SimpliLearn Phase 3 Project: SportyShoes.com e-commerce website

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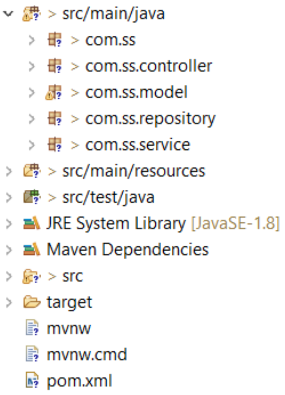
GitHub Project Repository URL : GitHub Link

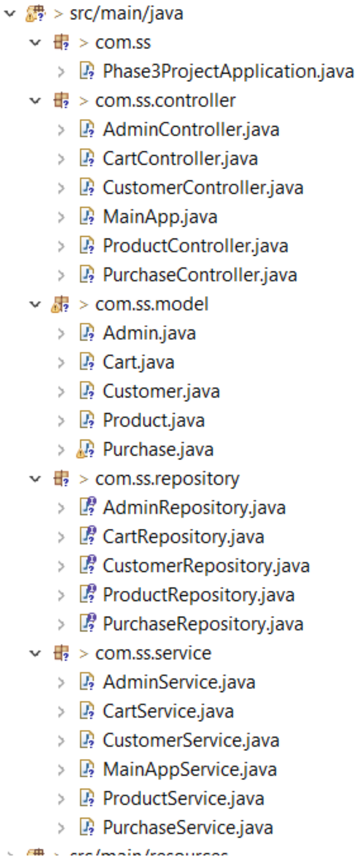
Technologies used:
Java, Spring MVC, SpringBoot,Thymeleaf, Hibernate, MySql.

Build tool – Maven

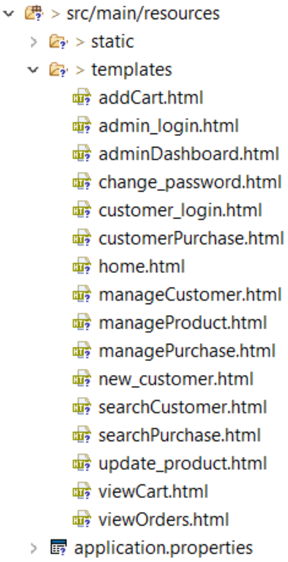
Project structure:



```
v > src/main/java
    > > com.ss
    > > com.ss.controller
    > > com.ss.model
    > > com.ss.repository
    > > com.ss.service
  > > src/main/resources
  > > src/test/java
  > JRE System Library [JavaSE-1.8]
  > Maven Dependencies
  > > src
  > target
    mvnw
    mvnw.cmd
    pom.xml
```



```
v > src/main/java
  v > com.ss
      > Phase3ProjectApplication.java
  v > com.ss.controller
      > AdminController.java
      > CartController.java
      > CustomerController.java
      > MainApp.java
      > ProductController.java
      > PurchaseController.java
  v > com.ss.model
      > Admin.java
      > Cart.java
      > Customer.java
      > Product.java
      > Purchase.java
  v > com.ss.repository
      > AdminRepository.java
      > CartRepository.java
      > CustomerRepository.java
      > ProductRepository.java
      > PurchaseRepository.java
  v > com.ss.service
      > AdminService.java
      > CartService.java
      > CustomerService.java
      > MainAppService.java
      > ProductService.java
      > PurchaseService.java
> > src/main/resources
```



```
v > src/main/resources
  > > static
  v > templates
        addCart.html
        admin_login.html
        adminDashboard.html
        change_password.html
        customer_login.html
        customerPurchase.html
        home.html
        manageCustomer.html
        manageProduct.html
        managePurchase.html
        new_customer.html
        searchCustomer.html
        searchPurchase.html
        update_product.html
        viewCart.html
        viewOrders.html
  > application.properties
```

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>2.4.8</version>
		<relativePath/> <!-- lookup parent from repository -->
	</parent>
	<groupId>com.ss</groupId>
	<artifactId>phase-3-project</artifactId>
	<version>0.0.1-SNAPSHOT</version>
	<name>phase-3-project</name>
	<description>Phase 3 simplilearn project</description>
	<properties>
```

```
        <java.version>1.8</java.version>
    </properties>
    <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-thymeleaf</artifactId>
        </dependency>
        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-web</artifactId>
        </dependency>

