

E-commerce Website for Sporty Shoes

(Source Code)

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1. GitHub Link.

<https://github.com/Sai153793/sportyshoeproject.git>

2. Folder Structure:

Folder Structure

SOURCE CODE

Phase3Project - sporty_shoe/src/main/java/com/example/datamodel/DataModelApplication.java

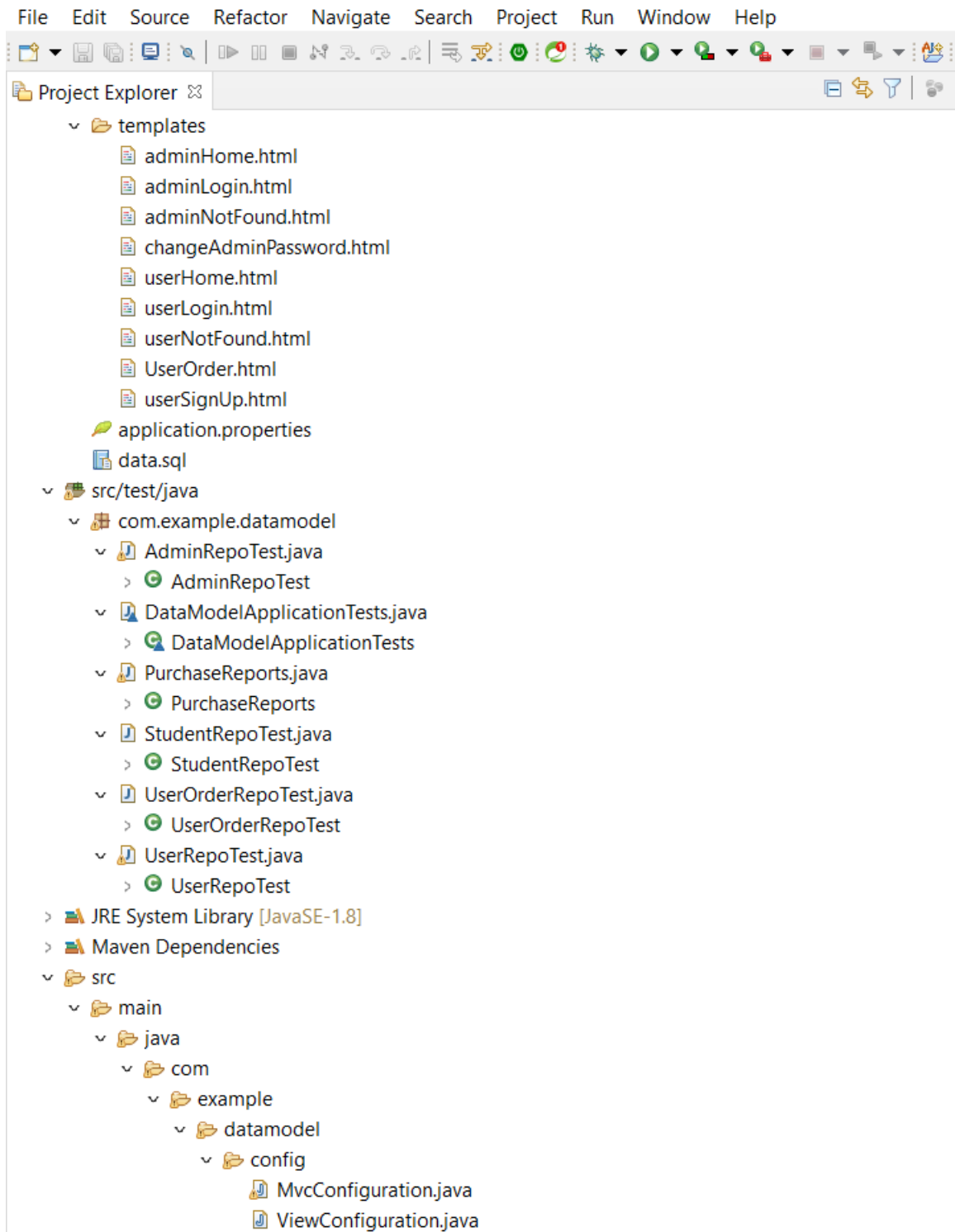
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Project Explorer

- Servers
 - Tomcat v9.0 Server at localhost-config
 - catalina.policy
 - catalina.properties
 - context.xml
 - server.xml
 - tomcat-users.xml
 - web.xml
 - Tomcat v9.0 Server at localhost.server
- sporty_shoe [boot] [devtools]
 - Spring Elements
 - Beans
 - DataModelApplication
 - src/main/java
 - com.example.datamodel
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 - UserSignup.java
 - UserSignup
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 - Admin.java

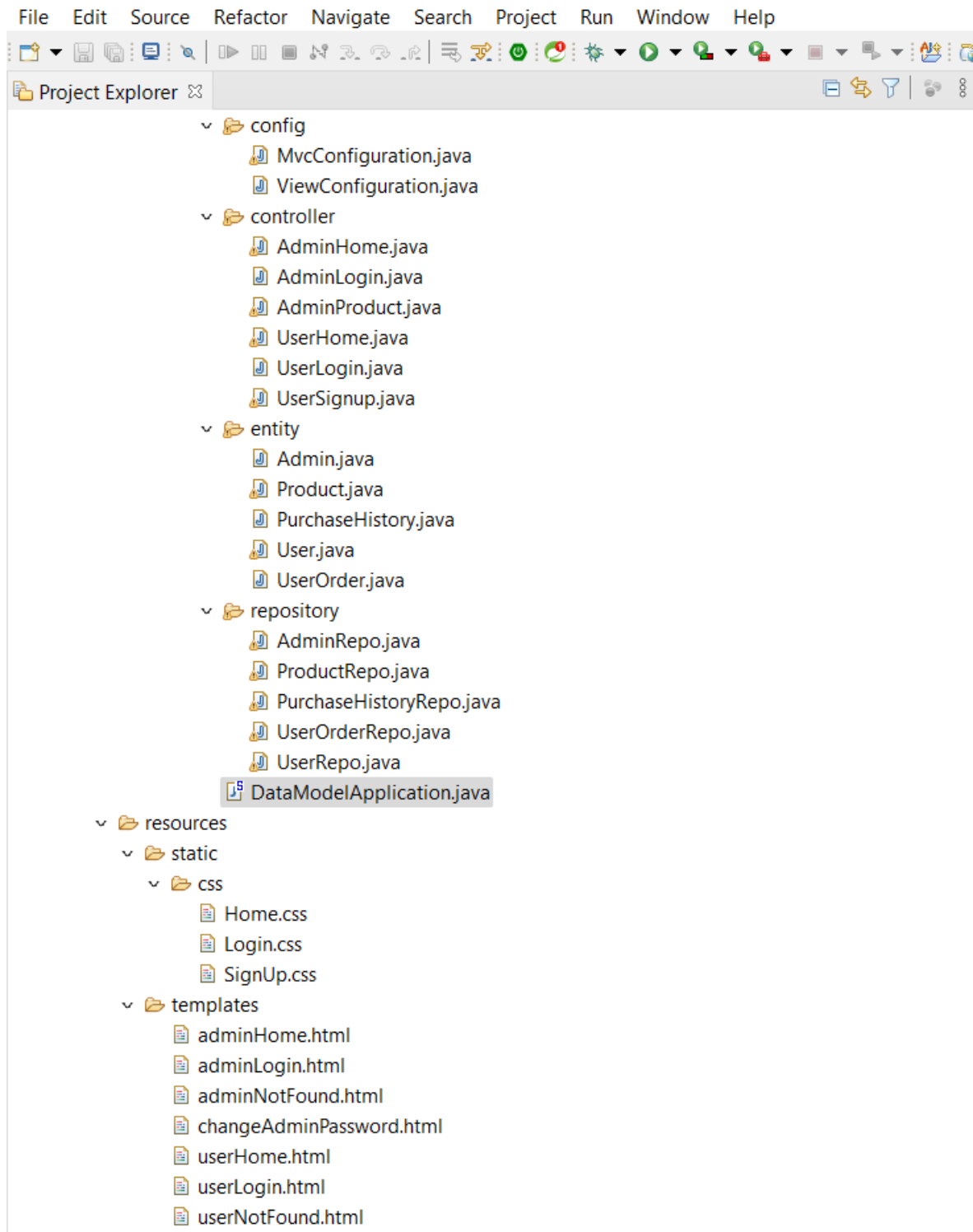
SOURCE CODE

Phase3Project - sporty_shoe/src/main/java/com/example/datamodel/DataModelApplication.java - Eclipse



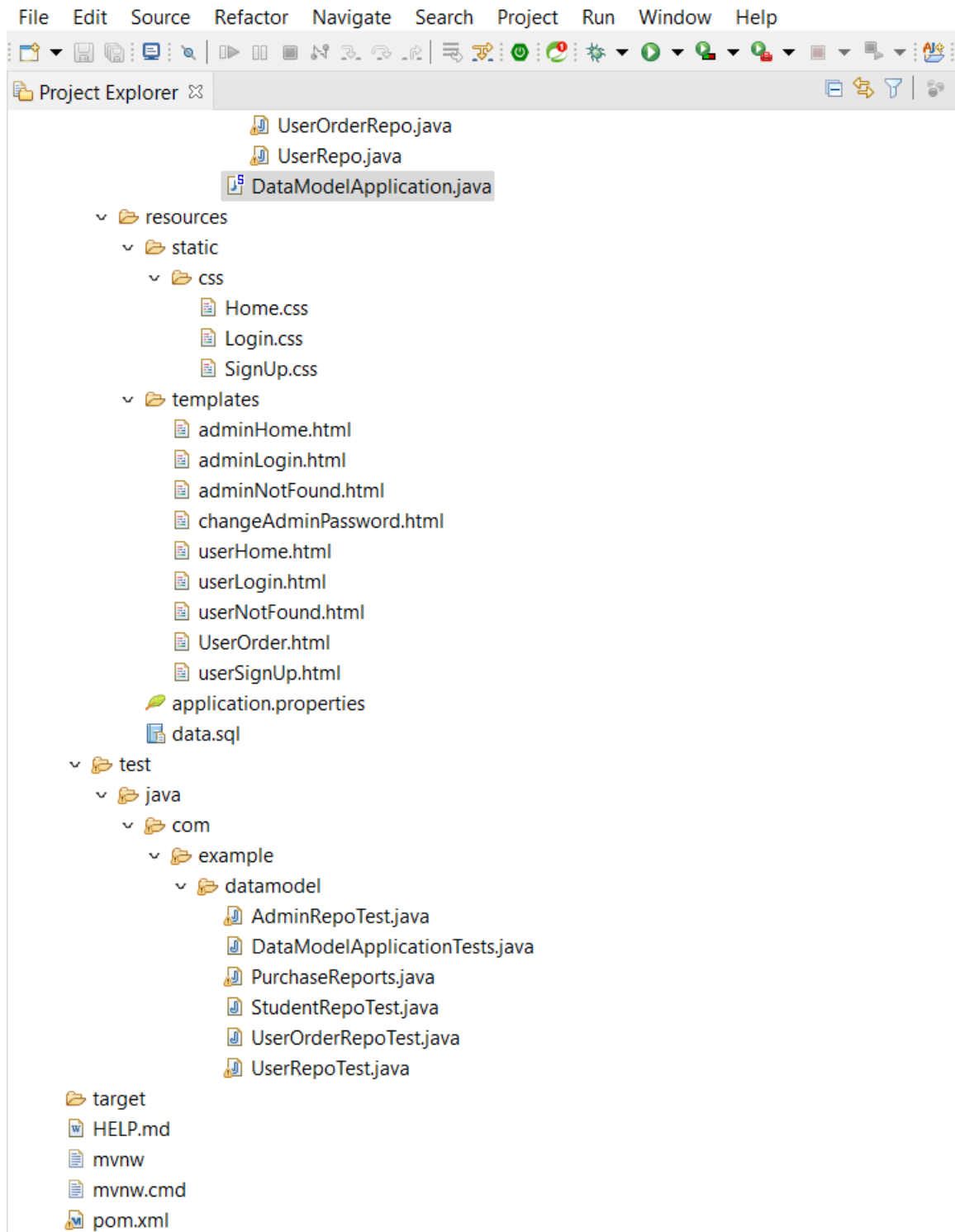
SOURCE CODE

Phase3Project - sporty_shoe/src/main/java/com/example/datamodel/DataModelApplication.java - Eclipse



