**1.AdminController :-**

package com.simplilearn.kitchenStoryFoods.controller;

import com.simplilearn.kitchenStoryFoods.models.Products;

import com.simplilearn.kitchenStoryFoods.service.ProductService;

import com.simplilearn.kitchenStoryFoods.service.PurchaseService;

import com.simplilearn.kitchenStoryFoods.service.UserService;

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

import org.springframework.stereotype.Controller;

import org.springframework.web.bind.annotation.\*;

import org.springframework.web.multipart.MultipartFile;

import org.springframework.web.servlet.ModelAndView;

import java.io.IOException;

import java.nio.file.Files;

import java.nio.file.Path;

import java.nio.file.Paths;

@Controller

public class AdminController {

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

    @Autowired

    ProductService productService;

    @Autowired

    UserService userService;

    @Autowired

    PurchaseService purchaseService;

    //Admin module

    @GetMapping("/admin")

    public String getAdminPage(){

        return "adminHome";

    }

    //Users Module

    @GetMapping("/admin/userData")

    public ModelAndView getUserData(){

        ModelAndView mv = new ModelAndView();

        mv.addObject("users",userService.getAllUsers());

        mv.setViewName("userData");

        return mv;

    }

    @GetMapping("/admin/userData/sort")

    public ModelAndView sortingOfUsers(){

        ModelAndView mv = new ModelAndView();

        mv.addObject("users",userService.findAllUsersOrderByName());

        mv.setViewName("userData");

        return mv;

    }

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

    public String deleteUser(@PathVariable int *id*){

    return "redirect:/admin/userData";

    }

    // Product module

    @GetMapping("/admin/products")

    public ModelAndView getProductData(){

        ModelAndView mv = new ModelAndView();

        mv.addObject("products",productService.getAllProducts());

        mv.setViewName("products");

        return mv;

    }

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

    public String addProductData(@ModelAttribute Products *product*, @RequestParam("productImage")MultipartFile *multipartFile*, @RequestParam("imageName") String *imageName*) throws IOException {

        String imageUUID;

        if(!multipartFile.isEmpty()){

            imageUUID = multipartFile.getOriginalFilename();

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

            Files.write(filenameAndPath,multipartFile.getBytes());

        }else{

            imageUUID = imageName;

        }

        product.setImageName(imageUUID);

        productService.saveProduct(product);

        return "redirect:/admin/products";

    }

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

    public ModelAndView productAdded(){

        ModelAndView mv = new ModelAndView();

        mv.addObject("product", new Products());

        mv.setViewName("productsAdd");

        return mv;

    }

    //purchase module

    @GetMapping("/admin/purchaseData")

    public ModelAndView getPurchaseDetails(){

        ModelAndView mv = new ModelAndView();

        mv.addObject("purchases",purchaseService.getPurchaseData());

        mv.setViewName("purchaseReport");

        return mv;

    }

    @GetMapping("/admin/purchase/sortByName")

    public ModelAndView getPurchaseDetailsSortByName(){

        ModelAndView mv = new ModelAndView();

        mv.addObject("purchases",purchaseService.getPurchaseDataSortedWithName());

        mv.setViewName("purchaseReport");

        return mv;

    }

    @GetMapping("/admin/purchase/sortByPrice")

    public ModelAndView getPurchaseDetailsSortByPrice(){

        ModelAndView mv = new ModelAndView();

        mv.addObject("purchases",purchaseService.getPurchaseDataSortedWithPrice());

        mv.setViewName("purchaseReport");

        return mv;

    }

}

**2. HomeController :-**

package com.simplilearn.kitchenStoryFoods.controller;

import com.simplilearn.kitchenStoryFoods.models.Users;

import com.simplilearn.kitchenStoryFoods.service.ProductService;

import com.simplilearn.kitchenStoryFoods.service.UserService;

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

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

import org.springframework.web.servlet.ModelAndView;

@Controller

public class HomeController {

    @Autowired

    ProductService productService;

