SEMESTER II 2024/2025

CSE3023

WEB-BASED APPLICATION DEVELOPMENT

TITLE: ONLINE SHOPPING SYSTEM

GROUP 1

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Introduction

The Online Shopping System is a digital platform designed to revolutionize the e-commerce experience by providing a seamless, secure, and user-friendly marketplace. It caters to both customers and businesses by addressing common challenges in online retail such as accessibility, inventory management, and payment security. By leveraging modern web technologies the system aims to enhance convenience for shoppers while offering robust tools for sellers to manage their products and orders efficiently. This project aligns with the growing demand for digital shopping solutions, ensuring scalability and adaptability to future trends in the e-commerce industry.

Problem Statement

Traditional shopping methods and outdated online platforms often struggle with inefficiencies, including limited accessibility, manual inventory tracking, and insecure payment options. Customers face difficulties comparing products while sellers grapple with stock management and order processing errors. The lack of a centralized automated system leads to poor user experiences and operational bottlenecks. This project aims to address these issues by introducing an integrated Online Shopping System that streamlines product discovery, order management, and secure transactions, ultimately benefiting both end-users and administrators.

System Objectives

1. **To analyze** the current challenges in online shopping systems such as limited accessibility, inefficient inventory management, and insecure payment options, by studying user behavior and industry trends to establish key requirements for an improved e-commerce platform.

2. **To design** a user-friendly and responsive interface for the Online Shopping System that enhances product discovery through advanced search filters, personalized recommendations, and seamless navigation, while ensuring secure and intuitive checkout processes for customers.

3. **To develop** a robust and scalable Online Shopping System with integrated modules for user management, product cataloging, and order processing, incorporating secure payment gateways and real-time inventory tracking to provide a reliable and efficient shopping experience for both customers and administrators**.**

System Scopes

- **In Scope:** User registration, product catalog management, order processing, and role-based access control (Admin/Customer).
- **Out of Scope:** Physical logistics, third-party vendor integrations, and advanced AI recommendations.
- **Target Users:** Customers and administrators.

System Significance

The system bridges gaps in the e-commerce ecosystem by combining usability with robust backend functionality. For customers, it offers convenience and trust; for businesses, it reduces operational overhead through automation. By addressing pain points like inventory mismanagement and payment security the platform fosters growth for small/medium retailers while elevating the shopping experience. Its modular design ensures scalability for future enhancements like AI-driven recommendations or multi-vendor support.

System Design

Figure 1: Sign-up page

Figure 2: Home page

Figure 3: Product details page

Figure 4: Product management page for admin

Figure 5: Order management page for the customer

Conclusion

The Online Shopping System represents a comprehensive solution to modern e-commerce challenges, balancing user needs with technical feasibility. Automating critical processes and prioritizing security sets a foundation for sustainable digital retail operations. Future iterations could expand its capabilities but the current scope delivers immediate value to all stakeholders proving that efficiency and customer satisfaction can coexist in the digital marketplace.

Appendix

```html
<body>
    <div id="toast" class="toast"></div>

    <header>
        <nav class="navbar">
            <a href="HomePage.html" class="logo">
                <img src="image/umtlogo.jpg" alt="Logo">
                ON9Shop
            </a>
            <ul class="nav-links">
                <li><a href="#">Home</a></li>
                <li><a href="products.jsp">Products</a></li>
                <li><a href="#">Categories</a></li>
                <li><a href="Cart.jsp">Cart</a></li>
                <li><a href="order.jsp">Order</a></li>
            </ul>
            <button class="login-btn" onclick="window.location.href = 'login.jsp'">Login</button>
        </nav>
    </header>

    <div class="search-container">
        <div class="search-bar">
            <input type="text" placeholder="Search for products..." id="search-input">
            <button id="search-btn">Search</button>
        </div>
    </div>

    <div class="main-content">
        <section class="hero">
            <h1>Welcome to ON9Shop</h1>
            <p>Discover amazing products at unbeatable prices</p>
            <button class="cta-btn" onclick="window.location.href = 'products.jsp'">Shop Now</button>
        </section>

        <section class="featured-products-section">
            <h2>Featured Products</h2>
            <div class="products">
```