SOURCE CODE

Phase3Project - sporty_shoe/src/main/java/com/example/datamodel/DataModelApplication.java - Eclipse



3. Project Code:

1. 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
http://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>2.5.6</version>
        <relativePath/><!-- lookup parent from repository -->
    </parent>
    <groupId>com.sportsshoes</groupId>
    <artifactId>sparty_shoe</artifactId>
    <version>0.0.1-SNAPSHOT</version>
    <name>sparty_shoe</name>
    <description>Demo project for Spring Boot</description>
    <properties>
        <java.version>1.8</java.version>
    </properties>
    <dependencies>
        <dependency>
<groupId>org.springframework.boot</groupId>
<artifactId>spring-boot-starter-data-jdbc</artifactId>
</dependency>
<dependency>
<groupId>org.springframework.boot</groupId>
<artifactId>spring-boot-starter-data-jpa</artifactId>
</dependency>
<dependency>
<groupId>org.springframework.boot</groupId>
<artifactId>spring-boot-starter-jdbc</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>
<!-- https://mvnrepository.com/artifact/org.springframework.boot/spring-boot-starter-thymeleaf -->
<dependency>
<groupId>org.springframework.boot</groupId>
<artifactId>spring-boot-starter-thymeleaf</artifactId>
<version>2.5.6</version>
</dependency>
</dependencies>

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

</project>

```

2. DataModelApplication.java

```
package com.example.datamodel;
```



```

import com.example.datamodel.repository.*;
import org.slf4j.Logger;
import org.slf4j.LoggerFactory;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.boot.CommandLineRunner;
import org.springframework.boot.SpringApplication;
import org.springframework.boot.autoconfigure.SpringBootApplication;

import java.util.Date;

@SpringBootApplication
public class DataModelApplication implements CommandLineRunner {

    @Autowired
    private UserOrderRepouserOrderRepo;

    @Autowired
    private ProductRepoproductRepo;

    @Autowired
    private AdminRepoadminRepo;

    @Autowired
    private UserRepouserRepo;

    @Autowired
    private PurchaseHistoryRepopurchaseHistoryRepo;

    private Logger logger =LoggerFactory.getLogger(this.getClass());

    public static void main(String[] args) {

SpringApplication.run(DataModelApplication.class, args);
    }

    @Override
    public void run(String... args) throws Exception {
        //purchaseHistoryRepo.

//        logger.info("list result -> {}",adminRepo.filterByDateAndCategory());
//        logger.info("gotcha -> {}", userOrderRepo.insert());
    }
}

```

3. MvcConfiguration.java

```
package com.example.datamodel.config;

import org.springframework.context.annotation.Configuration;
import org.springframework.web.servlet.config.annotation.EnableWebMvc;

@Configuration
public class MvcConfiguration {
}
```

4. ViewConfiguration.java

```
package com.example.datamodel.config;

import org.springframework.context.ApplicationContext;
import org.springframework.context.annotation.Bean;
import org.springframework.context.annotation.Configuration;
import org.springframework.web.servlet.ViewResolver;
import org.thymeleaf.spring5.SpringTemplateEngine;
import org.thymeleaf.spring5.templateresolver.SpringResourceTemplateResolver;
import org.thymeleaf.spring5.view.ThymeleafViewResolver;
import org.thymeleaf.templateresolver.ITemplateResolver;

@Configuration
public class ViewConfiguration {
    private final ApplicationContext applicationContext;

    public ViewConfiguration(ApplicationContext applicationContext) {
        this.applicationContext = applicationContext;
    }
}
```

```

@Bean
public ITemplateResolver templateResolver() {
    SpringResourceTemplateResolver templateResolver = new SpringResourceTemplateResolver();
    templateResolver.setApplicationContext(applicationContext);
    templateResolver.setPrefix("classpath:/templates/");
    templateResolver.setSuffix(".html");
    templateResolver.setTemplateMode("HTML");
    templateResolver.setCharacterEncoding("UTF-8");
    return templateResolver;
}

@Bean
public SpringTemplateEngine templateEngine() {
    SpringTemplateEngine templateEngine = new SpringTemplateEngine();
    templateEngine.setEnableSpringELCompiler(true);
    templateEngine.setTemplateResolver(templateResolver());
    return templateEngine;
}

@Bean
public ViewResolver viewResolver() {
    ThymeleafViewResolver viewResolver = new ThymeleafViewResolver();
    viewResolver.setTemplateEngine(templateEngine());
    return viewResolver;
}
}

```

5. AdminHome.java

```

package com.example.datamodel.controller;

import com.example.datamodel.entity.*;
import com.example.datamodel.repository.AdminRepo;
import com.example.datamodel.repository.ProductRepo;
import com.example.datamodel.repository.PurchaseHistoryRepo;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.PostMapping;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestParam;

```

```

import java.util.ArrayList;
import java.util.HashMap;
import java.util.List;
import java.util.Map;

@Controller
public class AdminHome {

    @Autowired
    private AdminRepo adminRepo;

    @Autowired
    private ProductRepo productRepo;

    @Autowired
    private PurchaseHistoryRepo purchaseHistoryRepo;

    @RequestMapping("/change")
    public String change() {
        return "changeAdminPassword";
    }

    @PostMapping("/changePassword")
    public String changePassword(@RequestParam Map<String,String>maps) {
        String email = maps.get("email");
        String oldPassword = maps.get("oldPassword");
        String newPassword = maps.get("newPassword");
        Admin admin = adminRepo.changePasswordByEmail(email,oldPassword,newPassword);
        if(admin == null) {
            return "adminNotFound";
        } else {
            return "adminLogin";
        }
    }

    @RequestMapping("/getUsers")
    public String getUsers(Model model) {
        List<User> users = adminRepo.getAllUsersForAdmin();
        model.addAttribute("users",users);
        return "adminHome";
    }

    @RequestMapping("/searchUser")
    public String searchUserByName(Model model, @RequestParam Map<String, String> maps) {
        String name = maps.get("name");
        List<User> users = adminRepo.searchUser(name);
        model.addAttribute("users",users);
    }

```

```

        return "adminHome";
    }

    @RequestMapping("/purchaseHistory")
    public String purchaseReports(Model model) {
        List<PurchaseHistory> purchaseHistories = purchaseHistoryRepo.getPurchaseHistory();
        model.addAttribute("purchaseHistory", purchaseHistories);
        return "adminHome";
    }
}

```

6. AdminLogin.java

```

package com.example.datamodel.controller;

import com.example.datamodel.repository.AdminRepo;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.web.bind.annotation.PostMapping;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestParam;

import java.util.Map;

@Controller
public class AdminLogin {

    @Autowired
    private AdminRepo adminRepo;

    @RequestMapping("/admin")
    public String admin() {
        return "adminLogin";
    }

    @PostMapping("/adminLogin")
    public String adminLogin(@RequestParam Map<String, String> maps) {
        String email = maps.get("email");
        String password = maps.get("password");
        if(adminRepo.verifyAdmin(email,password) == null) {
            return "adminNotFound";
        }
    }
}

```

```

    }
else {
    return "adminHome";
}
}
}

```

7. AdminProduct.java

```

package com.example.datamodel.controller;

import com.example.datamodel.repository.AdminRepo;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.web.bind.annotation.PostMapping;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestParam;

import java.util.Map;

@Controller
public class AdminLogin {

    @Autowired
    private AdminRepo adminRepo;

    @RequestMapping("/admin")
    public String admin() {
        return "adminLogin";
    }

    @PostMapping("/adminLogin")
    public String adminLogin(@RequestParam Map<String, String> maps) {
        String email = maps.get("email");
        String password = maps.get("password");
        if(adminRepo.verifyAdmin(email,password) ==null) {
            return "adminNotFound";
        }
        else {
            return "adminHome";
        }
    }
}

```

8. UserHome.java

```
package com.example.datamodel.controller;

import com.example.datamodel.entity.Product;
import com.example.datamodel.entity.User;
import com.example.datamodel.entity.UserOrder;
import com.example.datamodel.repository.ProductRepo;
import com.example.datamodel.repository.UserOrderRepo;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.boot.web.servlet.server.Session;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestParam;

import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
import java.util.List;
import java.util.Map;

@Controller
public class UserHome {
    @Autowired
    private ProductRepo productRepo;

    @Autowired
    private UserOrderRepo userOrderRepo;

    @RequestMapping("/add")
    public String addProduct(Model model, HttpServletRequest request, HttpServletResponse response)
    {
        List<Product> products = productRepo.getAllProducts();
        model.addAttribute("products",products);
        return "userHome";
    }

    @RequestMapping("/addProducts")
```

```

    public String addProductToOrder(Model model, @RequestParam("id") Long id, HttpServletRequest
request, HttpServletResponse response) {
        User user = (User)request.getSession().getAttribute("user");
        Long userId = user.getId();
        UserOrder userOrder = productRepo.addProductToUserOrder(id,userId);
        Long orderId = userOrder.getId();
        Long price = userOrderRepo.addTotalCostToOrder(orderId);
        model.addAttribute("order",userOrder);
        model.addAttribute("price",price);
        return "UserOrder";
    }
}

```

9. UserLogin.java

```

package com.example.datamodel.controller;

import com.example.datamodel.entity.User;
import com.example.datamodel.repository.UserRepo;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.*;

import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
import java.util.Map;

@Controller
@SessionAttributes({"user"})
public class UserLogin {

    @Autowired
    private UserRepo userRepo;

