Faculty of Engineering-Ain Shams University

Computer and Artificial Intelligence Deparment

CSE241:Milstone2

GitHub Repository:

https://github.com/Rodina761/E-Commerce-website-Phase2

YouTube Demo:

https://youtu.be/RFKk-vEQgfQ

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1. Introduction

The E-Commerce Skin Care Website serves as a software solution for management of skin care products. Developed using Object-Oriented Programming (OOP) principles, the system ensures a modular, organized, and maintainable code structure. Featuring a user-friendly GUI built with JavaFX, The application's user-friendly GUI, created using JavaFX, allows users to browse, add to cart, and purchase products while enabling administrators to manage inventory seamlessly.

Additionally, the project integrates CSS to deliver a modern and visually appealing design. By harmonizing OOP techniques, JavaFX, and CSS, this application delivers an efficient and aesthetically pleasing platform for online skin care shopping.

2. Objectives

The objectives of the E-Commerce Skin Care Website are as follows:

1. Efficient Product Management
    - Provide an easy-to-use interface for adding, updating, and deleting product records.
    - Allow users to browse for skin care products.
2. Customer-Friendly Shopping Experience
    - Enable secure user registration and login.
    - Support shopping cart functionality and order processing.
3. User-Friendly Interface
    - Develop an intuitive GUI using JavaFX.
    - Enhance the user experience with visually appealing CSS styling.
4. Data Integrity and Persistence
    - Ensure reliable storage and retrieval of product and user data.
5. Implementation of Object-Oriented Principles
    - Apply OOP concepts such as encapsulation, inheritance, and polymorphism to create a maintainable and scalable system.

