

ONLINE HEALTH AND BEAUTY PRODUCT ORDERING SYSTEM

“Golden Aura” System

Ganhewage GDM

E1946325

Faculty of Information Technology

University of Moratuwa

December 2024

ONLINE HEALTH AND BEAUTY PRODUCT ORDERING SYSTEM

“Golden Aura” System

Ganhewage GDM

E1946325

Dissertation submitted to the Faculty of Information Technology, University of Moratuwa, Sri Lanka in partial fulfillment of the requirements of the Degree of Bachelor of Information Technology (External) in Information Technology.

December 2024

Declaration of the Candidate & Supervisor

“I declare that this report is my own work and has not been submitted in any form for another degree or diploma at any university or other institution of tertiary education. Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references is given.”

Name of Student:

Ganhewage GDM

Signature of Student:



Date: 07/12/2024

Supervised by

Name of Supervisor

Dr. Samanthi Wickramasinghe

Signature of Supervisor:

Date:

Abstract

The growing demand for convenient online shopping experiences, especially in the health and beauty sectors, underscores the need for efficient, reliable, and user-friendly e-commerce platforms. Current systems often fall short of the seamless interactions between sellers, administrators, and customers critical to user retention and satisfaction.

The project aims to develop a comprehensive online ordering system for health and beauty products that bridges the gap in efficient management of product listings, order processing, and real-time communication between various stakeholders. It will improve system utilization, sales management, and customer engagement through an integrated platform.

Using the MERN stack (MongoDB, Express.js, React.js, and Node.js), the Golden Aura approach involves building a robust web application with three main interfaces: administrators, sellers, and customers. Key features include dynamic product category management, seller activation controls, real-time chat functionality, and advanced data visualization on dashboards.

Users can browse a vast catalog of health and beauty products, filter products, view product details, view blog details, write reviews, place orders, manage their accounts, and chat online with sellers to learn more about the products they are purchasing. Administrators can manage product categories, manage sellers by activating and deactivating sellers, chat online with sellers, manage orders, confirm sellers' money requests, and monitor platform activity. After activating the seller dashboard, sellers will be able to manage products, manage orders, manage blogs, respond to customer inquiries accurately through online chat, chat online with admin, request the admin to give them the money they need from the proceeds from product sales, manage their profile, and monitor platform activity.

This "Golden Aura" system aims to offer a reliable, comprehensive, user-friendly, and efficient online platform that seamlessly meets specific needs while efficiently managing significant user flow and a diverse product range. Also, the management processes of sellers and administrators will be streamlined through this system. This document therefore further discusses the need for a reliable, comprehensive, user-friendly, and efficient online health and beauty ordering system and the process of developing such a system.

Acknowledgements

The Bachelor of Information Technology (BIT-External) offered by the University of Moratuwa has contributed a lot to completing my further education. I want to sincerely thank the University of Moratuwa for providing me with this invaluable chance to work on a final-year project to complete this degree.

A special acknowledgment must be given to my project supervisor, Dr. Samanthi Wickramasinghe. She guided me on how to do my project correctly and what to include in this report. So, I am thankful to my project supervisor, Dr. Samanthi Wickramasinghe, for her contribution to coordinating my project. Finally, I would like to thank my friends and family for their encouragement in completing this project.

Overall, I humbly thank all the above-mentioned people for their contribution to making this project successful.

Table of Contents

1. Introduction	1
1.1. Motivation & Significance of Project	2
1.2. Aims and Objective	3
1.2.1. Aim.....	3
1.2.2. Objectives	3
1.3. Scope.....	4
1.4. Proposed Solution.....	5
1.5. Summary.....	7
2. Background	8
2.1. Introduction	8
2.2. Problem statement.....	9
2.3. Stakeholders.....	10
2.4. Existing systems.....	10
2.4.1. Cosmetics.lk.....	11
2.4.2. Healthguard.lk	13
2.4.3. BEHOLD BEAUTY	15
2.4.4. Essentials.lk	17
2.4.5. Beauty and Body.....	18
2.4.6. Summary of Evaluation	19
2.5. Summery	19
3. Specification & Design	20
3.1. Introduction	20
3.2. Components of the system	20