    @Autowired
    HttpSession session;

    @RequestMapping("/")
    public String loginPage() {
        return "userLogin";
    }
}

```



```

@PostMapping("/userLogin")
public String loginUser(Model model, @RequestParam Map<String, String> maps, HttpServletRequest
request, HttpServletResponse response) throws Exception {
    String email = maps.get("email");
    String password = maps.get("password");
    User user = userRepo.verifyUser(email,password);
    request.getSession().setAttribute("user",user);

    if(userRepo.verifyUser(email,password)==null) {
        return "userNotFound";
    }
    else {

        return "userHome";
    }
}
}

```

10. UserSignup.java

```

package com.example.datamodel.controller;

import com.example.datamodel.entity.User;
import com.example.datamodel.repository.UserRepo;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.web.bind.annotation.ModelAttribute;
import org.springframework.web.bind.annotation.RequestBody;
import org.springframework.web.bind.annotation.RequestMapping;

@Controller
public class UserSignup {

    @Autowired
    private UserRepo userRepo;

    @RequestMapping("/signup")
    public String signUp() {
        return "userSignUp";
    }
}

```

```

    }

    @RequestMapping("/UserSignUp")
    public String createUser(@ModelAttribute User user) {
        User u = userRepo.addNewUser(user);
        return "userLogin";
    }
}

```

11. [Admin.java](#)

```

package com.example.datamodel.entity;

import javax.persistence.*;

/*
 * STORES ADMIN DETAILS TO DATABASE
 */
@Entity
@NamedQuery(name = "get_all_admins", query = "select a from Admin a")
public class Admin {

    @Id
    @GeneratedValue(strategy = GenerationType.IDENTITY)
    @Column(name = "id", updatable = false, nullable = false)
    private Long id;

    private String password;

    private String adminName;

    private String email;

    public Admin(String password, String adminName, String email) {
        this.password = password;
        this.adminName = adminName;
        this.email = email;
    }
}
/*

```

```

    * Empty constructor to make JPA happy
    * so any kind of data can be acceptable*/
public Admin() {

    }
    /*
    * getter & setter for fetching and updating the data*/
public Long getId() {
return id;
    }

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

public String getPassword() {
return password;
    }

public void setPassword(String password) {
this.password = password;
    }

public String getAdminName() {
return adminName;
    }

public void setAdminName(String adminName) {
this.adminName = adminName;
    }

public String getEmail() {
return email;
    }

public void setEmail(String email) {
this.email = email;
    }

    @Override
public String toString() {
return "Admin{" +
        "id=" + id +
        ", password=" + password + "\" +
        ", adminName=" + adminName + "\" +
        ", email=" + email + "\" +
        '}'";
    }

```

```

    }
}

```

12. Product.java

```

package com.example.datamodel.entity;

import javax.persistence.*;
import java.util.ArrayList;
import java.util.Date;
import java.util.List;

@Entity
@NamedQueries(value = {
    @NamedQuery(name = "get_all_products", query = "Select p FROM Product p")
})
public class Product {
    @Id
    @GeneratedValue(strategy = GenerationType.IDENTITY)
    @Column(name = "id", updatable = false, nullable = false)
    private Long id;

    private String category;

    private String productName;

    private Long cost;

    @ManyToMany(fetch = FetchType.EAGER)
    @JoinTable(name="order_product",
        joinColumns = @JoinColumn(name="product_id"),
        inverseJoinColumns = @JoinColumn(name = "order_id")
    )
    private List<UserOrder>userOrders = new ArrayList<>();

    public Product() {
    }
}

```

```
public Product(String productName,String category, Long cost, List<UserOrder>userOrders) {
this.productName = productName;

this.category = category;
this.cost = cost;
this.userOrders = userOrders;
}

public Product(String productName,String category, Long cost) {
this.productName = productName;
this.category = category;
this.cost = cost;
}

public String getCategory() {
return category;
}

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

public Long getCost() {
return cost;
}

public void setCost(Long cost) {
this.cost = cost;
}

public Product(String productName) {
this.productName = productName;
}

public Long getId() {
return id;
}

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

public String getProductName() {
return productName;
}
```

```

    public void setProductName(String productName) {
this.productName = productName;
    }

    public List<UserOrder>getUserOrders() {
        return userOrders;
    }

    public void addUserOrders(UserOrderuserOrder) {
this.userOrders.add(userOrder);
    }

    public void delUserOrders(UserOrderuserOrder) {
this.userOrders.remove(userOrder);
    }

    @Override
    public String toString() {
        return "Product{" +
            "id=" + id +
            ", productName=" + productName + "\" +
            '}'";
    }
}

```

PurchaseHistory.java
package com.example.datamodel.entity;

```

import javax.persistence.*;
import java.util.Date;

```

```

@Entity
public class PurchaseHistory {

```

```

    @Id

```

```
@GeneratedValue(strategy = GenerationType.IDENTITY)
@Column(name = "id", updatable = false, nullable = false)
private Long id;

private Long productId;

private Long orderId;

private Long cost;

private Long total;

private Long UserId;

private String category;

private String productName;

private Date date;

public PurchaseHistory() {
}

public PurchaseHistory(Long productId, Long orderId, Long cost, Long total, Long userId, String
category, String productName, Date date) {
this.productId = productId;
this.orderId = orderId;
this.cost = cost;
this.total = total;
UserId = userId;
this.category = category;
this.productName = productName;
this.date = date;
}

public Long getId() {
return id;
}

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

public Long getProductId() {
return productId;
}
```

```
public void setProductId(Long productId) {
this.productId = productId;
}

public Long getOrderId() {
return orderId;
}

public void setOrderId(Long orderId) {
this.orderId = orderId;
}

public Long getCost() {
return cost;
}

public void setCost(Long cost) {
this.cost = cost;
}

public Long getTotal() {
return total;
}

public void setTotal(Long total) {
this.total = total;
}

public Long getUserId() {
return UserId;
}

public void setUserId(Long userId) {
UserId = userId;
}

public String getCategory() {
return category;
}

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

public String getProductName() {
return productName;
}
```



```

    public void setProductName(String productName) {
        this.productName = productName;
    }

    public Date getDate() {
        return date;
    }

    public void setDate(Date date) {
        this.date = date;
    }

    @Override
    public String toString() {
        return "PurchaseHistory{" +
            "id=" + id +
            ", productId=" + productId +
            ", orderId=" + orderId +
            ", cost=" + cost +
            ", total=" + total +
            ", UserId=" + UserId +
            ", category=" + category + "\" +
            ", productName=" + productName + "\" +
            ", date=" + date +
            '"';
    }
}

```

13. User.java

```

package com.example.datamodel.entity;

import org.springframework.web.context.annotation.SessionScope;

import javax.persistence.*;

@Entity
@NamedQueries(
    value = {
        @NamedQuery(name="get_all_users", query = "select u from User u")
    }
)

```

```
    }  
)  
public class User {  
    @Id  
    @GeneratedValue(strategy = GenerationType.IDENTITY)  
    @Column(name = "id", updatable = false, nullable = false)  
    private Long id;  
  
    private String userName;  
  
    private String email;  
  
    private String name;  
  
    private String password;  
  
    @OneToOne(cascade = {CascadeType.ALL})  
    private UserOrder userOrder;  
  
    public UserOrder getUserOrder() {  
        return userOrder;  
    }  
  
    public void setUserOrder(UserOrder userOrder) {  
        this.userOrder = userOrder;  
    }  
  
    public User() {  
    }  
  
    public User(String userName, String email, String name, String password) {  
        this.userName = userName;  
        this.email = email;  
        this.name = name;  
        this.password = password;  
    }  
  
    public Long getId() {  
        return id;  
    }  
  
    public void setId(Long id) {  
        this.id = id;  
    }  
}
```

```
}

public String getUsername() {
    return userName;
}

public void setUsername(String userName) {
this.userName = userName;
}

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;
}

@Override
public String toString() {
    return "User{" +
        "id=" + id +
        ", userName='" + userName + '\'' +
        ", email='" + email + '\'' +
        ", name='" + name + '\'' +
        ", password='" + password + '\'' +
        '}';
}
}
```

14. UserOrder.java

```

package com.example.datamodel.entity;

import javax.persistence.*;
import java.util.ArrayList;
import java.util.Date;
import java.util.List;

@Entity
@NamedQueries(value = {
    @NamedQuery(name = "get_all_orders", query = "Select u FROM UserOrder u")
})
public class UserOrder {
    @Id
    @GeneratedValue(strategy = GenerationType.IDENTITY)
    @Column(name = "id", updatable = false, nullable = false)
    private Long id;

    private Long total;

    public User getUser() {
        return user;
    }

    public void setUser(User user) {
        this.user = user;
    }

    @OneToOne(cascade = {CascadeType.ALL})
    private User user;

    private Date date;

    @ManyToMany(mappedBy = "userOrders", fetch = FetchType.EAGER)
    private List<Product> products = new ArrayList<>();

    public UserOrder() {
    }

    public UserOrder(Long total, Date date) {
        this.total = total;
    }

```

```
this.date = date;
}

    public UserOrder(Date date) {
this.date = date;
    this.id= user.getId();
}

    public UserOrder(Date date,Long id) {
this.date = date;
}

    public UserOrder(Long total, Date date, List<Product> products) {
this.total = total;
this.date = date;
this.products = products;
}

    public UserOrder(Long total) {
this.total = total;

}

    public Date getDate() {
    return date;
}

    public void setDate(Date date) {
this.date = date;
}

    public Long getId() {
    return id;
}

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

    public Long getTotal() {
    return total;
}

    public void setTotal(Long total) {
this.total = total;
}
```

```

public List<Product>getProducts() {
    return products;
}

public void addProducts(Product product) {
this.products.add(product);
}
public void delProducts(Product product) {
this.products.remove(product);
}

@Override
public String toString() {
    return "UserOrder{" +
        "id=" + id +
        ", total=" + total +
        ", date=" + date +
        ", products=" + products +
        '}';
}
}

```

15. AdminRepo.java

```

package com.example.datamodel.repository;

import com.example.datamodel.entity.Admin;
import com.example.datamodel.entity.User;
import com.example.datamodel.entity.UserOrder;
import org.slf4j.Logger;
import org.slf4j.LoggerFactory;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Repository;

import javax.persistence.EntityManager;
import javax.persistence.TypedQuery;
import javax.transaction.Transactional;
import java.util.ArrayList;
import java.util.List;

@Repository
@Transactional

```

```

public class AdminRepo {

    @Autowired
    EntityManager em;

    private Logger log = LoggerFactory.getLogger(this.getClass());

    @Autowired
    private UserOrderRepo userOrderRepo;

    @Autowired
    private ProductRepo productRepo;

    @Autowired
    private UserRepo userRepo;

    /**
     * Add a new admin if not exists already
     * Using persist of Entity Manager
     * if exist used merge to update the admin data
     */
    public Admin saveAdmin(Admin admin) {
        if(admin.getId() == null) {
            em.persist(admin);
        } else {
            em.merge(admin);
        }
        return admin;
    }