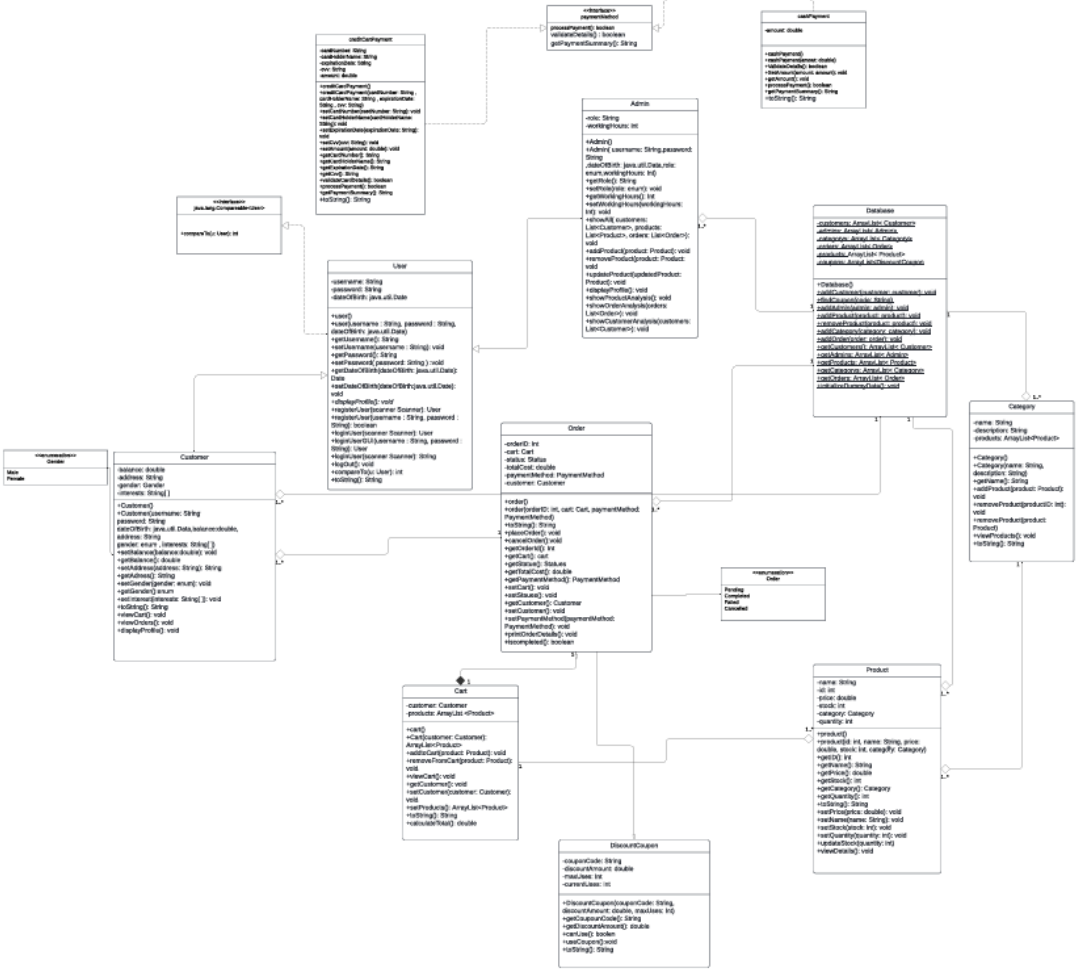
3. System Design

The E-Commerce Skin Care Website is designed using a modular architecture that separates the concerns of different system components, ensuring maintainability and scalability.

System Components

1. Backend (Core Logic)
    - Product Management: Handles CRUD operations for product data.
    - User Management: Manages user registration, login, and session handling.
    - Order Management: Processes transactions and updates product inventory.
2. Frontend (GUI)
    - Login/Registration Interface: Secure user authentication.
    - Product Browsing Interface: Displays product catalog with search and filter options.
    - Admin Panel: Allows CRUD operations for managing products.
3. Database Management
    - MySQL database to store users, products, orders, and transaction details

4.UML



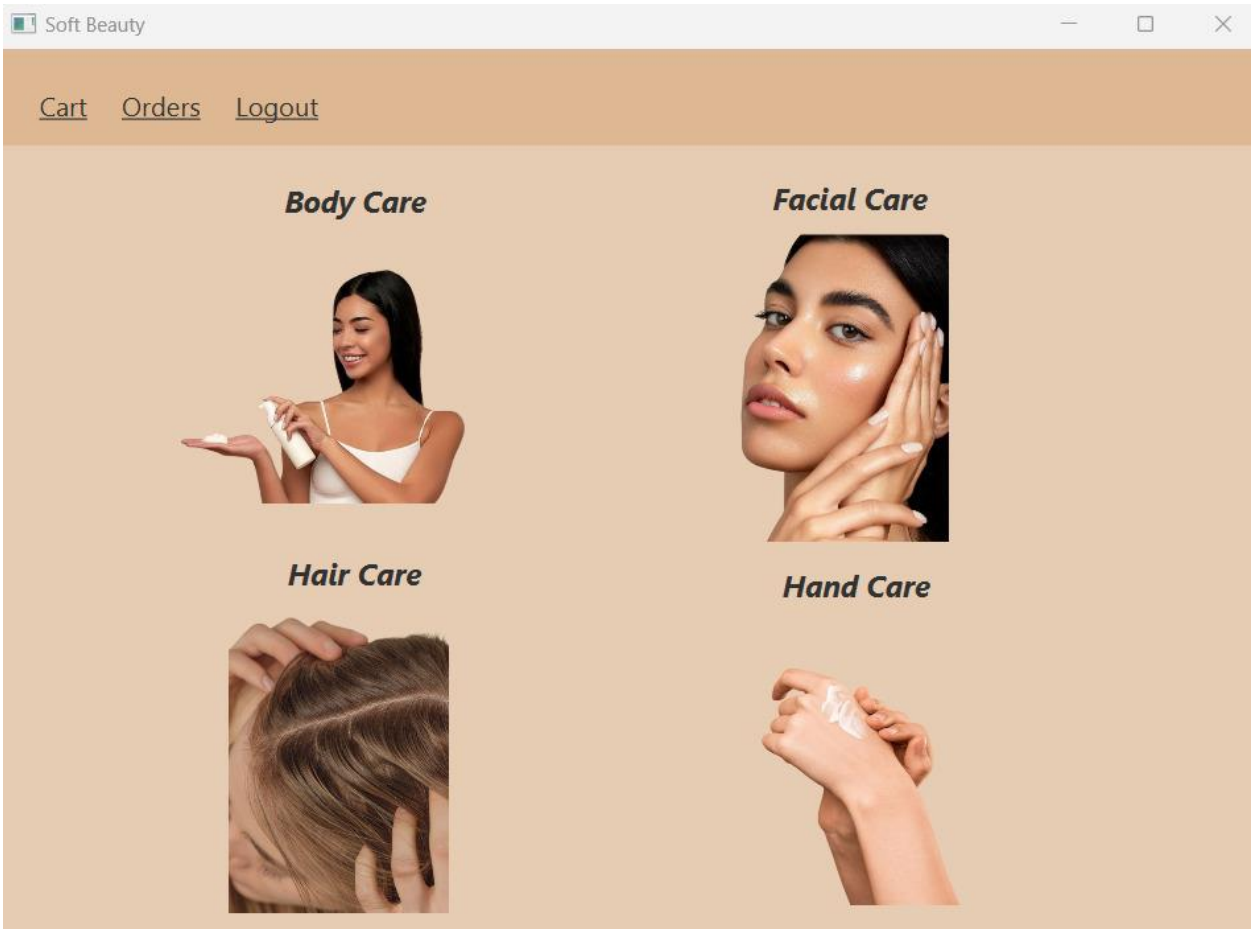
5.GUI Design (JavaFX)