3.2.1.	Functional Requirements.....	20
3.2.2.	Software components and tasks	21
3.2.2.1.	User Login and Registration	21
3.2.2.2.	Product Catalog and Search	21
3.2.2.3.	Shopping Cart Management.....	21
3.2.2.4.	Order Processing and Checkout.....	21
3.2.2.5.	User Profile	22
3.2.2.6.	Category Management (Admin)	22
3.2.2.7.	Product Management (Seller).....	22
3.2.2.8.	Blog Management (Seller)	22
3.2.2.9.	Order Management	22
3.2.3.	Database Component	22
3.2.4.	Hardware Components	25
3.3.	Development Methodology.....	25
3.4.	Technologies Adapted	29
3.5.	Designed System Interfaces.....	32
3.5.1.	Golden Aura System – Customer.....	32
3.5.1.1.	Home Page	32
3.5.1.2.	Shop Page.....	33
3.5.1.3.	Cart Page	34
3.5.1.4.	Wishlist Page	35
3.5.1.5.	Product Details Page.....	36
3.5.1.6.	Place Order Page.....	37
3.5.1.7.	Payment Page	38
3.5.1.8.	Customer Dashboard.....	38

3.5.1.9.	Customer Chat	39
3.5.1.10.	Customer Order Page.....	39
3.5.1.11.	Customer Profile Page.....	40
3.5.1.12.	Customer Blog Page.....	41
3.5.1.13.	Customer About Page.....	42
3.5.1.14.	Customer Contact Page.....	43
3.5.1.15.	Customer Register Page	44
3.5.1.16.	Customer Login Page	45
3.5.2.	Golden Aura System – Seller.....	46
3.5.2.1.	Dashboard.....	46
3.5.2.2.	Product Page.....	47
3.5.2.3.	Order Page.....	47
3.5.2.4.	Order Details Page	48
3.5.2.5.	Chat with Customer.....	48
3.5.2.6.	Chat Support.....	49
3.5.2.7.	Payments.....	49
3.5.2.8.	Profile	50
3.5.2.9.	Seller Blog Page.....	50
3.5.3.	Golden Aura System – Admin.....	51
3.5.3.1.	Dashboard.....	51
3.5.3.2.	Seller	52
3.5.3.3.	Category.....	52
3.5.3.4.	Chat with seller	53
3.5.3.5.	Order	53
3.5.3.6.	Order Details	54

3.5.3.7. Admin Profile	54
3.6. Summary	55
4. Implementation.....	56
4.1. Introduction	56
4.2. Implementation Process.....	56
4.2.1. Frontend Development.....	56
4.2.2. Backend Development	57
4.2.3. Database Integration (MongoDB)	58
4.2.4. Real-time Communication	60
4.2.5. Testing and Debugging.....	61
4.3. Key Functional Components.....	61
4.3.1. Authentication and Authorization	61
4.4. Challenges and Solutions	62
4.5. Summary	63
5. Results and Evaluation.....	64
5.1. Introduction	64
5.2. Achievement and Goals Met.....	64
5.3. Test and deployment plan	65
5.4. Test Cases.....	66
5.4.1. Test Cases for Customer Registration and Login.....	66
5.4.2. Test Cases for Product Search	74
5.4.3. Test Cases for Product Sort and Filtering.....	77
5.4.4. Test Cases for Cart	80
5.4.5. Test Cases for Wishlist	85
5.5. Test Data and Test Result.....	88

5.5.1.	Login Verification	88
5.5.2.	Cart	89
5.5.3.	Wishlist	91
5.6.	Summary	93
6.	Future Work	94
6.1.	Introduction	94
6.2.	Summary	95
7.	Conclusions	96
8.	Reflection	98
Table of Abbreviations		99
Appendices		100
References		141

List of Figures

Figure 1: Cosmetic.lk _ Home Page	11
Figure 2: Cosmetics.lk _ Navigation	12
Figure 3: Healthguard.lk _ HomePage.....	13
Figure 4: Healthguard.lk _ Navigation	14
Figure 5: Behold Beauty _ Home Page.....	15
Figure 6: Behold Beauty _ Navigation	16
Figure 7: Behold Beauty _ Product Page.....	16
Figure 8: Essentials.lk _ Home Page	17
Figure 9: Beauty & Body_ Home Page	18
Figure 10: Beauty & Body_ Product Page.....	19
Figure 11: Iterative Waterfall Model.....	26
Figure 12: Golden Aura System _ Home Page	32
Figure 13: Golden Aura System _ Shop Page.....	33