    /**
     * find a admin using id
     * used Entity manager's find method
     * which returns the admin object*/
    public Admin findById(Long adminId) {
        Admin admin = em.find(Admin.class, adminId);
        log.info("admin retrieved -> {}", admin);
        return admin;
    }

    /**
     * update admin password
     * first find user using findById
     * then verify with oldPassword
     * then update newPassword*/
    public String changePassword(Long adminId, String oldPassword, String newPassword) {

```

```

        Admin admin = findByld(adminId);
        if(admin.getPassword() == oldPassword) {
            admin.setPassword(newPassword);
            return "Password change successfull";
        } else {
            return "Password mismatch";
        }
    }

    public void filterByDateAndCategory() {
        List<UserOrder> orders = userOrderRepo.getAllOrders();
        List<List> ordersWithProducts = new ArrayList<>();
        for(Long i = 0L; i<orders.size(); i++) {
            UserOrder userOrder = em.find(UserOrder.class,i);
            ordersWithProducts.add(userOrder.getProducts());
        }

    }

    public List<Admin> getAdmins() {
        TypedQuery<Admin> query = em.createNamedQuery("get_all_admins",Admin.class);
        List<Admin> result = query.getResultList();
        return result;
    }

    public Admin verifyAdmin(String email, String password) {
        Admin admin = null;
        List<Admin> admins = getAdmins();
        for(int i = 0; i<admins.size();i++) {
            admin = admins.get(i);
            if(admin.getEmail().equals(email)) {
                if( admin.getPassword().equals(password) ) {
                    break;
                }
            }
        }
        log.info("admin -> {}",admin);
        return admin;
    }

    public Admin changePasswordByEmail(String email, String oldPassword, String newPassword) {
        Admin admin = verifyAdmin(email,oldPassword);
        if(admin == null) {
            return null;
        } else {
            Long id = admin.getId();
            changePassword(id,oldPassword,newPassword);
        }
    }

```



```

        return admin;
    }
}
public List<User>getAllUsersForAdmin() {
    List<User> users = userRepo getUsers();
    return users;
}
public List<User>searchUser(String name) {
    List users = userRepo.searchUserByName(name);
    return users;
}
}

```

16. ProductRepo.java

```

package com.example.datamodel.repository;

import com.example.datamodel.entity.Product;
import com.example.datamodel.entity.User;
import com.example.datamodel.entity.UserOrder;
import org.slf4j.Logger;
import org.slf4j.LoggerFactory;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Repository;

import javax.persistence.EntityManager;
import javax.persistence.Query;
import javax.persistence.TypedQuery;
import javax.transaction.Transactional;
import java.util.List;

@Repository
@Transactional
public class ProductRepo {

```

```
@Autowired
EntityManager em;

@Autowired
private UserRepository;

@Autowired
private UserOrderRepository;

private Logger log = LoggerFactory.getLogger(this.getClass());

public Product searchProduct(Long id) {
    Product product = em.find(Product.class, id);
    return product;
}

public List<Product> getAllProducts() {
    TypedQuery<Product> query = em.createNamedQuery("get_all_products", Product.class);
    List<Product> result = query.getResultList();
    return result;
}

public String delProduct(Long id) {
    Product product = searchProduct(id);
    em.remove(product);
    return "deleted Successfully";
}

public Product addProduct(Product product) {
    em.persist(product);
    return product;
}

public Product updateProduct(Long id, Product product) {
    Product p1 = searchProduct(id);
    if (p1.getId() == null) {
        em.persist(product);
    } else {
        em.merge(product);
    }
    return product;
}
```

```

    public UserOrderaddProductToOrder(Long orderId, Long productId) {
        UserOrderuserOrder = em.find(UserOrder.class, orderId);
        Product product = em.find(Product.class, productId);
        userOrder.addProducts(product);
        product.addUserOrders(userOrder);
        em.persist(userOrder);
        return userOrder;
    }

    public UserOrderaddProductToUserOrder(Long ProductId, Long userId) {
        UserOrderuserOrder = userOrderRepo.createNewOrder(userId);
        Long orderId = userOrder.getId();
        UserOrder userOrder1 = addProductToOrder(orderId, ProductId);
        return userOrder1;
    }

    public List<Object[]>testPurchaseRepoQuery() {
        Query q = em.createQuery("select uo,p from UserOrderuo JOIN uo.products p order by
p.categorydesc ");
        List<Object[]>resultList = q.getResultList();
        return resultList;
    }
}

```

17. PurchaseHistory.java

```

package com.example.datamodel.repository;

import com.example.datamodel.entity.Product;
import com.example.datamodel.entity.PurchaseHistory;
import com.example.datamodel.entity.UserOrder;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Repository;

import javax.persistence.*;
import javax.transaction.Transactional;

```

```

import java.util.*;

@Repository
@Transactional
public class PurchaseHistoryRepo {

    @Autowired
    EntityManager em;

    @Autowired
    private ProductRepo productRepo;

    public void save(PurchaseHistory purchaseHistory) {
        em.persist(purchaseHistory);
    }

    public void addDataToPurchaseHistory() {

        em.createNativeQuery("TRUNCATE TABLE purchase_history;").executeUpdate();

        List<Object[]> resultlist = productRepo.testPurchaseRepoQuery();
        for(Object[] result:resultlist) {
            Product product = (Product) result[1];
            UserOrder userOrder = (UserOrder) result[0];
            Long productId = product.getId();
            Long orderId = userOrder.getId();
            Long cost = product.getCost();
            Long total = userOrder.getTotal();
            Long userId = userOrder.getUser().getId();
            String category = product.getCategory();
            String productName = product.getProductName();
            Date date = userOrder.getDate();
            PurchaseHistory purchaseHistory = new
            PurchaseHistory(productId,orderId,cost,total,userId,category,productName,date);
            save(purchaseHistory);

        }
    }

    public List<PurchaseHistory> getPurchaseHistory() {
        addDataToPurchaseHistory();
        TypedQuery<PurchaseHistory> query = (TypedQuery<PurchaseHistory>)
        em.createNativeQuery("SELECT * FROM datamodel.purchase_history order by category and date
        desc;", PurchaseHistory.class);
        List<PurchaseHistory> result = query.getResultList();
        return result;
    }
}

```

```

    }

}

```

18. UserOrderRepo.java

```

package com.example.datamodel.repository;

import com.example.datamodel.entity.Product;
import com.example.datamodel.entity.User;
import com.example.datamodel.entity.UserOrder;
import org.slf4j.Logger;
import org.slf4j.LoggerFactory;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.context.annotation.Lazy;
import org.springframework.stereotype.Repository;

import javax.persistence.EntityManager;
import javax.persistence.TypedQuery;
import javax.transaction.Transactional;
import java.util.Date;
import java.util.List;

@Repository
@Transactional
public class UserOrderRepo {

    @Autowired
    EntityManager em;

    private UserRepouserRepo;

    @Autowired
    public UserOrderRepo(@Lazy UserRepouserRepo) {
        this.userRepo = userRepo;
    }

```

```

    }

    private Logger log = LoggerFactory.getLogger(this.getClass());

    public UserOrderinsert() {
        UserOrderuserOrder = new UserOrder(700L);
        Product product = new Product("rahu");
        em.persist(userOrder);
        em.persist(product);

        userOrder.addProducts(product);
        product.addUserOrders(userOrder);
        em.persist(userOrder);
        return userOrder;
    }

    public Long totalCost(Long orderId) {
        UserOrderuserOrder = em.find(UserOrder.class,orderId);
        List<Product> products = userOrder.getProducts();
        Long sum = 0L;
        for(int i = 0; i<products.size(); i++) {
            sum += products.get(i).getCost();
        }
        return sum;
    }

    public Long addTotalCostToOrder(Long orderId) {
        Long sum = totalCost(orderId);
        UserOrderuserOrder = em.find(UserOrder.class,orderId);
        userOrder.setTotal(sum);
        em.persist(userOrder);
        em.flush();
        return userOrder.getTotal();
    }

    public List<UserOrder>getAllOrders() {
        TypedQuery<UserOrder> query = em.createNamedQuery("get_all_orders",UserOrder.class);
        List<UserOrder> result = query.getResultList();
        return result;
    }

    public UserOrdercreateNewOrder(Long id) {
        User user = em.find(User.class,id);
        UserOrderuserOrder = user.getUserOrder();
        if(userOrder==null) {
            userOrder = new UserOrder(new Date(),id);

```

```

em.persist(userOrder);
userRepo.addUserOrderToUser(id,userOrder);
userOrder.setUser(em.find(User.class,id));
em.persist(userOrder);
    return userOrder;
} else {
    return userOrder;
}
}

public UserOrder getOrder(Long orderId) {
UserOrder userOrder = em.find(UserOrder.class,orderId);
    return userOrder;
}
}

```

19. UserRepo.java

```

package com.example.datamodel.repository;

import com.example.datamodel.entity.User;
import com.example.datamodel.entity.UserOrder;
import org.slf4j.Logger;
import org.slf4j.LoggerFactory;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Repository;

import javax.persistence.EntityManager;
import javax.persistence.Query;
import javax.persistence.TypedQuery;
import javax.transaction.Transactional;
import java.util.List;
import java.util.Queue;

@Repository
@Transactional
public class UserRepo {

    @Autowired

```

EntityManagerem;

```

private Logger log = LoggerFactory.getLogger(this.getClass());

/*
 * find user by user id
 * using entity manager's find method
 * return type is user object*/
public User findUserById(Long userId) {
    User user = em.find(User.class, userId);
    log.info("user object returned -> {}", user);
    return user;
}

public User updateUser(Long userId, String oldPassword, String newPassword) {
    User user= em.find(User.class, userId);

    if (user.getPassword() == oldPassword) {
        user.setPassword(newPassword);
        if (user.getPassword() == newPassword) {
            return user;
        } else {
            return null;
        }
    } else {
        return null;
    }
}

public User addNewUser(User user) {
    em.persist(user);
    return user;
}

public List<User> getUsers() {
    TypedQuery<User> query = em.createNamedQuery("get_all_users", User.class);
    List<User> result = query.getResultList();
    return result;
}

public User verifyUser(String email, String password) {
    User user = null;

    List<User> users = getUsers();
    User newuser = null;

```



```

        for (int i = 0; i<users.size(); i++) {
            user = users.get(i);
            if (user.getEmail().equals(email)) {
                if (user.getPassword().equals(password)) {
newuser = user;
                    break;
                }
            }
        }
        log.info("user -> {}", user);
        return newuser;
    }

    public List<User>searchUserByName(String name) {
        Query query = em.createNativeQuery("Select * from user where name = :name",User.class);
        query.setParameter("name",name);
        List result = query.getResultList();
        return result;
    }

    public void addUserOrderToUser(Long id, UserOrderuserOrder) {
        User user = em.find(User.class,id);
        user.setUserOrder(userOrder);
        em.merge(user);
    }

    public UserOrderverifyUserToOrder(Long userId) {
        User user = em.find(User.class,userId);
        return user.getUserOrder();
    }