        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-devtools</artifactId>
            <scope>runtime</scope>
            <optional>true</optional>
        </dependency>
        <dependency>
            <groupId>mysql</groupId>
            <artifactId>mysql-connector-java</artifactId>
            <scope>runtime</scope>
        </dependency>
        <dependency>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-test</artifactId>
            <scope>test</scope>
        </dependency>
    </dependencies>

    <build>
        <plugins>
            <plugin>
                <groupId>org.springframework.boot</groupId>
                <artifactId>spring-boot-maven-plugin</artifactId>
            </plugin>
        </plugins>
    </build>

</project>
```

Package: com.ss

Phase3ProjectApplication.java:

```
package com.ss;

import org.springframework.boot.SpringApplication;
import org.springframework.boot.autoconfigure.SpringBootApplication;

@SpringBootApplication
public class Phase3ProjectApplication {

    public static void main(String[] args) {
        SpringApplication.run(Phase3ProjectApplication.class, args);
    }

}
```

Package: com.ss.controller

AdminController.java

```
package com.ss.controller;

import javax.servlet.http.HttpSession;

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

import com.ss.model.Admin;
import com.ss.service.AdminService;

@Controller
public class AdminController {

    @Autowired
    private AdminService adminService;

    @PostMapping("/verifyLogin")
    public String verifyLogin(@RequestParam(name="username") String 
username,@RequestParam(name="password") String password,HttpSession session,Model 
model) {
        if(!username.isEmpty() || !password.isEmpty()) {
            if(adminService.loginVerify(username,password)) {
                session.setAttribute("uname", username);
                return "adminDashboard";
            }
            else {
                model.addAttribute("action","Username or password wrong");
                return "admin_login";
            }
        }else {
            model.addAttribute("action", "Fields must not be empty");
            return "admin_login";
        }

    }

    @GetMapping("/getDashboard")
    public String getDashboard() {
        return "adminDashboard";
    }

    @GetMapping("/changePassword")
    public String changeAdminPassword(HttpSession session, Model model) {
        String username=(String) session.getAttribute("uname");
        Admin admin = adminService.getAdmin(username);
        model.addAttribute("admin", admin);
        return "change_password";
    }

    @PostMapping("/updatePassword")
    public String updatePassword(@RequestParam(name="oldPassword") String 
oldPassword,@RequestParam(name="newPassword") String newPassword,HttpSession 
session,Model model) {
        String username=(String) session.getAttribute("uname");
        Admin admin = adminService.getAdmin(username);
        if(oldPassword.equals(admin.getPassword())) {
            admin.setPassword(newPassword);
            adminService.updatePassword(admin);
            model.addAttribute("action", "Password changed Successfully");
            return "adminDashboard";
        }else {
            model.addAttribute("action", "Old Password not matching");
            return "change_password";
        }

    }

    @GetMapping("/logout")
    public String adminLogout(HttpSession session) {
        session.invalidate();
        return "redirect:/";
    }
}
```

Package: com.ss.controller

CartController.java

```
package com.ss.controller;

//import java.sql.Date;
import java.util.List;

import javax.servlet.http.HttpSession;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.ExceptionHandler;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.PostMapping;
import org.springframework.web.bind.annotation.RequestParam;

import com.ss.model.Cart;
import com.ss.model.Customer;
import com.ss.model.Product;
import com.ss.model.Purchase;
import com.ss.service.CartService;
import com.ss.service.CustomerService;
import com.ss.service.PurchaseService;

@Controller
```

```
public class CartController {

        @Autowired
        private CartService cartService;

        @Autowired
        private CustomerService customerService;

        @Autowired
        private PurchaseService purchaseService;

        @ExceptionHandler(Exception.class)
        public String handleSqlException(Exception e, HttpSession session) {
                session.setAttribute("action", "Choose Payment before Buying");
                return "redirect:/viewCart";
        }
        @PostMapping("/confirmCart")
        public String addToCart(@RequestParam("size") float size,@RequestParam("quantity") int
quantity,HttpSession session) {
                Cart cart = new Cart();
                Product product = (Product) session.getAttribute("product");
                int min=100;int max=999;int b = (int)(Math.random()*(max-min+1)+min);
                cart.setId(b);
                cart.setProductId(product.getId());
                cart.setQuantity(quantity);
                cart.setPrice(product.getPrice()*quantity);
                cart.setSize(size);
                cartService.saveCart(cart);
                session.setAttribute("action", "Product added to cart");
                float temp=0;
                if(session.getAttribute("sessionCost")==null) {
                        temp=0;
                }else {
                        temp=(float) session.getAttribute("sessionCost");
                }
                float sessionCost=(cart.getPrice()+temp);
                session.setAttribute("sessionCost", sessionCost);
                return "redirect:/";
        }