Figure 14: Golden Aura System _ Cart Page	34
Figure 15: Golden Aura System _ Wishlist Page.....	35
Figure 16: Golden Aura System _ Product Details Page	36
Figure 17: Golden Aura System _ Place Order Page	37
Figure 18: Golden Aura System _ Payment Page.....	38
Figure 19: Golden Aura System _ Customer Dashboard.....	38
Figure 20: Golden Aura System _ Customer Chat.....	39
Figure 21: Golden Aura System _ Customer Order Page	39
Figure 22: Golden Aura System _ Customer Profile Page	40
Figure 23: Golden Aura System _ Customer Blog Page.....	41
Figure 24: Golden Aura System _ Customer About Page.....	42
Figure 25: Golden Aura System _ Customer Contact Page.....	43
Figure 26: Golden Aura System _ Customer Registration Page.....	44
Figure 27: Golden Aura System _ Customer Login Page.....	45
Figure 28: Golden Aura System _ Seller_Dashboard	46
Figure 29: Golden Aura System _ Seller_Product Page	47
Figure 30: Golden Aura System _ Seller_Order Page	47
Figure 31: Golden Aura System _ Seller_Order Details Page	48
Figure 32: Golden Aura System _ Seller_Chat with Customer	48
Figure 33: Golden Aura System _ Seller_Chat Support	49
Figure 34: Golden Aura System _ Seller_Payment	49
Figure 35: Golden Aura System _ Seller_Profile	50
Figure 36: Golden Aura System _ Seller_Blog Page.....	50
Figure 37: Golden Aura System _ Admin_Dashboard	51
Figure 38: Golden Aura System _ Admin_Seller View	52
Figure 39: Golden Aura System _ Admin_Category.....	52
Figure 40: Golden Aura System _ Admin_Chat with Seller.....	53
Figure 41: Golden Aura System _ Admin_Order	53
Figure 42: Golden Aura System _ Admin_Order Details.....	54
Figure 43: Golden Aura System _ Admin_Profile.....	54
Figure 44: Golden Aura System _ Code of fetch and display products I	56

Figure 45: Golden Aura System _ Code of fetch and display products II	57
Figure 46: Golden Aura System _ Code of product routes	57
Figure 47: Golden Aura System _ Code of products schema	59
Figure 48: Golden Aura System _ Code of Customer and Seller Chat.....	60
Figure 49: Golden Aura System _ Code of JWT Implementation.....	61
Figure 50: Golden Aura System _ Code of Product Routes with Auth Middleware	62
Figure 51: Golden Aura System _ Customer Login Success Message.....	88
Figure 52: Golden Aura System _ Customer Invalid Login Message (Email Wrong)	88
Figure 53: Golden Aura System _ Customer Invalid Login Message (Password Wrong)	89
Figure 54: Golden Aura System _ Receiving success message when adding product to cart.....	89
Figure 55: Golden Aura System _ Receiving message when product increment is success	90
Figure 56: Golden Aura System _ Receiving message when product is removed from cart	90
Figure 57: Golden Aura System _ Receiving message when product is already added to the cart.....	91
Figure 58: Golden Aura System _ Receiving success message when adding product to Wishlist	91
Figure 59: Golden Aura System _ Receiving message when product is removed from Wishlist	92
Figure 60: Golden Aura System _ Receiving message when product is already added to the Wishlist.....	92
Figure 61: Gantt chart	100
Figure 62: Use Case Diagram for Admin Registration and Login.....	101
Figure 63: Use Case Diagram for Seller Registration and Login	101
Figure 64: Use Case Diagram for Customer Registration and Login	102
Figure 65: Use case Diagram for Category Management (Admin).....	102
Figure 66: Use case Diagram for Product Management (Seller).....	103
Figure 67: Use Case Diagram for Cart Management.....	103
Figure 68: Use Case Diagram for Order Management	104

