**1.AdminController :-**

package com.sheryian.major.controller;

import java.io.IOException;

import java.nio.file.Files;

import java.nio.file.Path;

import java.nio.file.Paths;

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.sheryian.major.dto.ProductDTO;

import com.sheryian.major.model.Category;

import com.sheryian.major.model.Product;

import com.sheryian.major.repository.UserRepository;

import com.sheryian.major.service.CategoryService;

import com.sheryian.major.service.ProductService;

import com.sheryian.major.service.UserService;

@Controller

public class AdminController {

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

@Autowired

CategoryService categoryService;

@Autowired

ProductService productService;

@Autowired

UserService userService;

@GetMapping("/admin")

public String adminHome() {

return "adminHome";

}

@GetMapping("/admin/categories")

public String getCat(Model model) {

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

return "categories";

}

@GetMapping("/admin/categories/add") // get request from categories.html

public String getCatAdd(Model model) {

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

return "categoriesAdd";

}

@PostMapping("/admin/categories/add") // get request from categories.html

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

categoryService.addCategory(category);

return "redirect:/admin/categories";

}

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

public String deleteCat(@PathVariable int id) {

categoryService.removeCategoryById(id);

return "redirect:/admin/categories";

}

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

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

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

if (category.isPresent()) {

model.addAttribute("category", category.get()); // optional se data nikalne keliye use :- .get()

return "categoriesAdd";

} else {

return "404";

}

}

// product Section

@GetMapping("/admin/products")

public String products(Model model) {

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

return "products";

}

// Opens product add

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

public String productAddGet(Model model) {

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

model.addAttribute("categories", categoryService.getAllCategory()); // we return here empty productDTO, and list of categories

return "productsAdd";

}

// for submit in product add

@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.setId(productDTO.getId());

product.setName(productDTO.getName());

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

product.setPrice(productDTO.getPrice());

product.setWeight(productDTO.getWeight());

product.setDescription(productDTO.getDescription());

String imageUUID;

if(!file.isEmpty()) {

imageUUID =file.getOriginalFilename(); // get the name of file

Path fileNameAndPath =Paths.get(uploadDir, imageUUID); // gives name and path of file

Files.write(fileNameAndPath, file.getBytes()); // Files.write =file ko save kro,(file ka name,path,

}else{ // file empty:product ko update kiya jayega , na ki add

imageUUID=imgName;

}

product.setImageName(imageUUID); // product ko save krna hai

productService.addProduct(product); // ye product ko add krega aur redirect krega

return "redirect:/admin/products";

}

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

public String deleteProduct(@PathVariable int id) {

productService.removeProductById(id);

return "redirect:/admin/products";

}

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

public String updateProductGet(@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("categories", categoryService.getAllCategory());

model.addAttribute("productDTO", productDTO); // when we click on update all this seted information shown on frontend

return "productsAdd";

}

// USER SECTION: list of Users

@GetMapping("/admin/users")

public String users(Model model) {

model.addAttribute("users",userService.getAllUser());

return "users";

}

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

public String deleteUser(@PathVariable int id) {

userService.removeUserById(id);

return "redirect:/admin/users";

}

}

**2. CartController :-**

package com.sheryian.major.controller;

import java.time.LocalDate;

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

import com.sheryian.major.global.GlobalData;

import com.sheryian.major.model.Product;

import com.sheryian.major.service.ProductService;

@Controller

public class CartController {

@Autowired

ProductService productService;

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

public String addToCart(@PathVariable int id) {

GlobalData.cart.add(productService.getProductById((long) 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";

}

@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";

}

// payNow

@PostMapping("/payNow")

public String payNow(Model model) {

model.addAttribute("result","congratulations..!!,your order is now booked");

LocalDate localDate = LocalDate.now();

model.addAttribute("localDate",localDate);

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

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

return "orderPlaced";

}

}

**3.HomeController**

package com.sheryian.major.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.sheryian.major.global.GlobalData;

import com.sheryian.major.service.CategoryService;

import com.sheryian.major.service.ProductService;

@Controller

public class HomeController {

@Autowired

CategoryService categoryService;

@Autowired

ProductService productService;

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

public String home(Model model) {

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

return "index";

}

@GetMapping("/shop")

public String shop(Model model) {

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

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

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

return "shop";

}

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

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

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

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

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

return "shop"; // products on the basis of category,so we have to create method get product by category id

}

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

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

model.addAttribute("product", productService.getProductById((long) id).get()); // used .get() beacuse we used optional

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

return "viewProduct";

}

}

**4.LoginController :-**

**package com.sheryian.major.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.sheryian.major.global.GlobalData;**

**import com.sheryian.major.model.Role;**

**import com.sheryian.major.model.User;**

**import com.sheryian.major.repository.RoleRepository;**

**import com.sheryian.major.repository.UserRepository;**

**@Controller**

**public class LoginController {**

**@Autowired**

**private BCryptPasswordEncoder bCryptPasswordEncoder;**

**@Autowired**

**UserRepository userRepository;**

**@Autowired**

**RoleRepository roleRepository;**

**@GetMapping("/login")**

**public String login() {**

**GlobalData.cart.clear(); // for clearing cart**

**return "login";**

**}**

**@GetMapping("/register")**

**public String registerGet() {**

**return "register";**

**}**

**@PostMapping("/register") // user ko directly login (autoLogedin)**

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

**String password=user.getPassword();**

**user.setPassword(bCryptPasswordEncoder.encode(password));**

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

**roles.add(roleRepository.findById(2).get()); //add Role as 2.USER\_ROLE**

**user.setRoles(roles);**

**userRepository.save(user);**

**request.login(user.getEmail(), password); // it is used for autologin**

**return "redirect:/";**

**}**

**}**