}

```

20. Home.css

```
@charset "ISO-8859-1";
ul {
  list-style-type: none;
  margin: 0;
  padding: 0;
  width: 100%;
  top: 0;
  overflow: hidden;
  position: -webkit-sticky; /* Safari */
  position: sticky;
  background-color: #333;
}
li {

  float: left;
}
lia {
  display: block;
  color: white;
  text-align: center;
  padding: 14px16px;
  text-decoration: none;
}
li:last-child {
  border-bottom: none;
}
lia:hover {
  background-color: #111;
  color: white;
}
.active {
  background-color: #04AA6D;
  color: white;
}

* {
  padding: 0;
  margin: 0;
  box-sizing: border-box;
}

body {
  background: #fefefe;
  font-family: sans-serif;
}
```

```
.container {  
  width: 90%;  
  margin: 50px auto;  
}  
.heading {  
  text-align: center;  
  font-size: 30px;  
  margin-bottom: 50px;  
}  
.row {  
  display: flex;  
  flex-direction: row;  
  justify-content: space-around;  
}  
  
.card {  
  width: 20%;  
  background: #fff;  
  border: 1px solid #ccc;  
  margin-bottom: 50px;  
  margin-left: 5%;  
  border-radius: 20px;  
  transition: 0.3s;  
}  
  
.card-header {  
  text-align: center;  
  padding: 50px 10px;  
  background: linear-gradient(to right, #ff416c, #2bbefd);  
  color: #fff;  
  border-radius: 20px;  
}  
  
.card-body {  
  padding: 30px 20px;  
  align-content: center;  
  text-align: center;  
  font-size: 18px;  
}  
  
.card-body.btn {  
  display: block;  
  color: #fff;  
  text-align: center;  
  background: linear-gradient(to right, #045159, #24f3f3);
```

```

margin-top: 30px;
text-decoration: none;
padding: 10px 5px;
}

.card:hover {
  transform: scale(1.05);
  box-shadow: 0 40px 10px rgba(0,0,0,0.75);
}

@media screen and (max-width: 1000px) {
  .card {
    width: 40%;
  }
}

@media screen and (max-width: 620px) {
  .container {
    width: 100%;

  }

  .heading {
    padding: 20px;
    font-size: 20px;
  }
  .card {
    width: 80%;
  }
}

.link {
  display: flex;

  text-decoration: none;
  outline: none;
  border: none;
  cursor: pointer;
  width: 100%;
  height: 60px;
  border-radius: 30px;
  font-weight: 700;
  font-family: "Lato", sans-serif;
  color: #fff;
  align-items: center;
  justify-content: center;
  text-align: center;

```

```

background-color: #4a8f83;
box-shadow: 3px3px8px#b1b1b1,-3px-3px8px#fff;
font-size: 18px;
}
.link:hover {
  transform: scale(1.02);
  box-shadow: 0040px-10pxrgba(0,0,0,0.75);
}
.ticket {

  width: 600px;
  height: 400px;
  margin-left:30%;
  margin-top:10%;

  justify-content: center;
  padding: 60px35px35px35px;
  border-radius: 40px;
  background-color: #ecf0f3;
  box-shadow: 13px13px20px#cbced1,
-13px-13px20px#fff;
}
.row {
display:flex;
  flex-direction: row;
  justify-content: space-between;
  border-radius: 30px;
  margin-left: 5px;
  margin-right: 5px;
}
.ticket:hover {
  transform: scale(1.02);
  box-shadow: 0040px-10pxrgba(0,0,0,0.75);
}
.row:hover {
  transform: scale(1.02);
  box-shadow: 0040px-10pxrgba(0,0,0,0.75);
}
a:hover {
  transform: scale(1.02);
  outline: none;
text-underline: none;
  outline-color: #04AA6D;
  box-shadow: 0040px-10pxrgba(0,0,0,0.75);
}

```

```

a {
  display: flex;
  text-decoration: none;
  outline: none;
  border: none;
  cursor: pointer;
  width: 100%;
  height: 60px;
  border-radius: 30px;
  font-weight: 700;
  font-family: "Lato", sans-serif;
  color: #fff;
  align-items: center;
  justify-content: center;
  text-align: center;
  background-color: #4a8f83;
  box-shadow: 3px 3px 8px #b1b1b1, -3px -3px 8px #fff;
}
h1 {
  display: flex;

  text-decoration: none;
  outline: none;
  border: none;
  cursor: pointer;
  width: 100%;
  height: 60px;
  border-radius: 30px;
  font-weight: 700;
  font-family: "Lato", sans-serif;
  color: #fff;
  align-items: center;
  justify-content: center;
  text-align: center;
  background-color: #4a8f83;
  box-shadow: 3px 3px 8px #b1b1b1, -3px -3px 8px #fff;
  font-size: 18px;
}
h1:hover {
  transform: scale(1.02);
  box-shadow: 0 40px 10px rgba(0,0,0,0.75);
}
.loginBox {
  width: 400px;
  height: 700px;

```

```

padding: 60px35px35px35px;
border-radius: 40px;
background-color: #ecf0f3;
box-shadow: 13px13px20px#cbced1,
-13px-13px20px#fff;
}
.logo {
background: url(https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcQN59jZY3e-
DGR0qDhobXi5vhnIVUv1-qw8aQ&usqp=CAU);
width: 100px;
height: 100px;
border-radius: 50%;
margin: 0auto;
box-shadow: 0px0px2px#5f5f5f,
0px0px0px5px#ecf0f3,
8px8px15px#a7aaaf,
-8px-8px15px#fff;
}
.title {
text-align: center;
font-size: 28px;
padding-top: 24px;
letter-spacing: 0.5px;
}
.fields {
width: 100%;
padding: 75px5px5px5px;
}
.fieldsinput {
border: none;
outline: none;
background: none;
font-size: 18px;
text-align: center;
color: #555;
padding: 20px10px20px5px;
}
.username,
.password {
margin-bottom: 30px;
border-radius: 25px;
text-decoration-color: #04AA6D;
color: #2bbefd;
background: linear-gradient(to right, #ff416c, #2bbefd);

```

```

    box-shadow: 3px3px8px#b1b1b1,-3px-3px8px#fff;
}
::placeholder { /* Chrome, Firefox, Opera, Safari 10.1+ */
color: white;
text-align: center;
opacity: 1; /* Firefox */
}
.fieldssvg {
height: 22px;
margin: 010px-3px25px;
}
.signin-button {
outline: none;
border: none;
cursor: pointer;
width: 100%;
height: 60px;
border-radius: 30px;
font-weight: 700;
font-family: "Lato",sans-serif;
color: #fff;
text-align: center;
background: linear-gradient(to right,#ff416c,#2bbefd);
box-shadow: 3px3px8px#b1b1b1,-3px-3px8px#fff;

}
a {
display: flex;
text-decoration: none;
outline: none;
border: none;
cursor: pointer;
width: 100%;
height: 60px;
border-radius: 30px;
font-weight: 700;
font-family: "Lato",sans-serif;
color: #fff;
align-items: center;
justify-content: center;
text-align: center;
background-color: gray;
box-shadow: 3px3px8px#b1b1b1,-3px-3px8px#fff;

}

```


21. Login.css

```
@charset "ISO-8859-1";
* {
  box-sizing: border-box;
}
body {
  margin: 0;
  height: 100vh;
  width: 100vw;
  overflow: hidden;
  font-family: "Lato", sans-serif;
  font-weight: 700;
  display: flex;
  align-items: center;
  justify-content: center;
  color: #555;
  background-color: #ecf0f3;
}
.loginBox {
  width: 400px;
  height: 700px;
  padding: 60px 35px 35px 35px;
  border-radius: 40px;
  background-color: #ecf0f3;
  box-shadow: 13px 13px 20px #cbced1,
-13px -13px 20px #fff;
}
.logo {
  background: url(https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcQN59jZY3e-
DGR0qDhobXi5vhnIVUv1-qw8aQ&usqp=CAU);
  width: 100px;
  height: 100px;
  border-radius: 50%;
  margin: 0 auto;
```

```

    box-shadow: 0px0px2px#5f5f5f,
    0px0px0px5px#ecf0f3,
    8px8px15px#a7aaaf,
    -8px-8px15px#fff;

}
.title {
    text-align: center;
    font-size: 28px;
    padding-top: 24px;
    letter-spacing: 0.5px;
}
.fields {
    width: 100%;
    padding: 75px5px5px5px;
}
.fieldsinput {
    border: none;
    outline: none;
    background: none;
    font-size: 18px;
color: #555;
    padding: 20px10px20px5px;

}
.username,
.password {
    margin-bottom: 30px;
    border-radius: 25px;
    box-shadow: inset8px8px8px#cbced1,inset
-8px-8px8px#fff;
}
.fieldssvg {
    height: 22px;
    margin: 010px-3px25px;
}
.signin-button {
    outline: none;
    border: none;
    cursor: pointer;
    width: 100%;
    height: 60px;
    border-radius: 30px;
    font-weight: 700;
    font-family: "Lato",sans-serif;
color: #fff;
    text-align: center;

```

```

background-color: #FD8469;
box-shadow: 3px3px8px#b1b1b1,-3px-3px8px#fff;
}
a {
  display: flex;
  text-decoration: none;
  outline: none;
  border: none;
  cursor: pointer;
  width: 100%;
  height: 60px;
  border-radius: 30px;
  font-weight: 700;
  font-family: "Lato",sans-serif;
color: #fff;
  align-items: center;
  justify-content: center;
  text-align: center;
  background-color: gray;
  box-shadow: 3px3px8px#b1b1b1,-3px-3px8px#fff;
}

```

22. SignUp.css

```

@charset "ISO-8859-1";
* {
  box-sizing: border-box;
}
body {
  margin: 0;
  height: 100vh;
  width: 100vw;
  overflow: hidden;
  font-family: "Lato",sans-serif;
  font-weight: 700;
  display: flex;

```

```

    align-items: center;
    justify-content: center;
    color: #555;
    background-color: #ecf0f3;
}
.loginBox {
    width: 400px;
    height: 900px;
    padding: 60px35px35px35px;
    border-radius: 40px;
    background-color: #ecf0f3;
    box-shadow: 13px13px20px#cbced1,
-13px-13px20px#fff;

}
.logo {
    background: url(https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcQN59jZY3e-
DGR0qDhobXi5vhnIVUv1-qw8aQ&usqp=CAU);
    width: 100px;
    height: 100px;
    border-radius: 50%;
    margin: 0 auto;
    box-shadow: 0px0px2px#5f5f5f,
0px0px0px5px#ecf0f3,
8px8px15px#a7aaaf,
-8px-8px15px#fff;