Figure 69: Activity Diagram for Admin Login	105
Figure 70: Activity Diagram for Customer Registration	106
Figure 71: Activity Diagram for Customer Login	107
Figure 72: Activity Diagram for Seller Registration.....	108
Figure 73: Activity Diagram for Seller Login.....	109
Figure 74: Activity Diagram for Product Management	110
Figure 75: Activity Diagram for Category Management.....	111
Figure 76: Activity Diagram for Order Management	112
Figure 77: Entity Relationship Diagram	113

List of Tables

Table 1: Cosmetics.lk _ Advantages and Disadvantages	12
Table 2: Healthguard.lk_ Advantages and Disadvantages	13
Table 3: Behold Beauty System _ Advantages and Disadvantages	15
Table 4: Essentials.lk System _ Advantages and Disadvantages	17
Table 5: Beauty & Body System _ Advantages and Disadvantages	18
Table 6: Summary of Evaluation	19
Table 7: Tast Cases for Login and Registration management.....	73
Table 8: Test Cases for Product Search.....	76
Table 9 : Test Cases for Product Sort and Filtering	80
Table 10: Test Cases for Cart	84
Table 11: Test Cases for Wishlist	87

1. Introduction

The digital age has altered our way of life, and electronic commerce has become a part of our daily activities. Different e-commerce operations are being developed for online shopping, which has significantly transformed the way products are bought and sold. This trend can be seen prominently in the health and beauty industry, where the convenience and accessibility of online shopping have become increasingly important. Therefore, the weaknesses and needs of the existing online shopping websites should be considered. Accordingly, most systems focus on a limited product selection or only one product. Also, the user interface of some systems can be confusing and difficult to navigate. Furthermore, many customers are reluctant to buy health and beauty products online due to existing issues of product authenticity and security in online transactions. Accordingly, a major problem that still exists is the lack of a comprehensive and effective online ordering system that meets the specific needs of purchasing health and beauty products online. Also, as customers prioritize convenience and efficiency, the need for comprehensive, efficient, and user-friendly online platforms has become imperative. Therefore, a suitable technology should be considered for the system created to fulfill this system requirement. To make this decision, the technologies used in creating existing online health and beauty product ordering systems were considered, and most of the systems have been created with the C# programming language, PHP scripting language, etc. This was confirmed by articles such as “On gender differences in consumer behavior for the online financial transaction of cosmetics, [1]” “The fundamentals of the ubiquitous online shopping cart development and online ordering system, [2]”. Therefore, the proposed online health and beauty product ordering system, Golden Aura, focuses on developing an online health and beauty product ordering system using the MERN stack designed to enhance the shopping experience for customers while providing comprehensive management capabilities to sellers and administrators.

Accordingly, the system enables users to browse a large catalog of health and beauty products, filter products, view product details, view blog details, write reviews, place orders, manage their accounts, pay online, and communicate directly with sellers using the online chat feature. Administrators are also able to manage product categories, manage

sellers by activating and deactivating sellers, chat online with sellers, manage orders, confirm sellers' money requests, and monitor platform activity. Also, after activating the seller dashboard, sellers will be able to manage products, manage orders, manage blogs, respond accurately to customer inquiries via online chat, chat online with admin, request the admin to give them the money they need from the proceeds from product sales, manage their profile, and monitor platform activity. Thus, this Golden Aura system provides an easy-to-use system for consumers, sellers, and administrators.

This report follows a structured format, with Part 2 delving into the system's background, Part 3 delving into its specifications and design, Part 4 into its implementation, Part 5 into its results and evaluation, and Part 6 into its future work. Accordingly, this final report further discusses the proposed "Golden Aura" system as a sustainable solution to the challenges faced in purchasing health and beauty products online.

1.1. Motivation & Significance of Project

The motivation for this project stems from the weaknesses in the current market and the potential to significantly improve the online shopping experience in the health and beauty sector. This is because people are looking for reliable ways to meet their needs as a result of becoming more conscious of their appearance and health. As customer expectations rise, there is a need for an efficient and effective solution that simplifies the ordering process, improves the user experience, and enables a diverse range of products to be available in one system.