        @GetMapping("/viewCart")
        public String viewCart(Model model,HttpSession session) {
                List<Cart> cartList = cartService.getAllCart();
                if(!cartList.isEmpty()) {
                model.addAttribute("cartList", cartList);
                model.addAttribute("action", session.getAttribute("action"));
                session.setAttribute("action", null);
                return "viewCart";
                }else {
                        session.setAttribute("action", "No products currently in Cart");
                        return "redirect:/";
                }
        }

        @PostMapping("/buyNow")
```

```
	public String buyProducts(@RequestParam("pm") String pm, HttpSession session) {
		System.out.println(pm);
		if(pm.equals("yes")) {
			List<Cart> cartList = cartService.getAllCart();
			Purchase purchase = new Purchase();
			String email = (String) session.getAttribute("customerLogin");
			Customer customer = customerService.getCustomer(email);
			for(Cart cl:cartList) {
				java.sql.Date date = new java.sql.Date(new
java.util.Date().getTime());
				int min=100000;int max=999999;int b =
(int)(Math.random()*(max-min+1)+min);
				purchase.setId(b);
				purchase.setDop(date);
				System.out.println(date);
				purchase.setCustomer(customer);
				purchase.setProductid(cl.getProductId());
				purchase.setQuantity(cl.getQuantity());
				purchase.setTotalcost(cl.getPrice());
				purchaseService.addPurchase(purchase);
			}
		session.setAttribute("action", "Products added to Customer Order List
Sucessfully");
		return "redirect:/";
		}else {
			session.setAttribute("action", "Make Payment before to finilize orders");
			return "redirect:/viewCart";
		}
	}

}
```

Package: com.ss.controller

CustomerController.java

```
package com.ss.controller;

import java.sql.SQLException;
import java.util.List;
import java.util.regex.Matcher;
import java.util.regex.Pattern;

import javax.servlet.http.HttpSession;

import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.ExceptionHandler;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.PostMapping;
import org.springframework.web.bind.annotation.RequestParam;

import com.ss.model.Customer;
import com.ss.model.Purchase;
import com.ss.service.CartService;
import com.ss.service.CustomerService;
import com.ss.service.PurchaseService;

@Controller
public class CustomerController {

    @Autowired
    private CustomerService customerService;

    @Autowired
    private PurchaseService purchaseService;

    @Autowired
    private CartService cartService;

    @ExceptionHandler(SQLException.class)
    public String handleSqlException(SQLException e, HttpSession session) {
        session.setAttribute("action", "User can't be deleted until their orders are
deleted");
        return "redirect:/manageCustomer";
    }

    @PostMapping("/saveCustomer")
    public String saveCustomer(Customer customer, Model model, HttpSession session) {
        List<String> cEmails = customerService.customerEmails();
        boolean notExist = true;
        for(String e : cEmails) {
            if(customer.getEmail().equals(e))
                notExist=false;
        }
        if(notExist) {
            if (validate(customer.getEmail())) {
                customerService.saveCustomer(customer);
                model.addAttribute("action", "Added successfully, login to
shop");
                session.setAttribute("customerLogin", customer.getEmail());
                session.setAttribute("custName", customer.getName());
                cartService.cartDeleteAll();
                return "redirect:/";
            } else {
                model.addAttribute("action", "Email pattern doesn't match");
                return "new_customer";
            }
        }else {
            session.setAttribute("action", "Entered Email Already Exist please Login");
            return "redirect:/";
        }