    @Autowired

    UserService userService;

    public int userId;

    @GetMapping("/")

    public String showHomePage(){

        return "index";

    }

    @GetMapping("/logout")

    public String showLogoutPage(){

        return "index";

    }

    @GetMapping("/login")

    public String showLoginPage(){

        return "login";

    }

    @PostMapping("/login")

    public String validateLoginDetails(@RequestParam("email")String *email*,@RequestParam("password") String *password*){

        Users user = userService.getUserDetailByEmail(email);

        if(user.getEmail().equalsIgnoreCase(email) && user.getPassword().equals(password)){

            userId=user.getId();

            if(password.equals("admin"))

                return "adminHome";

            return "redirect:/shop";

        }else {

            return "login";

        }

    }

    @GetMapping("/register")

    public ModelAndView showRegisterPage(){

        ModelAndView mv = new ModelAndView();

        mv.addObject("user",new Users());

        mv.setViewName("register");

        return mv;

    }

    @PostMapping("/register")

    public String showLogin(@ModelAttribute("user")Users *user*){

        userService.saveUser(user);

        return "login";

    }

    @GetMapping("/shop")

    public ModelAndView getShopPage(){

        ModelAndView mv = new ModelAndView();

        mv.addObject("products",productService.getAllProducts());

        mv.setViewName("shop");

        return mv;

    }

    @GetMapping("/shop/highToLow")

    public ModelAndView sortLowToHigh(){

        ModelAndView mv = new ModelAndView();

        mv.addObject("products",productService.getSortedHighToLow());

        mv.setViewName("shop");

        return mv;

    }

    @GetMapping("/shop/lowToHigh")

    public ModelAndView sortHighToLow(){

        ModelAndView mv = new ModelAndView();

        mv.addObject("products",productService.getSortedLowToHigh());

        mv.setViewName("shop");

        return mv;

    }

}

**3. PurchaseController**

package com.simplilearn.kitchenStoryFoods.controller;

import com.simplilearn.kitchenStoryFoods.models.Products;

import com.simplilearn.kitchenStoryFoods.models.Purchase;

import com.simplilearn.kitchenStoryFoods.models.Users;

import com.simplilearn.kitchenStoryFoods.service.ProductService;

import com.simplilearn.kitchenStoryFoods.service.PurchaseService;

import com.simplilearn.kitchenStoryFoods.service.UserService;

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

import org.springframework.stereotype.Controller;

import org.springframework.web.bind.annotation.\*;

import org.springframework.web.servlet.ModelAndView;

@Controller

public class PurchaseController {

    @Autowired

    ProductService productService;

    @Autowired

    UserService userService;

    @Autowired

    PurchaseService purchaseService;

    @Autowired

    HomeController homeController;

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

    public ModelAndView addTOCart(@PathVariable("id")Long *id*){

        Products product = productService.findProductById(id);

        ModelAndView mv = new ModelAndView();

        mv.addObject("cart",product);

        mv.setViewName("cart");

        return mv;

    }

    @GetMapping("/checkout/{id}")

    public ModelAndView addTOCheckout(@PathVariable("id")Long *id*){

        Products product = productService.findProductById(id);

        ModelAndView mv = new ModelAndView();

        mv.addObject("cart",product);

        mv.setViewName("checkout");

        return mv;

    }

    @PostMapping("/payNow/{id}")

    public ModelAndView generateReceipt(@PathVariable("id")Long *id*){

        Users user = userService.findUserById(homeController.userId);

        Products product = productService.findProductById(id);

        Purchase purchase = new Purchase();

        purchase.setName(user.getFirstName()+" "+user.getLastName());

        purchase.setPrice(product.getPrice());

        purchase.setProduct(product.getName());

        purchase.setQuantity(1);

        purchaseService.savePurchaseData(purchase);

        ModelAndView mv = new ModelAndView();

        mv.addObject("cart",product);

        mv.setViewName("orderPlaced");

        return mv;

    }

}