The GUI is created with JavaFX and is divided into different scenes for various sections of the system:

Main Window Description

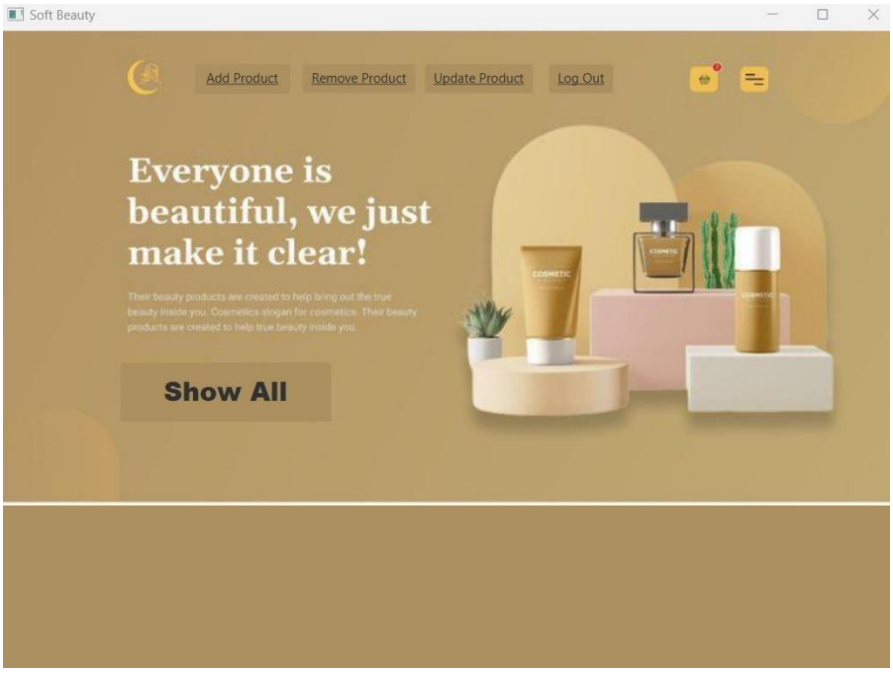
The main window of the E-Commerce Skin Care Website, titled **"Soft Beauty"**, provides a clean and user-friendly interface that caters to the needs of customers. The layout is designed to ensure easy navigation and quick access to core functionalities. Here's a detailed description:

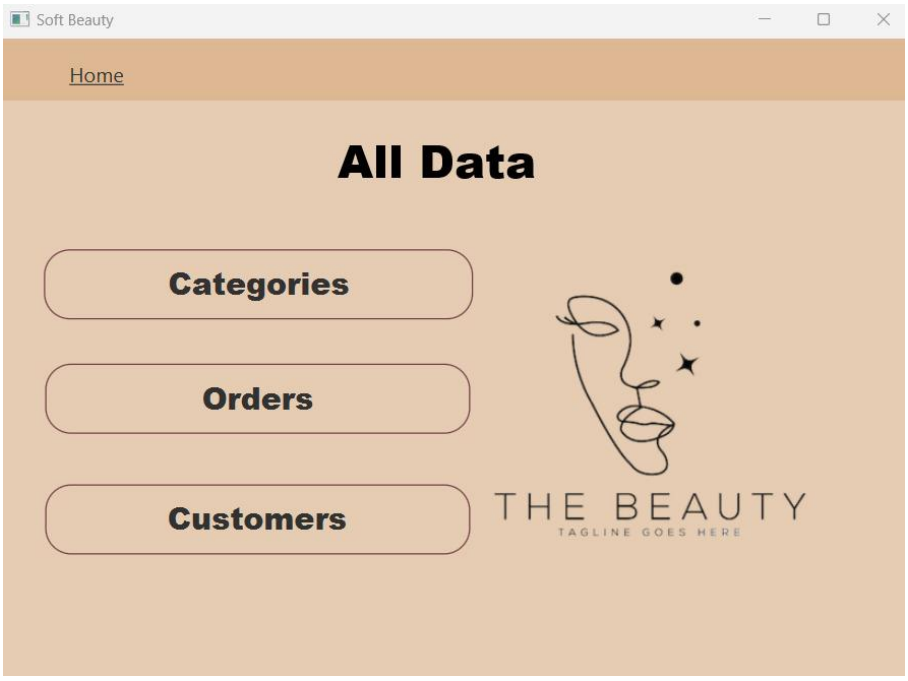
1. **Header Navigation Bar**:
    - Located at the top, the navigation bar features links to essential sections:
        - **Cart**: Takes the user to their shopping cart to view selected items for purchase.
        - **Orders**: Allows users to view their past and current orders.
        - **Logout**: Provides an option to securely exit the account.
2. **Category Display**:
    - The main section of the window is divided into four categories of products, each visually represented with an image:



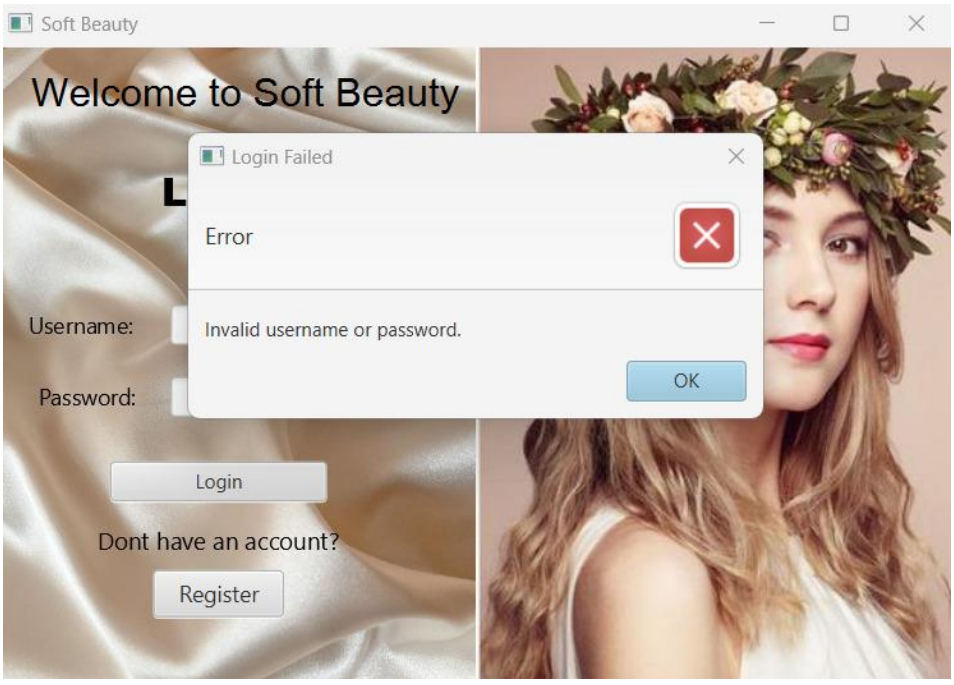
The Admin Window

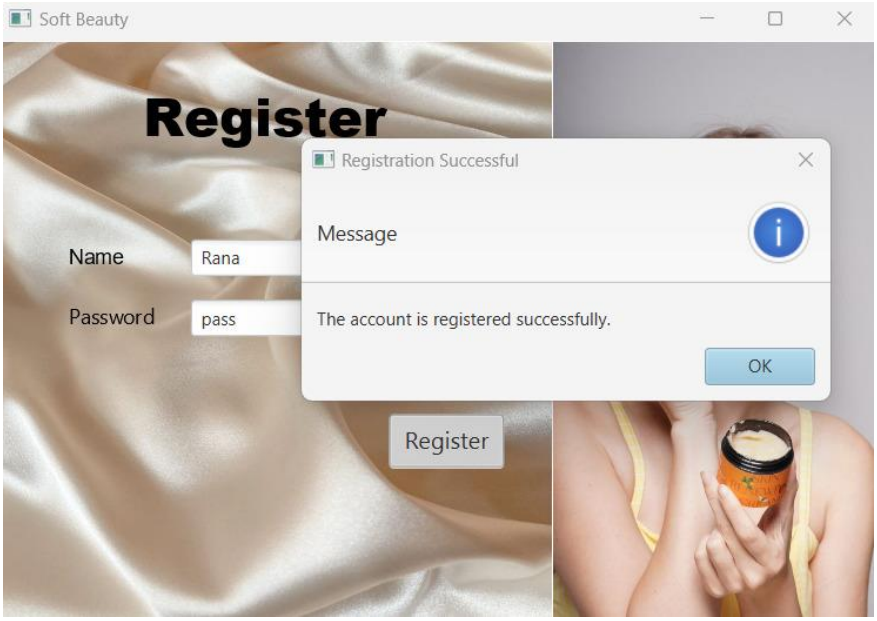
Admin window of the E-Commerce Skin Care Website is a user-friendly interface designed for efficient platform management. It provides key functionalities such as adding, removing, and updating products through dedicated buttons. The interface includes a motivational tagline, product previews, and a **Show All** button to view the catalog. Styled with a warm and professional design, it ensures seamless navigation and aligns with the overall branding of the platform.


Soft Beauty
Add Product
Remove Product
Update Product
Log Out
Everyone is beautiful, we just make it clear!
Their beauty products are created to help bring out the true beauty inside you. Cosmetics slogan for cosmetics. Their beauty products are created to help true beauty inside you.
Show All


Soft Beauty
Home
All Data
Categories
Orders
Customers
THE BEAUTY
TAGLINE GOES HERE

6.Test cases


Soft Beauty
Welcome to Soft Beauty
Login Failed
Error
Invalid username or password.
OK
Username:
Password:
Login
Dont have an account?
Register


Soft Beauty
Register
Registration Successful
Message
The account is registered successfully.
OK
Name
Rana
Password
pass
Register

7. Conclusion

This project successfully developed a robust e-commerce platform for managing and purchasing skin care products. Key functionalities include user registration, product browsing, cart management, and administrative tools for inventory management. The integration of OOP principles and JavaFX ensures the system's modularity, scalability, and maintainability.