    }

    @PostMapping("/verifyCustLogin")
    public String verifyLogin(@RequestParam(name = "email") String email,
            @RequestParam(name = "password") String password, HttpSession
session, Model model) {
        if (!email.isEmpty() || !password.isEmpty()) {
            if (customerService.loginVerify(email, password)) {
                session.setAttribute("customerLogin", email);
                Customer customer = customerService.getCustomer(email);
                session.setAttribute("custName", customer.getName());
                cartService.cartDeleteAll();
                return "redirect:/";
            } else {
                model.addAttribute("action", "email or password wrong");
                return "customer_login";
            }
        } else {
            model.addAttribute("action", "Fields must not be empty");
            return "customer_login";
        }

    }

    @GetMapping("/customerLogout")
    public String customerLogout(HttpSession session) {
        cartService.cartDeleteAll();
        session.invalidate();
        return "redirect:/";
    }

    @GetMapping("/manageCustomer")
    public String manageCustomer(Model model,HttpSession session) {
        model.addAttribute("action", session.getAttribute("action"));
        session.setAttribute("action", null);
        model.addAttribute("customers", customerService.getAllCustomers());
        return "manageCustomer";
    }

    @GetMapping("/deleteCustomer/{email}")
    public String deleteCustomer(@PathVariable(name = "email") String email, Model model)
{
        customerService.deleteCustomer(email);
        model.addAttribute("action", "Customer Deleted Sucessfully");
        return "redirect:/manageCustomer";
    }

    @GetMapping("/customerOrders/{email}")
    public String customerOrders(@PathVariable(name = "email") String email, Model
model,HttpSession session) {
        List<Purchase> sPurchase = purchaseService.getByEmail(email);
        if(!sPurchase.isEmpty()) {
        model.addAttribute("sPurchase", sPurchase);
        return "customerPurchase";
        }else {
            session.setAttribute("action", "No Active Orders/Purchases by
Customer");
            return "redirect:/manageCustomer";
        }
    }

    @PostMapping("/searchCustomer")
    public String searchCustomer(@RequestParam("keyword") String keyword,Model model)
{
        List<Customer> sCustomer = customerService.searchCustomer(keyword);
        if(sCustomer.isEmpty()) {
            model.addAttribute("action", "No Customer found");
            model.addAttribute("customers", customerService.getAllCustomers());
            return "manageCustomer";
        }else {
            model.addAttribute("searchHeading","Entered Catogery");
            model.addAttribute("sCustomer", sCustomer);
            return "searchCustomer";
        }

    }

    public static final Pattern VALID_EMAIL_ADDRESS_REGEX = Pattern.compile("^[A-Z0-
9._%+-]+@[A-Z0-9.-]+\\.[A-Z]{2,6}$",
            Pattern.CASE_INSENSITIVE);

    public static boolean validate(String emailStr) {
        Matcher matcher = VALID_EMAIL_ADDRESS_REGEX.matcher(emailStr);
        return matcher.find();
    }

}
```

Package: com.ss.controller

MainApp.java

```
package com.ss.controller;

import java.util.List;

import javax.servlet.http.HttpSession;

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

import com.ss.model.Admin;
import com.ss.model.Cart;
import com.ss.model.Customer;
import com.ss.model.Product;
import com.ss.model.Purchase;
import com.ss.service.ProductService;
import com.ss.service.PurchaseService;
//import com.ss.service.PurchaseService;

@Controller
public class MainApp {

    @Autowired
    private ProductService productService;
    @Autowired
    private PurchaseService purchaseService;

    @GetMapping("/")
    public String viewHomePage(Model model,HttpSession session) {
        model.addAttribute("action", session.getAttribute("action"));
        session.setAttribute("action", null);
        if(session.getAttribute("productList")==null) {
            session.setAttribute("productList", productService.getAllProducts());
            session.setAttribute("searchH", null);
        }
        return "home";
    }

    @GetMapping("/goHome")
    public String goHome(Model model,HttpSession session) {
        model.addAttribute("action", session.getAttribute("action"));
        session.setAttribute("action", null);
        session.setAttribute("productList", productService.getAllProducts());
        session.setAttribute("searchH", null);
        return "home";
    }

    @PostMapping("/searchHome")
    public String searchHome(@RequestParam("keyword") String keyword,Model
model,HttpSession session) {
        model.addAttribute("action", session.getAttribute("action"));
        session.setAttribute("action", null);
        List<Product> productList = productService.homeSearch(keyword);
        if(productList.isEmpty()) {
            session.setAttribute("action", "Currently no products for searched");
            session.setAttribute("productList", null);
            return "redirect:/";
        }
        session.setAttribute("productList", productList);
        session.setAttribute("searchH", "yes");
        return "home";
    }


