

Development of E-commerce Web Portal (QuickCart)

Project Scenario

1. Project Proposal

This project aims to develop a user-friendly E-commerce web portal that allows customers to browse, select, and purchase products online. The portal will feature functionalities such as product listing, detailed product views, a shopping cart, a streamlined checkout process, user account management, social media sharing, rating and comment.

2. Functional Specifications

Product Listing Page (Home Page):

- Displays a list of available products.
- Includes features for searching, filtering products.

Product Detail Page:

- Provides a detailed view of a selected product, including:
 - Product name, description, price, images, and user reviews.
 - Options to add the product to the shopping cart.
- Social Media Sharing Feature:
 - Integrated into the product detail page.
 - Provides easy sharing options for WhatsApp, Twitter(X) and Telegram.
- Contains a section for user comments and reviews:
 - Allows users to submit new comments and ratings.
 - Displays a list of user comments, each with options to rating as 1 star to 5 stars.

Shopping Cart Page:

- Lists all products that the user has added to the cart.
- Allows users to:
 - Update the quantity of each product.
 - Remove items from the cart.
 - View the total price of the items in the cart.
- Provides a button to proceed to checkout.

Order Confirmation Page:

- Displays confirmation details after a successful checkout process, including order number and an order summary with all items, quantities, and the total amount.

Login/Register Page:

- Allows users to:
 - Log in to their existing account.
 - Register for a new account.
- includes fields for username, password, email, and phone number.

User Profile Page:

- Displays user account details and order history.
- Allows users to update their profile information and updating their password.

Team Contributions and Roles

Each team member had distinct responsibilities and completed specific features in the development of the e-commerce web portal.

Muhammad Azizi Akhmad (G2404748C)

- **Role:** Developer and QA
- **Completed Features:**
 - ◆ Implemented the **Login and Registration** functionality.
 - ◆ Managed the **User Profile** page, allowing users to update their personal information and password.
 - ◆ Conducted thorough testing of each system component to ensure the application functions smoothly.

Liu Jingtai (G2401699A)

- **Role:** Developer and Project Coordinator
- **Completed Features:**
 - ◆ Developed the **Product Detail Page** with features such as **product ratings, comments, and social media sharing**.
 - ◆ Built the **Checkout Process** and **View Order History** pages.
 - ◆ Coordinated within the team to ensure timely project delivery and appropriate distribution of development tasks.