}
.title {
    text-align: center;
    font-size: 28px;
    padding-top: 24px;
    letter-spacing: 0.5px;
}
.fields {
    width: 100%;
    padding: 75px5px5px5px;
}
.fieldsinput {
    border: none;
    outline: none;
    background: none;
    font-size: 18px;
    color: #555;
    padding: 20px10px20px5px;

}

```

```

.username,
.password {
  margin-bottom: 30px;
  border-radius: 25px;
  box-shadow: inset 8px 8px 8px #cbced1, inset
-8px -8px 8px #fff;
}
.fieldssvg {
  height: 22px;
  margin: 0 10px -3px 25px;
}
.signin-button {
  outline: none;
  border: none;
  cursor: pointer;
  width: 100%;
  height: 60px;
  border-radius: 30px;
  font-weight: 700;
  font-family: "Lato", sans-serif;
color: #fff;
  text-align: center;
  background-color: #FD8469;
  box-shadow: 3px 3px 8px #b1b1b1, -3px -3px 8px #fff;
}
a {
  display: flex;
  text-decoration: none;
  outline: none;
  border: none;
  cursor: pointer;
  width: 100%;
  height: 60px;
  border-radius: 30px;
  font-weight: 700;
  font-family: "Lato", sans-serif;
color: #fff;
  align-items: center;
  justify-content: center;
  text-align: center;
  background-color: gray;
  box-shadow: 3px 3px 8px #b1b1b1, -3px -3px 8px #fff;
}

```

23. adminHome.html

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<title>Title</title>
<link rel="stylesheet" type="text/css" href="/css/Home.css">
<!-- Latest compiled and minified CSS -->
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">

<!-- jQuery library -->
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>

<!-- Latest compiled JavaScript -->
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>
</head>
<body>

<nav>
<ul>
<li><a class="active" href="change">Change admin password</a></li>
<li><a href="getUsers">Get All the users</a></li>
<li><a href="getProducts">Get All the Products</a></li>
<li style="float:right"><a href="purchaseHistory">Get All the Purchase records</a></li>
</ul>
</nav>
<div class="row">
<div class="card text-center">
<h2 class="card-header">Search User</h2>
<form action="searchUser">
<input class="username" type="text" name="name" placeholder="Enter name of user">
<Button class="signin-button" type="submit" value="click">Search</Button>
</form>
</div>

<div class="card text-center">
```

```

<h2 class="card-header">Add product</h2>
<form action="addProduct" method="post">
<input class="username" type="text" name="productName" placeholder="product name">
<input class="username" type="text" name="category" placeholder="category">
<input class="username" type="number" name="cost" placeholder="cost">
<Button class="signin-button" type="submit" value="click">Add Product</Button>
</form>
</div>

```

```

</div>
<div class="row">
<div class="card text-center">
<h2 class="card-header">Delete Product</h2>

```

```

<form action="delProduct" method="post">
<input class="username" type="number" name="id" placeholder="Enter Product Id">
<Button class="signin-button" type="submit" value="click">Delete Product</Button>
</form>
</div>

```

```

<div class="card text-center">
<h2 class="card-header">Update product</h2>
<form action="updateProduct" method="post">

<input class="username" type="number" name="id" placeholder="Product Id">
<input class="username" type="text" name="productName" placeholder="product name">
<input class="username" type="text" name="category" placeholder="category">
<input class="username" type="number" name="cost" placeholder="cost">
<Button class="signin-button" type="submit" value="click">Update Product</Button>
</form>
</div>
</div>

```

```

<div class="container">

```

```

<div th:if="{not #lists.isEmpty(users)}">
<h2>user list</h2>

```

```

<table class="table table-striped">
<tr>
<th>User_Id</th>
<th>User_Email</th>

```

```

<th>Name</th>
<th>Password</th>
<th>User_Name</th>
</tr>
<tr th:each="user : ${users}">
<td th:text="${user.id}"></td>
<td th:text="${user.email}"></td>
<td th:text="${user.name}"></td>
<td th:text="${user.password}"></td>
<td th:text="${user.userName}"></td>
</tr>
</table>

</div>
</div>

<div class="container">

<div th:if="${not #lists.isEmpty(products)}">
<h2>Product List</h2>

<table class="table table-striped">
<tr>
<th>Product_Id</th>
<th>Product_Name</th>
<th>Category</th>
<th>Cost</th>

</tr>
<tr th:each="product : ${products}">
<td th:text="${product.id}"></td>
<td th:text="${product.productName}"></td>
<td th:text="${product.category}"></td>
<td th:text="${product.cost}"></td>

</tr>
</table>

</div>
</div>

<div class="container">

```



```

<div th:if="{not #lists.isEmpty(purchaseHistory)}">
<h2>Purchase History List</h2>

<table class="table table-striped">
<tr>
<th>id</th>
<th>category</th>
<th>product_id</th>
<th>order_id</th>
<th>cost</th>
<th>total</th>
<th>user_id</th>
<th>product_name</th>
<th>date</th>
</tr>
<tr th:each="purchaseHistories : {purchaseHistory}">
<td th:text="{purchaseHistories.id}"></td>
<td th:text="{purchaseHistories.category}"></td>
<td th:text="{purchaseHistories.productId}"></td>
<td th:text="{purchaseHistories.orderId}"></td>
<td th:text="{purchaseHistories.cost}"></td>
<td th:text="{purchaseHistories.total}"></td>
<td th:text="{purchaseHistories.UserId}"></td>
<td th:text="{purchaseHistories.productName}"></td>
<td th:text="{purchaseHistories.date}"></td>

</tr>
</table>

</div>
</div>

</body>
</html>

```

24. adminLogin.html

```

<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
<link rel="preconnect"href="https://fonts.googleapis.com">
<link rel="preconnect"href="https://fonts.gstatic.com"crossorigin>
<link href="https://fonts.googleapis.com/css2?family=Lato:wght@300&display=swap"rel="stylesheet">
<link href="/css/Login.css"rel="stylesheet" type="text/css">
</head>
<body>

<div class="loginBox">
<div class="logo"></div>
<div class="title">Login</div>
<form action="adminLogin" method="post">
<div class="fields">
<div class="username">
<svg class="svg-icon"viewBox="0 0 20 20">
<pathd="M12.075,10.812c1.358-0.853,2.242-2.507,2.242-4.037c0-2.181-1.795-4.618-4.198-4.618S5.921,4.594,5.921,6.775c0,1.53,0.884,3.185,2.242,4.037c-3.222,0.865-5.6,3.807-5.6,7.298c0,0.23,0.189,0.42,0.42,0.42h14.273c0.23,0,0.42-0.189,0.42-0.42C17.676,14.619,15.297,11.677,12.075,10.812 M6.761,6.775c0-2.162,1.773-3.778,3.358-3.778s3.359,1.616,3.359,3.778c0,2.162-1.774,3.778-3.359,3.778S6.761,8.937,6.761,6.775 M3.415,17.69c0.218-3.51,3.142-6.297,6.704-6.297c3.562,0,6.486,2.787,6.705,6.297H3.415z"></path>
</svg>
<input class="user-input" type="email" placeholder="Enter Your Email" name="email" required>
</div>
<div class="password">
<svg class="svg-icon"viewBox="0 0 20 20">
<pathd="M17.308,7.564h-1.993c0-2.929-2.385-5.314-5.314-5.314S4.686,4.635,4.686,7.564H2.693c-0.244,0-0.443,0.2-0.443,0.443v9.3c0,0.243,0.199,0.442,0.443,0.442h14.615c0.243,0,0.442-0.199,0.442-0.442v-9.3C17.75,7.764,17.551,7.564,17.308,7.564 M10,3.136c2.442,0,4.43,1.986,4.43,4.428H5.571C5.571,5.122,7.558,3.136,10,3.136 M16.865,16.864H3.136V8.45h13.729V16.864z M10,10.664c-0.854,0-1.55,0.696-1.55,1.551c0,0.699,0.467,1.292,1.107,1.485v0.95c0,0.243,0.2,0.442,0.443,0.442s0.443-0.199,0.443-0.442V13.7c0.64-0.193,1.106-0.786,1.106-1.485C11.55,11.36,10.854,10.664,10,10.664 M10,12.878c-0.366,0-0.664-0.298-0.664-0.663c0-0.366,0.298-0.665,0.664-0.665c0.365,0,0.664,0.299,0.664,0.665C10.664,12.58,10.365,12.878,10,12.878"></path>
</svg>
<input class="user-input" type="password" placeholder="Enter Your password" name="password" required>
</div>
<div class="signin-button">
<input class="user-input" type="submit" value="Login">
</div>
</div>

```

```
</form>
<a href="change">Change Password</a>
```

```
</div>
</body>
</html>
```

```
adminNotFound.html
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<title>Title</title>
</head>
<body>
Admin not found
</body>
</html>
```

```
changeAdminPassword.html
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
<link rel="preconnect"href="https://fonts.googleapis.com">
<link rel="preconnect"href="https://fonts.gstatic.com"crossorigin>
<link href="https://fonts.googleapis.com/css2?family=Lato:wght@300&display=swap"rel="stylesheet">
<link href="/css/SignUp.css"rel="stylesheet" type="text/css">
</head>
<body>

<div class="loginBox">
<div class="logo"></div>
<div class="title">Change Password</div>
<form action="changePassword" method="post">
```

```

<div class="fields">
<div class="username">
<svg class="svg-icon" viewBox="0 0 20 20">
<pathd="M12.075,10.812c1.358-0.853,2.242-2.507,2.242-4.037c0-2.181-1.795-4.618-4.198-
4.618S5.921,4.594,5.921,6.775c0,1.53,0.884,3.185,2.242,4.037c-3.222,0.865-5.6,3.807-
5.6,7.298c0,0.23,0.189,0.42,0.42,0.42h14.273c0.23,0,0.42-0.189,0.42-
0.42C17.676,14.619,15.297,11.677,12.075,10.812 M6.761,6.775c0-2.162,1.773-3.778,3.358-
3.778s3.359,1.616,3.359,3.778c0,2.162-1.774,3.778-3.359,3.778S6.761,8.937,6.761,6.775
M3.415,17.69c0.218-3.51,3.142-6.297,6.704-6.297c3.562,0,6.486,2.787,6.705,6.297H3.415z"></path>
</svg>
<input class="user-input" type="email" placeholder="Enter Your Email Id" name="email" required>
</div>
<div class="password">
<svg class="svg-icon" viewBox="0 0 20 20">
<pathd="M17.308,7.564h-1.993c0-2.929-2.385-5.314-5.314-5.314S4.686,4.635,4.686,7.564H2.693c-
0.244,0-0.443,0.2-0.443,0.443v9.3c0,0.243,0.199,0.442,0.443,0.442h14.615c0.243,0,0.442-0.199,0.442-
0.442v-9.3C17.75,7.764,17.551,7.564,17.308,7.564
M10,3.136c2.442,0,4.43,1.986,4.43,4.428H5.571C5.571,5.122,7.558,3.136,10,3.136
M16.865,16.864H3.136V8.45h13.729V16.864z M10,10.664c-0.854,0-1.55,0.696-
1.55,1.551c0,0.699,0.467,1.292,1.107,1.485v0.95c0,0.243,0.2,0.442,0.443,0.442s0.443-0.199,0.443-
0.442V13.7c0.64-0.193,1.106-0.786,1.106-1.485C11.55,11.36,10.854,10.664,10,10.664 M10,12.878c-
0.366,0-0.664-0.298-0.664-0.663c0-0.366,0.298-0.665,0.664-
0.665c0.365,0,0.664,0.299,0.664,0.665C10.664,12.58,10.365,12.878,10,12.878"></path>
</svg>
<input class="user-input" type="password" placeholder="Enter Your Old Password"
name="oldPassword" required>
</div>
<div class="password">
<svg class="svg-icon" viewBox="0 0 20 20">
<pathd="M17.308,7.564h-1.993c0-2.929-2.385-5.314-5.314-5.314S4.686,4.635,4.686,7.564H2.693c-
0.244,0-0.443,0.2-0.443,0.443v9.3c0,0.243,0.199,0.442,0.443,0.442h14.615c0.243,0,0.442-0.199,0.442-
0.442v-9.3C17.75,7.764,17.551,7.564,17.308,7.564
M10,3.136c2.442,0,4.43,1.986,4.43,4.428H5.571C5.571,5.122,7.558,3.136,10,3.136
M16.865,16.864H3.136V8.45h13.729V16.864z M10,10.664c-0.854,0-1.55,0.696-
1.55,1.551c0,0.699,0.467,1.292,1.107,1.485v0.95c0,0.243,0.2,0.442,0.443,0.442s0.443-0.199,0.443-
0.442V13.7c0.64-0.193,1.106-0.786,1.106-1.485C11.55,11.36,10.854,10.664,10,10.664 M10,12.878c-
0.366,0-0.664-0.298-0.664-0.663c0-0.366,0.298-0.665,0.664-
0.665c0.365,0,0.664,0.299,0.664,0.665C10.664,12.58,10.365,12.878,10,12.878"></path>
</svg>
<input class="user-input" type="password" placeholder="Enter Your new password"
name="newPassword" required>
</div>
<div class="signin-button">
<input class="user-input" type="submit" value="Change Password">
</div>
</div>
</form>