    @GetMapping("/register")
    public String register(Model model) {
        Customer customer = new Customer();
        model.addAttribute("customer", customer);
        return "new_customer";
    }

    @GetMapping("/login")
    public String customerLogin(Model model) {
        Customer customer = new Customer();
        model.addAttribute("customer", customer);
        return "customer_login";
    }
    @GetMapping("/adminLogin")
    public String adminLogin(Model model) {
        Admin admin = new Admin();
        model.addAttribute("admin",admin);
        return "admin_login";
    }

    @GetMapping("/addCart/{id}")
    public String selectProduct(@PathVariable("id") int id,HttpSession session,Model model) {
        if(session.getAttribute("customerLogin")==null) {
            session.setAttribute("action", "Login or Register to start shopping");
            return "redirect:/";
        }else {
            session.setAttribute("product", productService.getProductById(id));
            Cart cart = new Cart();
            model.addAttribute("cart", cart);
            return "addCart";
        }
    }

    @GetMapping("/viewOrders/{email}")
    public String customerOrders(@PathVariable(name = "email") String email, Model
model,HttpSession session) {
        List<Purchase> sPurchase = purchaseService.getByEmail(email);
        if(!sPurchase.isEmpty()) {
        model.addAttribute("sPurchase", sPurchase);
        return "ViewOrders";
        }else {
            session.setAttribute("action", "No Active Orders/Purchases by
Customer");
            return "redirect:/";
        }
    }
}
```

Package: com.ss.controller

ProductController.java

```
package com.ss.controller;

import javax.servlet.http.HttpSession;

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 com.ss.model.Product;
import com.ss.service.ProductService;

@Controller
public class ProductController {

    @Autowired
```

```
        private ProductService productService;

        @GetMapping("/manageProduct")
        public String manageProduct(Model model) {
                model.addAttribute("products",productService.getAllProducts());
                Product product = new Product();
                model.addAttribute("product", product);
                return "manageProduct";
        }

        @PostMapping("/addProduct")
        public String addProduct(@ModelAttribute("product") Product product, Model model,
HttpSession session) {
                int min=10000;int max=99999;int b = (int)(Math.random()*(max-min+1)+min);
                product.setId(b);
                productService.addProduct(product);
                session.setAttribute("action","Product Added succesfully");
                model.addAttribute("product", product);
                return "redirect:/manageProduct";
        }

        @GetMapping("/showProductUpdate/{id}")
        public String showProductUpdate(@PathVariable(value="id") int id, Model model) {
                Product product = productService.getProductById(id);
                model.addAttribute("product", product);
                return "update_product";
        }

        @PostMapping("/updateProduct")
        public String updateProduct(@ModelAttribute("product") Product product, Model
model,HttpSession session) {
                productService.addProduct(product);
                session.setAttribute("action","Product Updated succesfully");
                model.addAttribute("product", product);
                return "redirect:/manageProduct";
        }

        @GetMapping("/deleteProduct/{id}")
        public String deleteProduct(@PathVariable(value="id") int id,Model model,HttpSession
session) {
                productService.deleteProduct(id);
                session.setAttribute("action", "Product Deleted Succesfully");
                Product product = new Product();
                model.addAttribute("product", product);
                return "redirect:/manageProduct";
        }
}
```

Package: com.ss.controller

PurchaseController.java

```
package com.ss.controller;

import java.text.SimpleDateFormat;
import java.sql.Date;
import java.util.List;
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 org.springframework.web.bind.annotation.RequestParam;

import com.ss.model.Purchase;
import com.ss.service.PurchaseService;

@Controller
public class PurchaseController {

    @Autowired
    private PurchaseService purchaseService;

    @GetMapping("/managePurchase")
    public String managePurchase(Model model) {
        model.addAttribute("purchases", purchaseService.getAllPurchases());
        return "managePurchase";
    }