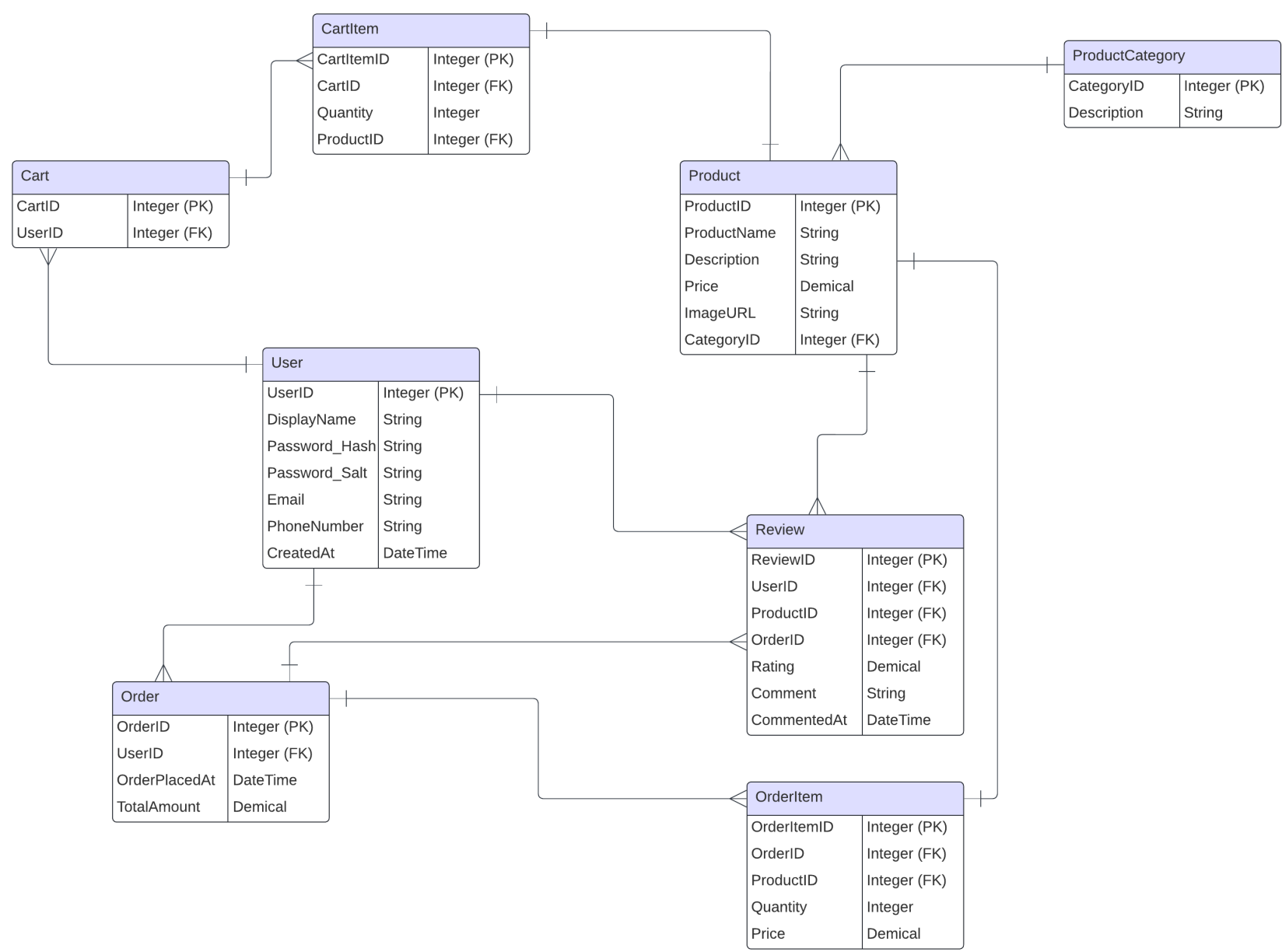
Muhammad Zahin Bin Ramlan (G2405662G)

- **Role:** Database Administrator
- **Completed Features:**
 - ◆ Designed and set up the **database schema** and relationships.
 - ◆ Integrated the database with the front-end components to enable seamless data retrieval and storage.

I Muthukumar (G2405943C)

- **Role:** Developer
- **Completed Features:**
 - ◆ Developed the **Product Listing Page**, which allows users to search and filter products.
 - ◆ Implemented the **Shopping Cart** functionality, including features for updating product quantities, removing items, and calculating the total cost.

Database Design (ER Diagram)



Project Specifications and Setup Guide

Java Version: Java SE 22

Server Version: Apache Tomcat 10.1

External Referenced Libraries:

- jackson-databind-2.15.0.jar
- mysql-connector-java-8.0.26.jar
- jackson-core-2.15.0.jar
- jackson-annotations-2.15.0.jar
- jackson-datatype-jsr310-2.15.0.jar

GitHub Repository URL - <https://github.com/Steven-Liu-0914/QuickCart>

Database

Endpoint: quickcart.cqojz0ygx2o6.us-east-1.rds.amazonaws.com

Master Username: admin

Master Password: 67tXQGVmYOEpiDBX1NSG

Database Back-Up Copy Script: [QuickCart-Dump20241022.sql](#)

Project Setup Guide

1. Download and Install Required Tools:

- **Java Development Kit (JDK) SE 22:** Ensure you have JDK 22 installed.
- **Apache Tomcat 10.1:** Download and set up Tomcat as your server.

2. Get the Project Source:

- Clone the project repository from GitHub or Get from the attached Zip Source File, move into your local workspace and load the project using Eclipse.

3. Configure the Database

The Configuration of Database Connection String is at **src\main\resources\config.properties**

4. Build and Deploy

Open the project in Eclipse, ensuring that the necessary external libraries are added to the build path (should auto-included).

Right-click on the project, select Run As > Run on Server, and choose Tomcat 10.1.

5. Access the Application

Open your browser and go to <http://localhost:8080/QuickCart> to access the e-commerce portal.