```

```
<a href="">Login</a>
```

```
</div>
```

```
</body>
```

```
</html>
```

25. userHome.html

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
<meta charset="UTF-8">
```

```
<title>User Home</title>
```

```
<link rel="stylesheet" type="text/css" href="/css/Home.css">
```

```
<!-- Latest compiled and minified CSS -->
```

```
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/css/bootstrap.min.css">
```

```
<!-- jQuery library -->
```

```
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>
```

```
<!-- Latest compiled JavaScript -->
```

```
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.4.1/js/bootstrap.min.js"></script>
```

```
</head>
```

```
<body>
```

```
<nav>
```

```
<ul>
```

```
<li><a class="active" href="add">Get All the Products</a></li>
```

```
<li><a th:text="{price}"></a></li>
```

```
<li><a href="#">Dashboard</a></li>
```

```
<li style="float:right"><a class="active" href="#">About</a></li>
```

```
</ul>
```

```
</nav>
```

```
<main class="dashboard">
```

```
<div class="container">
```

```
<div th:if="{not #lists.isEmpty(products)}">
```

```
<h2>Product List</h2>
```

```
<table class="table">
```

```

<thead>
<tr class="table-info">
<th scope="col">Product_Id</th>
<th scope="col">Product_Name</th>
<th scope="col">Category</th>
<th scope="col">Cost</th>
</tr>
</thead>
<tbody>
<tr class="table-info" th:each="product : ${products}">
<form action="addProducts" method="post">

<th scope="row" th:text="${product.id}"></th>
<td th:text="${product.productName}"></td>
<td th:text="${product.category}"></td>
<td th:text="${product.cost}"></td>
<td>
<input type="hidden" th:value="${product.id}" name="id"/>
<button type="submit" class="btn btn-info btn-rounded" name="action" value="order">order</button>
</td>
</form>
</tr>
</table>

</div>
</div>
</main>
</body>
</html>

```

26. userLogin.html

```

<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
<link rel="preconnect" href="https://fonts.googleapis.com">
<link rel="preconnect" href="https://fonts.gstatic.com" crossorigin>
<link href="https://fonts.googleapis.com/css2?family=Lato:wght@300&display=swap" rel="stylesheet">
<link href="/css/Login.css" rel="stylesheet" type="text/css">

```

```

</head>
<body>

<div class="loginBox">
<div class="logo"></div>
<div class="title">Login</div>
<form action="userLogin" method="post">
<div class="fields">
<div class="username">
<svg class="svg-icon" viewBox="0 0 20 20">
<pathd="M12.075,10.812c1.358-0.853,2.242-2.507,2.242-4.037c0-2.181-1.795-4.618-4.198-
4.618S5.921,4.594,5.921,6.775c0,1.53,0.884,3.185,2.242,4.037c-3.222,0.865-5.6,3.807-
5.6,7.298c0,0.23,0.189,0.42,0.42,0.42h14.273c0.23,0,0.42-0.189,0.42-
0.42C17.676,14.619,15.297,11.677,12.075,10.812 M6.761,6.775c0-2.162,1.773-3.778,3.358-
3.778s3.359,1.616,3.359,3.778c0,2.162-1.774,3.778-3.359,3.778S6.761,8.937,6.761,6.775
M3.415,17.69c0.218-3.51,3.142-6.297,6.704-6.297c3.562,0,6.486,2.787,6.705,6.297H3.415z"></path>
</svg>
<input class="user-input" type="email" placeholder="Enter Your Email" name="email" required>
</div>
<div class="password">
<svg class="svg-icon" viewBox="0 0 20 20">
<pathd="M17.308,7.564h-1.993c0-2.929-2.385-5.314-5.314-5.314S4.686,4.635,4.686,7.564H2.693c-
0.244,0-0.443,0.2-0.443,0.443v9.3c0,0.243,0.199,0.442,0.443,0.442h14.615c0.243,0,0.442-0.199,0.442-
0.442v-9.3C17.75,7.764,17.551,7.564,17.308,7.564
M10,3.136c2.442,0,4.43,1.986,4.43,4.428H5.571C5.571,5.122,7.558,3.136,10,3.136
M16.865,16.864H3.136V8.45h13.729V16.864z M10,10.664c-0.854,0-1.55,0.696-
1.55,1.551c0,0.699,0.467,1.292,1.107,1.485v0.95c0,0.243,0.2,0.442,0.443,0.442s0.443-0.199,0.443-
0.442V13.7c0.64-0.193,1.106-0.786,1.106-1.485C11.55,11.36,10.854,10.664,10,10.664 M10,12.878c-
0.366,0-0.664-0.298-0.664-0.663c0-0.366,0.298-0.665,0.664-
0.665c0.365,0,0.664,0.299,0.664,0.665C10.664,12.58,10.365,12.878,10,12.878"></path>
</svg>
<input class="user-input" type="password" placeholder="Enter Your password" name="password"
required>
</div>
<div class="signin-button">
<input class="user-input" type="submit" value="Login">
</div>
</div>
</form>
<a href="signup">SignUp</a>

</div>
</body>
</html>

```

27. userNotFound.html

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<title>Title</title>
</head>
<body>
if new user create account first<a href="userSignUp.html"></a>
Try logging in again<a href="userLogin.html"></a>
</body>
</html>
```

28. UserOrder.html

```
<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Sporty shoes</title>
</head>
<body>
    <form action="UserSignUp">

        <h1>thankyou for order product</h1>
        <input type="submit" value="relogin">

    </form>
</body>
</html>
```


29. [userSignup.html](#)

```

<!DOCTYPE html>
<html>
<head>
<meta charset="ISO-8859-1">
<title>Insert title here</title>
<link rel="preconnect"href="https://fonts.googleapis.com">
<link rel="preconnect"href="https://fonts.gstatic.com"crossorigin>
<link href="https://fonts.googleapis.com/css2?family=Lato:wght@300&display=swap"rel="stylesheet">
<link href="/css/SignUp.css"rel="stylesheet" type="text/css">
</head>
<body>

<div class="loginBox">
<div class="logo"></div>
<div class="title">SignUp</div>
<form action="UserSignUp" method="post">
<div class="fields">
<div class="username">
<svg class="svg-icon"viewBox="0 0 20 20">
<pathd="M12.075,10.812c1.358-0.853,2.242-2.507,2.242-4.037c0-2.181-1.795-4.618-4.198-
4.618S5.921,4.594,5.921,6.775c0,1.53,0.884,3.185,2.242,4.037c-3.222,0.865-5.6,3.807-
5.6,7.298c0,0.23,0.189,0.42,0.42,0.42h14.273c0.23,0,0.42-0.189,0.42-
0.42C17.676,14.619,15.297,11.677,12.075,10.812 M6.761,6.775c0-2.162,1.773-3.778,3.358-
3.778s3.359,1.616,3.359,3.778c0,2.162-1.774,3.778-3.359,3.778S6.761,8.937,6.761,6.775
M3.415,17.69c0.218-3.51,3.142-6.297,6.704-6.297c3.562,0,6.486,2.787,6.705,6.297H3.415z"></path>
</svg>
<input class="user-input" type="text" placeholder="Choose Your UserName" name="userName"
required>
</div>
<div class="username">
<svg class="svg-icon"viewBox="0 0 20 20">
<pathd="M12.075,10.812c1.358-0.853,2.242-2.507,2.242-4.037c0-2.181-1.795-4.618-4.198-
4.618S5.921,4.594,5.921,6.775c0,1.53,0.884,3.185,2.242,4.037c-3.222,0.865-5.6,3.807-
5.6,7.298c0,0.23,0.189,0.42,0.42,0.42h14.273c0.23,0,0.42-0.189,0.42-
0.42C17.676,14.619,15.297,11.677,12.075,10.812 M6.761,6.775c0-2.162,1.773-3.778,3.358-
3.778s3.359,1.616,3.359,3.778c0,2.162-1.774,3.778-3.359,3.778S6.761,8.937,6.761,6.775
M3.415,17.69c0.218-3.51,3.142-6.297,6.704-6.297c3.562,0,6.486,2.787,6.705,6.297H3.415z"></path>
</svg>
<input class="user-input" type="email" placeholder="Enter Your email" name="email" required>
</div>
<div class="password">
<svg class="svg-icon"viewBox="0 0 20 20">
<pathd="M17.308,7.564h-1.993c0-2.929-2.385-5.314-5.314-5.314S4.686,4.635,4.686,7.564H2.693c-
0.244,0-0.443,0.2-0.443,0.443v9.3c0,0.243,0.199,0.442,0.443,0.442h14.615c0.243,0,0.442-0.199,0.442-
0.442v-9.3C17.75,7.764,17.551,7.564,17.308,7.564