Figure 6: Code for home page

```
<body>
    <div class="title">Login</div>
    <div class="signup-link">
        <a href="signup.jsp">Don't have an account? Sign Up</a>
    </div>
    <div class="container">
        <!-- Display error message if login fails -->
        <% if (request.getAttribute("errorMessage") != null) { %>
            <div class="error-message">
                <%= request.getAttribute("errorMessage") %>
            </div>
        <% } %>

        <!-- Display success message from registration -->
        <% if (session.getAttribute("successMessage") != null) { %>
            <div class="success-message">
                <%= session.getAttribute("successMessage") %>
            </div>
            <% session.removeAttribute("successMessage"); %>
        <% } %>

        <form action="UserController" method="post">
            <input type="hidden" name="action" value="login" />
            <div class="form-group">
                <label for="email">Email</label>
                <input type="email" id="email" name="email" placeholder="Enter your email"
                       value="<%= request.getParameter("email") != null ? request.getParameter("email") : "" %>" required>
            </div>
            <div class="form-group">
                <label for="password">Password</label>
                <input type="password" id="password" name="password" placeholder="Enter your password" required>
            </div>
            <button type="submit">Login</button>
        </form>
    </div>
</body>
```
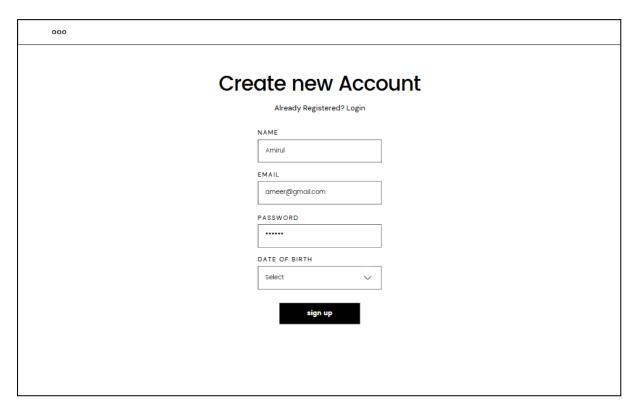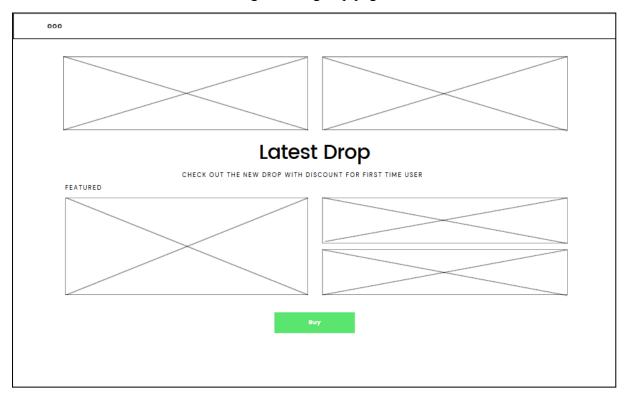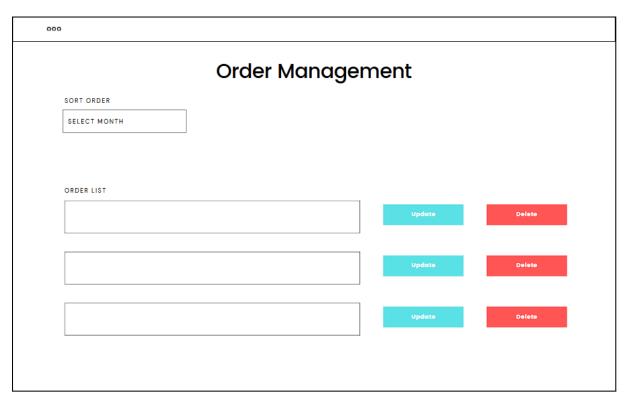
Figure 7: Code for login page

```
<tbody>
    <%
    try {
        Class.forName("com.mysql.cj.jdbc.Driver");
        Connection conn = DriverManager.getConnection("jdbc:mysql://localhost:3306/shopping", "root", "");
        Statement stmt = conn.createStatement();
        ResultSet rs = stmt.executeQuery("SELECT * FROM products");

        while (rs.next()) {
    %>
            <tr>
                <td><%= rs.getString("product_id") %></td>
                <td><%= rs.getString("name") %></td>
                <td>RM <%= String.format("%.2f", rs.getDouble("price")) %></td>
                <td><%= rs.getInt("stock_quantity") %></td>
                <td class="action-btns">
    <a href="editProduct.jsp?id=<%= rs.getString("product_id") %>" class="btn btn-warning action-btn">Edit</a>
    <form action="AdminProductServlet" method="post" style="display:inline;">
        <input type="hidden" name="action" value="delete">
        <input type="hidden" name="product_id" value="<%= rs.getString("product_id") %>">
        <button type="submit" class="btn btn-danger action-btn" onclick="return confirm('Are you sure you want to delete this product?')">Delete</button>
    </form>
    </td>
            </tr>
    <%
        }
        conn.close();
    } catch (Exception e) {
        out.println("<div class='error-message'>Error: " + e.getMessage() + "</div>");
    }
    %>
    </tbody>
```

Figure 8: Code for admin to edit products