    @PostMapping("/searchPurchaseDate")
    public String searchPurchaseDate(@RequestParam("keyword") String keyword,Model
model) {
        Date date=null;
        try {
        //DateFormat parser = new SimpleDateFormat("yyyy-MM-dd");
        date = new Date(new SimpleDateFormat("yyyy-MM-
dd").parse(keyword).getTime());
        }catch(Exception e) { System.out.println(e); }
        List<Purchase> sPurchase = purchaseService.getPurchaseByDate(date);
        if(sPurchase.isEmpty()) {
            model.addAttribute("action", "No purchases on the selected date");
            model.addAttribute("purchases", purchaseService.getAllPurchases());
            return "managePurchase";
        }else {
            model.addAttribute("searchHeading","selected Date");
            model.addAttribute("sPurchase", sPurchase);
            return "searchPurchase";
        }

    }

    @PostMapping("/searchPurchaseCategory")
    public String searchPurchaseCategory(@RequestParam("keyword") String keyword,Model
model) {
        List<Purchase> sPurchase = purchaseService.getPurchaseByCategory(keyword);
        if(sPurchase.isEmpty()) {
            model.addAttribute("action", "No purchases on the Entered Category");
            model.addAttribute("purchases", purchaseService.getAllPurchases());
            return "managePurchase";
        }else {
            model.addAttribute("searchHeading","Entered Catogery");
```

```
                model.addAttribute("sPurchase", sPurchase);
                return "searchPurchase";
            }

    }

    @GetMapping("/deletePurchase/{id}")
    public String deletePurchase(@PathVariable("id") int id,Model model) {
        purchaseService.deletePurchase(id);
        model.addAttribute("action", "Purchase Deleted Succesfully");
        return "redirect:/managePurchase";
    }
}
```

Package: com.ss.model

Admin.java

```
package com.ss.model;

import javax.persistence.Entity;
import javax.persistence.Id;

@Entity
public class Admin {
    @Id
    private String username;
    private String password;

    public Admin() {
        super();
    }
    public Admin(String username, String password) {
        super();
        this.username = username;
        this.password = password;
    }
    public String getUsername() {
        return username;
    }
    public void setUsername(String username) {
        this.username = username;
    }
    public String getPassword() {
        return password;
    }
    public void setPassword(String password) {
        this.password = password;
    }
}
```

Package: com.ss.model

Cart.java

```
package com.ss.model;

import javax.persistence.Entity;
import javax.persistence.Id;

@Entity
```

```java
public class Cart {

    @Id
    private int id;
    private int productId;
    private int quantity;
    private float size;
    private float price;

    public Cart() {
        super();
    }

    public Cart(int id, int productId, int quantity, float size, float price) {
        super();
        this.id = id;
        this.productId = productId;
        this.quantity = quantity;
        this.size = size;
        this.price = price;
    }

    public int getId() {
        return id;
    }
    public void setId(int id) {
        this.id = id;
    }
    public int getProductId() {
        return productId;
    }
    public void setProductId(int productId) {
        this.productId = productId;
    }
    public int getQuantity() {
        return quantity;
    }
    public void setQuantity(int quantity) {
        this.quantity = quantity;
    }
    public float getSize() {
        return size;
    }
    public void setSize(float size) {
        this.size = size;
    }
    public float getPrice() {
        return price;
    }
    public void setPrice(float price) {
        this.price = price;
    }


}
```

Package: com.ss.model

Customer.java

```
package com.ss.model;

import javax.persistence.Entity;
import javax.persistence.Id;

@Entity
public class Customer {
    @Id
    private String email;
    private String name;
    private String password;
    private long contact;

    public Customer() {
        super();
    }

    public Customer(String email, String name, String password, long contact) {
        super();
        this.email = email;
        this.name = name;
        this.password = password;
        this.contact = contact;
    }

    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 String getPassword() {
        return password;
    }
    public void setPassword(String password) {
        this.password = password;
    }
    public long getContact() {
        return contact;
    }
    public void setContact(long contact) {
        this.contact = contact;
    }


}
```

Package: com.ss.model

Product.java

```
package com.ss.model;

import javax.persistence.Entity;
import javax.persistence.Id;

@Entity
public class Product {
    @Id
    private int id;
    private String company;
    private String name;
    private float price;
    private String category;

    public Product(int id, String company, String name, float price, String category) {
        super();
        this.id = id;
        this.company = company;
        this.name = name;
        this.price = price;
        this.category = category;
    }

    public Product() {
        super();
    }

    public int getId() {
        return id;
    }

    public void setId(int id) {
        this.id = id;
    }

    public String getCompany() {
        return company;
    }

    public void setCompany(String company) {
        this.company = company;
    }

    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    public float getPrice() {
        return price;
    }
    public void setPrice(float price) {
        this.price = price;
    }

    public String getCategory() {
        return category;
    }

    public void setCategory(String category) {
        this.category = category;
    }


