public class ProductService {

@Autowired

ProductRepository productRepository;

public List<Product> getAllProducts(){

return productRepository.findAll();

}

public void addProduct(Product product) {

productRepository.save(product);

}

public void removeProductById(long id) {

productRepository.deleteById(id);

}

public Optional<Product> getProductById(long id){

return productRepository.findById(id);

}

public List<Product> getAllProductsByCategoryId(int id){

return productRepository.findAllByCategory\_Id(id);

}

}

**PurchaseService.java**

package com.project.sportyshoes.service;

import com.project.sportyshoes.model.Purchase;

import com.project.sportyshoes.repository.PurchaseRepository;

import java.util.List;

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

import org.springframework.stereotype.Service;

@Service

public class PurchaseService {

public List<Purchase> getAllPurchases(){

return purchaseRepository.findAll();

}

@Autowired

PurchaseRepository purchaseRepository;

}