```

```

M10,3.136c2.442,0,4.43,1.986,4.43,4.428H5.571C5.571,5.122,7.558,3.136,10,3.136
M16.865,16.864H3.136V8.45h13.729V16.864z M10,10.664c-0.854,0-1.55,0.696-
1.55,1.551c0,0.699,0.467,1.292,1.107,1.485v0.95c0,0.243,0.2,0.442,0.443,0.442s0.443-0.199,0.443-
0.442V13.7c0.64-0.193,1.106-0.786,1.106-1.485C11.55,11.36,10.854,10.664,10,10.664 M10,12.878c-
0.366,0-0.664-0.298-0.664-0.663c0-0.366,0.298-0.665,0.664-
0.665c0.365,0,0.664,0.299,0.664,0.665C10.664,12.58,10.365,12.878,10,12.878"></path>
</svg>
<input class="user-input" type="text" placeholder="Enter Your name" name="name" required>
</div>
<div class="password">
<svg class="svg-icon" viewBox="0 0 20 20">
<pathd="M17.308,7.564h-1.993c0-2.929-2.385-5.314-5.314-5.314S4.686,4.635,4.686,7.564H2.693c-
0.244,0-0.443,0.2-0.443,0.443v9.3c0,0.243,0.199,0.442,0.443,0.442h14.615c0.243,0,0.442-0.199,0.442-
0.442v-9.3C17.75,7.764,17.551,7.564,17.308,7.564
M10,3.136c2.442,0,4.43,1.986,4.43,4.428H5.571C5.571,5.122,7.558,3.136,10,3.136
M16.865,16.864H3.136V8.45h13.729V16.864z M10,10.664c-0.854,0-1.55,0.696-
1.55,1.551c0,0.699,0.467,1.292,1.107,1.485v0.95c0,0.243,0.2,0.442,0.443,0.442s0.443-0.199,0.443-
0.442V13.7c0.64-0.193,1.106-0.786,1.106-1.485C11.55,11.36,10.854,10.664,10,10.664 M10,12.878c-
0.366,0-0.664-0.298-0.664-0.663c0-0.366,0.298-0.665,0.664-
0.665c0.365,0,0.664,0.299,0.664,0.665C10.664,12.58,10.365,12.878,10,12.878"></path>
</svg>
<input class="user-input" type="password" placeholder="Enter Your password" name="password"
required>
</div>
<div class="signin-button">
<input class="user-input" type="submit" value="Sign Up">
</div>
</div>
</form>
<a href="">Login</a>

</div>
</body>
</html>

```

30. application.properties

```

spring.jpa.defer-datasource-initialization=true
#db connection
spring.jpa.hibernate.ddl-auto=update

```

```
spring.datasource.driver-class-name=com.mysql.cj.jdbc.Driver
spring.datasource.url=jdbc:mysql://localhost:3306/sportyshoesdbs
spring.datasource.username=root
spring.datasource.password=Ravi@0525
```

```
#showqueries
spring.jpa.show-sql=true
spring.jpa.properties.hibernate.format_sql=true
logging.level.org.hibernate.type=trace
```

31. Data.sql

```
# insertintouser_order(id, total) VALUES (3,100);
# insertintouser_order(id, total) VALUES (4,500);
# insertintoproduct(id, product_name) VALUES (4,'nam');
# insertintoproduct(id, product_name) values (5,'kara');
# insertintoproduct(id, product_name) values (6,'yara');
insertintoorder_product(product_id, order_id) VALUES (3,4);
insertintoorder_product(product_id, order_id) values (3,4);
insertintoorder_product(product_id, order_id) values (4,3);
insertintoorder_product(product_id, order_id) values (4,3);
```

32. AdminRepoTest.java

```
package com.example.datamodel;

import com.example.datamodel.entity.UserOrder;
import com.example.datamodel.repository.AdminRepo;
import com.example.datamodel.repository.UserOrderRepo;
import org.junit.jupiter.api.Test;
import org.slf4j.Logger;
import org.slf4j.LoggerFactory;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.boot.test.context.SpringBootTest;

import javax.persistence.EntityManager;
import javax.transaction.Transactional;
```

```

import java.util.ArrayList;
import java.util.List;

@SpringBootTest
public class AdminRepoTest {

    private Logger log = LoggerFactory.getLogger(this.getClass());

    @Autowired
    EntityManagerem;

    @Autowired
    AdminRepoadminRepo;

    @Autowired
    private UserOrderRepouserOrderRepo;

    @Test
    @Transactional
    public void filterByDateAndCategoryTest() {
        List<UserOrder> orders = userOrderRepo.getAllOrders();
        List<List>ordersWithProducts = new ArrayList<>();
        for(Long i = 1L; i<= orders.size(); i++) {
            UserOrderuserOrder = em.find(UserOrder.class,i);
            ordersWithProducts.add(userOrder.getProducts());
        }
        log.info("here you go look at this -> {}",ordersWithProducts);
    }
}

```

33. DataModelApplicationTest.java

```

package com.example.datamodel;

import org.junit.jupiter.api.Test;
import org.springframework.boot.test.context.SpringBootTest;

@SpringBootTest

```

```

class DataModelApplicationTests {

    @Test
    void contextLoads() {
    }

}

```

34. PurchaseReports.java

```

package com.example.datamodel;

import com.example.datamodel.entity.Product;
import com.example.datamodel.entity.PurchaseHistory;
import com.example.datamodel.entity.UserOrder;
import com.example.datamodel.repository.PurchaseHistoryRepo;
import org.junit.jupiter.api.Test;
import org.slf4j.Logger;
import org.slf4j.LoggerFactory;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.boot.test.context.SpringBootTest;
import org.springframework.test.annotation.DirtiesContext;

import javax.persistence.EntityManager;
import javax.persistence.Query;
import javax.persistence.TypedQuery;
import javax.transaction.Transactional;
import java.util.List;

@SpringBootTest
public class PurchaseReports {

    @Autowired
    EntityManager em;

    @Autowired
    private PurchaseHistoryRepo purchaseHistoryRepo;

    private Logger logger = LoggerFactory.getLogger(this.getClass());

```

```

@Test
@Transactional
@DirtiesContext
void testPurchaseRepoQuery() {
    Query q = em.createQuery("select p,uo from Product p JOIN p.userOrdersuo order by
p.categorydesc");
    List<Object[]>resultList = q.getResultList();
    UserOrderuserOrder = null;
    Product product = null;
    for(Object[] result:resultList) {
        product = (Product) result[0];
        userOrder = (UserOrder) result[1];

//        logger.info("product -> {}",product);

    }
    logger.info("userorder->{}",userOrder,product.getCategory());
}

@Test
@Transactional
@DirtiesContext
void testGetPurchaseHistory() {

TypedQuery<PurchaseHistory> query = (TypedQuery<PurchaseHistory>)
em.createNativeQuery("SELECT * FROM datamodel.purchase_history order by category and date
desc;",PurchaseHistory.class);
    List<PurchaseHistory> result = query.getResultList();
    logger.info("results -> {}",result);
}

}

```

35. StudentRepoTest.java

```

package com.example.datamodel;

import com.example.datamodel.entity.Product;
import com.example.datamodel.entity.UserOrder;

```

```

import org.junit.jupiter.api.Test;
import org.slf4j.Logger;
import org.slf4j.LoggerFactory;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.boot.test.context.SpringBootTest;

import javax.persistence.EntityManager;
import javax.transaction.Transactional;

@SpringBootTest
public class StudentRepoTest {

    @Autowired
    EntityManager em;

    private Logger log = LoggerFactory.getLogger(this.getClass());

    @Test
    @Transactional
    void retrieveProductandOrders() {
        Product product = em.find(Product.class, 3L);
        log.info("products -> {}", product);
        log.info("product with order -> {}", product.getUserOrders());

        UserOrder userOrder = em.find(UserOrder.class, 4L);
        log.info("orders -> {}", userOrder);
        log.info("order info -> {}", userOrder.getProducts());
    }
}

```

36. UserOrderRepoTest.java

```

package com.example.datamodel;

import com.example.datamodel.entity.UserOrder;
import com.example.datamodel.repository.UserOrderRepo;

```

```
import com.example.datamodel.repository.UserRepo;
import org.junit.jupiter.api.Test;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.boot.test.context.SpringBootTest;
import org.springframework.test.annotation.DirtiesContext;
```

```
import javax.persistence.EntityManager;
import javax.transaction.Transactional;
import java.util.Date;
```

```
@SpringBootTest
public class UserOrderRepoTest {
```

```
    @Autowired
    EntityManager em;
```

```
    @Autowired
    private UserOrderRepository userOrderRepo;
```

```
    @Autowired
    private UserRepository userRepo;
```

```
    @Test
    @Transactional
    @DirtiesContext
    public void userOrder() {
        userOrderRepo.createNewOrder(1L);
    }
```

```
    @Test
    @Transactional
    @DirtiesContext
    public void userOrder() {
        User userOrder = new UserOrder(new Date());
        em.persist(userOrder);
    }
```

```
    @Test
    @Transactional
    @DirtiesContext
    public void userOrderNull() {
        userRepo.verifyUserToOrder(1L);
    }
```



```

@Test
@Transactional

    public void userOrderaddTo() {
        userRepo.addUserOrderToUser(1L,newUserOrder(new Date(),1L));
    }
}

```

37. UserRepoTest.java

```

package com.example.datamodel;

import com.example.datamodel.entity.User;
import com.example.datamodel.repository.UserRepo;
import org.junit.jupiter.api.Test;
import org.slf4j.Logger;
import org.slf4j.LoggerFactory;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.boot.test.context.SpringBootTest;
import org.springframework.test.annotation.DirtiesContext;

import javax.persistence.EntityManager;
import javax.persistence.Query;
import javax.persistence.TypedQuery;
import javax.transaction.Transactional;
import java.util.List;

@SpringBootTest
public class UserRepoTest {

    private Logger log = LoggerFactory.getLogger(this.getClass());

    @Autowired
    EntityManager em;

    @Autowired
    private UserRepo userRepo;

    @Test
    @Transactional
    public void findUserByEmailTest() {

```

```

        User user = userRepo.findUserById(1l);
log.info("Username -> {}",user.getUserName());
log.info("name -> {}", user.getName());
    }

```

```

@Test
@Transactional
@DirtiesContext
public void userUpdateTest() {
    User user = userRepo.userUpdate(1L,"saksham@123","sks123");

log.info("user updated -> {}",user);
}

```

```

@Test
@Transactional
void getUsers() {
TypedQuery<User> query = em.createNamedQuery("get_all_users",User.class);
    List<User> result = query.getResultList();
log.info("Users List -> {}", result);
}

```

```

@Test
@Transactional
public void searchUser() {
    Query query = em.createNativeQuery("select * from User where user_id = :userId", User.class);
query.setParameter("userId",1L);
    List result = query.getResultList();
log.info("specified user -> {}", result);
}

```

```

@Test
@Transactional
public void logintest() {
userRepo.verifyUser("r@gmail.com","1");
}
}

```