}
```

Package: com.ss.model
Purchase.java

```
package com.ss.model;

import java.sql.Date;

import javax.persistence.Entity;
import javax.persistence.Id;
import javax.persistence.OneToOne;

import com.ss.model.Customer;

@Entity
public class Purchase {
    @Id
    private int id;
    private float size;
    private Date dop;
    private int quantity;
    private float totalcost;
    private int productid;
    @OneToOne
    private Customer customer;


    public Purchase() {
        super();
    }


    public Purchase(int id, float size, Date dop, int quantity, float totalcost, int productid,
Customer customer) {
        super();
        this.id = id;
        this.size = size;
        this.dop = dop;
        this.quantity = quantity;
        this.totalcost = totalcost;
        this.productid = productid;
        this.customer = customer;
    }


    public int getId() {
        return id;
    }

    public void setId(int id) {
        this.id = id;
    }

    public float getSize() {
        return size;
    }

    public void setSize(float size) {
        this.size = size;
    }

    public Date getDop() {
        return dop;
    }

    public void setDop(Date dop) {
        this.dop = dop;
    }

    public int getQuantity() {
        return quantity;
    }

    public void setQuantity(int quantity) {
        this.quantity = quantity;
    }

    public float getTotalcost() {
        return totalcost;
    }

    public void setTotalcost(float totalcost) {
        this.totalcost = totalcost;
    }

    public int getProductid() {
        return productid;
    }

    public void setProductid(int productid) {
        this.productid = productid;
    }

    public Customer getCustomer() {
        return customer;
    }
```

```
	public void setCustomer(Customer customer) {
		this.customer = customer;
	}


}
```

Package: com.ss.repository

AdminRepository.java

```
package com.ss.repository;

import java.util.List;

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

import com.ss.model.Admin;

public interface AdminRepository extends JpaRepository<Admin,String>{
	Admin findByUsername(String username);

	@Query(value="SELECT username FROM Admin",nativeQuery=true)
	public List<String> findUsenames();
}
```

Package: com.ss.repository

CartRepository.java

```
package com.ss.repository;

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

import com.ss.model.Cart;

public interface CartRepository extends JpaRepository<Cart, Integer>{

}
```

Package: com.ss.repository

CustomerRepository.java

```
package com.ss.repository;

import java.util.List;

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

import com.ss.model.Customer;

public interface CustomerRepository extends JpaRepository<Customer, String> {

	Customer findByEmail(String email);

	@Query("SELECT c FROM Customer c WHERE c.email LIKE %?1%"
				+" OR c.name LIKE %?1%"
				+" OR c.contact LIKE %?1%")
	public List<Customer> userSearch(String name);

	@Query("SELECT c.email from Customer c")
```

```
        public List<String> customerEmails();
}
```

Package: com.ss.repository
Productrepository.java

```
package com.ss.repository;

import java.util.List;

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

import com.ss.model.Product;

public interface ProductRepository extends JpaRepository<Product, Integer> {
        Product findById(int id);

        @Query("Select id from Product where category Like %?1%")
        List<Integer> getByCategory(String keyword);

        @Query("SELECT p FROM Product p WHERE p.company LIKE %?1%"
                        +" OR p.name LIKE %?1%"
                        +" OR p.price LIKE %?1%"
                        +" OR p.category LIKE %?1%")
        public List<Product> homeSearch(String keyword);
}
```

Package: com.ss.repository
PurchaseRepository.java

```
package com.ss.repository;

import java.sql.Date;
import java.util.List;

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

import com.ss.model.Purchase;

public interface PurchaseRepository extends JpaRepository<Purchase, Integer>{


         @Query("SELECT p FROM Purchase p WHERE p.customer.email LIKE %?1%")
         public   List<Purchase> getByEmail(String email);

         public List<Purchase> findByDop(Date dop);
         public List<Purchase> findByproductid(int id);
}
```

Package: com.ss.service
AdminService.java

```
package com.ss.service;