But people still go to physical stores to buy health and beauty products, and when the products are not available, they face various inconveniences by going to several stores as well as spending a lot of time and money. But now there are ways to buy health and beauty products online. However, some systems are built around one product category and do not offer a wide range of products. Likewise, some systems have confusing interfaces and are less secure and less efficient. Thus, customers hesitate to buy online due to various flawed systems. The importance of this project lies in meeting these challenges and contributing to the evolution of e-commerce in the health and beauty industry.

It is important to develop a health and beauty ordering system that adapts to consumer behavior, changing business, and changing technology. By addressing such gaps, the

system can significantly improve operational efficiency, customer satisfaction, and business growth for sellers.

Accordingly, Golden Aura, an online ordering system for health and beauty products, further validates the need to provide customers with a reliable, comprehensive, user-friendly, and efficient platform. It also confirms the need to provide admin and sales dashboards to enable better monitoring and control mechanisms for administrators and sellers. In addition, since this project integrates advanced web technologies, the Golden Aura system will be a benchmark for future e-commerce platforms.

1.2. Aims and Objective

1.2.1. Aim

This project aims to develop a web-based application that allows customers to order health and beauty products online using the MERN stack technology.

1.2.2. Objectives

- To develop a user-friendly website or application that offers a vast selection of health and beauty products and allows customers to browse products and place orders easily.
- To implement a secure payment gateway to ensure safe transactions for both customers and the business.
- To design an intuitive admin panel that enables the admin to manage the website's product categories, activate or deactivate seller accounts, communicate with sellers via online chat, and monitor platform activity.
- To design an intuitive seller panel that enables the sellers to manage products, manage orders, communicate with admin via online chat, and assist customer interaction via online chat.
- To provide responsive customer service and support through the chat feature.
- To ensure that customers have a detailed record of their transactions for their convenience and future reference, the system will automatically generate and send an email invoice to customers immediately after they have completed an order for health and beauty products.

1.3. Scope

This project involves developing an online health and beauty product ordering system called Golden Aura. Golden Aura is designed to provide users with a robust and user-friendly e-commerce platform for ordering health and beauty products. Core capabilities include product catalog browsing, product filtering, product searching, product ordering, secure payment, written reviews, chatting online with sellers, and user account management.

The purpose of Golden Aura is to increase the number of online shopping opportunities in the health and beauty sectors while improving consumers' ability to buy both health products and cosmetic products easily. It will ensure that consumers can access a wide variety of healthcare and beauty products with ease while at the same time ordering them easily. This is intended to improve the purchasing experience of Golden Aura, thus contributing to its revenue growth and promoting brand loyalty.

There are many benefits expected from the development of Golden Aura. The convenience of the customer is one of them. To be able to offer consumers the convenience of browsing, finding details about product information, and buying products in their own homes so that they can spend less time and effort is part of its objective. One of its benefits can also be indicated by the fact that it can choose from a variety of products. Thus, consumers have been allowed to get many different health and beauty products through various brands to meet consumer preferences. Thus, the system has allowed new sellers to join to provide a wide range of products to customers. Also, being able to make safe transactions can be called another benefit. Secure transactions by implementing secure payment methods, ensuring customer data security, and establishing trust.

The Golden Aura project has several objectives and goals. Some of them include developing an intuitive and responsive user interface for seamless navigation, implementing secure user authentication and authorization mechanisms, integrating with a robust product catalog with detailed product information, and ensuring a smooth and efficient shopping experience from product selection to checkout. It also improves their business by connecting sellers to this system, and customers using the system can offer a wide range of products for purchase.

This project scope section outlines the key aspects of the Online Health and Beauty Product Ordering System ‘Golden Aura’, its purpose, benefits, objectives, alignment with business strategies, and references to a more detailed vision for long-term strategic planning.

1.4. Proposed Solution

The proposed solution for the online health and beauty product ordering system project is to develop an online health and beauty product ordering web-based application that allows users to browse, select, and order health and beauty products online. MongoDB, Express.js, React.js, and the system will be built using the MERN stack, which includes Node.js. This technology stack is widely used to build modern web applications and provides scalability, reliability, and security. Also, the system will consist of three main components. One component can be considered the customer interface that enables customers to browse and purchase products, and another component can be considered the admin panel designed for administrators to manage product categories, manage sellers, and manage orders and platform activity. Also, the other component can be considered a seller panel, where sellers can manage orders, chat online with admins, respond accurately to customer queries through online chat, and monitor platform activity.

The primary users of the system will be individuals who are interested in purchasing health and beauty products online. This enables consumers to save their time, effort, and money by providing a comprehensive and user-friendly platform where they can easily purchase the health and beauty products of their choice online.

The system will be an online platform where users can browse different health and beauty products, search for products by name or keywords, add products to their cart, view product descriptions, and order products online. The platform will have a user registration and login system that allows users to create an account, manage user accounts, and access their order history. The system will also have a payment gateway integration that will allow users to make secure online payments. Also, by chatting with the sellers online, customers can get more information about the products they want to buy, as well as solve existing problems about the products.

The admin dashboard and seller dashboards will be built using React for the frontend and Node.js for the backend. Administrators will be able to manage product categories by

adding, editing, and deleting products, manage sellers by activating and deactivating sellers, chat online with sellers, monitor orders, and monitor platform activity. Also, after activating the sales dashboard, sellers will be able to manage products, manage orders, chat online with administrators, accurately respond to customer queries through online chat, and monitor platform activity.

The proposed solution will be scalable, responsive and optimized for performance. So will a comprehensive and user-friendly online ordering system that meets specific needs and can efficiently handle large volumes of users and products. Furthermore, this online health and beauty product ordering system is expected to be set up to ensure the security of sensitive information such as passwords and payment information. The system will also be flexible enough to allow for the easy addition of new features and functionality in the future.

The MERN stack is a newly integrated technology that makes it possible to easily set up a scalable, reliable, secure, comprehensive, and user-friendly online ordering system. Therefore, the skills and experience needed to develop and implement this system have to be acquired through studies. This will enable the successful completion of this project.

In conclusion, the proposed solution is an online health and beauty product ordering system that allows users to browse, select, and order health and beauty products online. The system will be built using the MERN stack and will be scalable, reliable, and secure. Also, this health and beauty product ordering system will be a comprehensive and user-friendly online ordering system that meets specific needs and can efficiently handle a large volume of users and products. Also, the skills and experience needed to develop and implement this system will be carried out using studies and thus the project will be able to be completed successfully.

1.5. Summary

This chapter introduces the “Golden Aura” project, which aims to develop a web-based application that allows consumers to order health and beauty products online using MERN stack technology. It also highlights the problems and challenges faced by consumers when ordering health and beauty products online and the need to provide appropriate dashboards for sellers and administrators. It also outlines the need for the “Golden Aura” project, highlighting the proposed solution, motivations, scope, and objectives of the project.

2. Background

2.1. Introduction

Marketing of health and beauty products has always been an area of high profitable demand, and with the arrival of e-commerce, it's indeed growing briskly. However, the COVID-19 pandemic accelerated the shift to online shopping, with many customers now preferring to shop for health and beauty products online rather than in physical stores. But despite the growing demand for online shopping, there are still some challenges that customers face. A major problem is the lack of a comprehensive and effective online ordering system that meets specific conditions for ordering health and beauty products online. Online shopping websites frequently have a limited product selection, and the user interface can be confusing and difficult to navigate. Also, numerous customers are reluctant to buy health and beauty products online due to concerns about product authenticity, safety, and security. Meanwhile, some customers look for platforms that offer not only a wide range of products but also interactive features such as live chat and detailed product reviews. Accordingly, it further creates the need for a reliable, comprehensive, user-friendly, and efficient platform that can ensure product quality and safety as well as secure transactions.

To address these issues, Golden Aura, the system for online ordering of health and beauty products, intends to provide users with a reliable, comprehensive, user-friendly, and efficient online shopping experience. The system will use state-of-the-art security protocols to ensure safe and secure transactions while offering a wide range of products, including skin care, hair care, body care, makeup, perfumes, and specialty hygiene products. Additionally, the system will provide a user-friendly interface that allows customers to easily browse, place orders, track orders, filter products, manage accounts, view product details, view blog details, post reviews, chat online with sellers, and make secure payments. Meanwhile, sellers and administrators need sophisticated tools to effectively manage inventory, orders, and customer interactions. Therefore, this system provides a separate interface to administrators through which administrators can manage product categories, manage sellers by activating and deactivating sellers, chat online with sellers, manage orders, confirm sellers' money requests, and monitor platform activity. Also, a separate

interface will be provided to the sellers so that the sellers After activating the seller dashboard, sellers will be able to manage products, manage orders, manage blogs, respond to customer inquiries accurately through online chat, chat online with admin, request the admin to give them the money they need from the proceeds from product sales, manage their profile, and monitor platform activity.