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

import com.ss.model.Admin;
import com.ss.repository.AdminRepository;
@Service
public class AdminService {

        @Autowired
        private AdminRepository adminRepository;

        public Admin getAdmin(String username) {
                return adminRepository.findByUsername(username);
        }

        public boolean loginVerify(String username, String password) {
                Admin admin = adminRepository.findByUsername(username);
    if (admin!= null && admin.getUsername().equals(username) &&
admin.getPassword().equals(password)) {
      return true;
    }
    return false;
        }

        public void updatePassword(Admin admin) {
                adminRepository.save(admin);

        }

}
```

Package: com.ss.service
CartService.java

```
package com.ss.service;

import java.util.List;

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

import com.ss.model.Cart;
import com.ss.repository.CartRepository;

@Service
public class CartService {

        @Autowired
        private CartRepository cartRepository;

        public void saveCart(Cart cart) {
                cartRepository.save(cart);
        }

        public List<Cart> getAllCart() {
                return cartRepository.findAll();
        }

        public void cartDeleteAll() {
                cartRepository.deleteAll();
        }
}
```

Package: com.ss.service

CustomerService.java

```java
package com.ss.service;

import java.util.List;

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

import com.ss.model.Customer;
import com.ss.repository.CustomerRepository;

@Service
public class CustomerService {

        @Autowired
        private CustomerRepository customerRepository;

        public void saveCustomer(Customer customer) {
                this.customerRepository.save(customer);

        }

        public boolean loginVerify(String email, String password) {
                Customer customer = customerRepository.findByEmail(email);
    if (customer!= null && customer.getEmail().equals(email) && 
customer.getPassword().equals(password)) {
      return true;
    }
    return false;
        }

        public Customer getCustomer(String email) {
                return customerRepository.findByEmail(email);
        }

        public List<Customer> getAllCustomers() {
                return customerRepository.findAll();
        }

        public void deleteCustomer(String email) {
                customerRepository.deleteById(email);
        }

        public List<Customer> searchCustomer(String keyword) {
                return customerRepository.userSearch(keyword);
        }

        public List<String> customerEmails(){
                return customerRepository.customerEmails();
        }

}
```

Package: com.ss.service

ProductService.java

```
package com.ss.service;

import java.util.List;

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

import com.ss.model.Product;
import com.ss.repository.ProductRepository;

@Service
public class ProductService {

	@Autowired
	private ProductRepository productRepository;

	public List<Product> getAllProducts(){
		return productRepository.findAll();
	}

	public void addProduct(Product product) {
		productRepository.save(product);

	}

	public Product getProductById(int id) {
		return productRepository.findById(id);
	}

	public void deleteProduct(int id) {
		productRepository.deleteById(id);
	}

	public List<Product> homeSearch(String keyword) {
		return productRepository.homeSearch(keyword);
	}
}
```

Package: com.ss.service

PurchaseService.java

```
package com.ss.service;

import java.sql.Date;
import java.util.ArrayList;
import java.util.List;

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

import com.ss.model.Purchase;
import com.ss.repository.ProductRepository;
import com.ss.repository.PurchaseRepository;

@Service
public class PurchaseService {
    @Autowired
    private PurchaseRepository purchaseRepository;

    @Autowired
    private ProductRepository productRepository;

    public List<Purchase> getAllPurchases(){
        return purchaseRepository.findAll();
    }

    public List<Purchase> getByEmail(String email){
         return   purchaseRepository.getByEmail(email);
    }

    public List<Purchase> getPurchaseByDate(Date keyword) {
        return purchaseRepository.findByDop(keyword);
    }

    public List<Purchase> getPurchaseByCategory(String keyword) {
        List<Purchase> sPurchase = new ArrayList<>();
        List<Integer> productIds = productRepository.getByCategory(keyword);
        if (!productIds.isEmpty()) {
            for (int id : productIds) {
                List<Purchase> tempList =
purchaseRepository.findByproductid(id);
                if (!tempList.isEmpty()) {
                    for (Purchase p : tempList) {
                        sPurchase.add(p);
                    }
                }
            }
        }
        return sPurchase;
    }

    public void deletePurchase(int id) {
        purchaseRepository.deleteById(id);

    }

    public void addPurchase(Purchase purchase) {
        purchaseRepository.save(purchase);
    }
}
```