This project focuses on the development of an online health and beauty product ordering system using the MERN stack (MongoDB, Express.js, React.js, and Node.js). Also, the system will provide a seamless, scalable, and interactive environment for all stakeholders involved in the online health and beauty market.

2.2. Problem statement

The health and beauty industry lacks an effective, comprehensive, and reliable online ordering system that meets its specific needs. Online shopping websites often have a limited selection of products. Also, some user interfaces are confusing and difficult to navigate. Hence, consumers face various difficulties while purchasing health and beauty products online. That is, the prices of the products and the product details are not clearly displayed on some websites, so the customers have to face many problems in online transactions. Accordingly, the increasing demand for health and beauty products further indicates the need for a reliable online ordering system. Nowadays, people are more concerned about health and appearance. They are also looking for safer ways to buy their essential products. Hence, the current situation has increased the need for an easy and reliable system for customers to order their products.

Similarly, problems for both customers and sellers, such as insufficient seller tools for order and inventory management, limited customer interaction channels, and insufficient administrative oversight of seller activities, are common. Additionally, the lack of personalized dashboards and analytics tools makes it difficult for sellers and administrators to monitor performance and optimize operations. Hence, there is a clear need for a more integrated, feature-rich platform that supports effective communication and management across all user categories: customers, sellers, and administrators.

The online system known as Golden Aura provides access to a vast range of health and beauty products, complete with product information and customer reviews. It enables

customers to manage their accounts, place orders, browse a large catalog of health and beauty products, filter products, view product details, view blog details, write reviews, place orders, chat online with sellers to learn more about the products they are purchasing, and make secure payments. Also, administrators can manage product categories, manage sellers by activating and deactivating sellers, chat online with sellers, manage orders, confirm sellers' money requests, and monitor platform activity. After activating the seller dashboard, sellers will be able to manage products, manage orders, manage blogs, respond to customer inquiries accurately through online chat, chat online with admin, request the admin to give them the money they need from the proceeds from product sales, manage their profile, and monitor platform activity. By enhancing the convenience of customers and sellers through a reliable, comprehensive, efficient, and user-friendly platform, Golden Aura brings many benefits to both customers and businesses. These benefits include higher sales, enhanced customer satisfaction, and decreased operational expenses.

2.3. Stakeholders

The primary stakeholders in this system include administrators, customers, and sellers. Customers need an easy-to-navigate platform that offers detailed product descriptions, reviews, and real-time communication with sellers. Sellers, on the other hand, need robust tools to manage their products, manage orders, manage blogs, communicate with the administrator in real time, and engage directly with customers. Administrators, who oversee platform operations, ensure proper management of product categories, seller activities, and order management. Thus, each stakeholder group has specific needs that must be addressed for the platform to be effective and scalable.

2.4. Existing systems

This section will critically analyze five existing online health and beauty product ordering systems. Here, the focus is primarily on the existing methods available for ordering health and beauty products in Sri Lanka. Here, the strengths and weaknesses of each system will be discussed, focusing on user satisfaction and meeting needs. As such, this analysis helps identify gaps and opportunities for the proposed online health and beauty product ordering system.

2.4.1. Cosmetics.lk

LMJ International Lanka has designed the COSMETICS.LK system to further avoid the inconvenience of identifying the availability of products on the shelves in real time for several or more customers and serve the customers directly. This system strives to be the largest online shopping for beauty products in Sri Lanka, offering the most diverse range of beauty and healthcare products, including a range of non-toxic, vegan, and cruelty-free products. Therefore, cosmetics.lk can be termed as an online store that focuses exclusively on beauty and cosmetic products offering various international and local brands. [3]

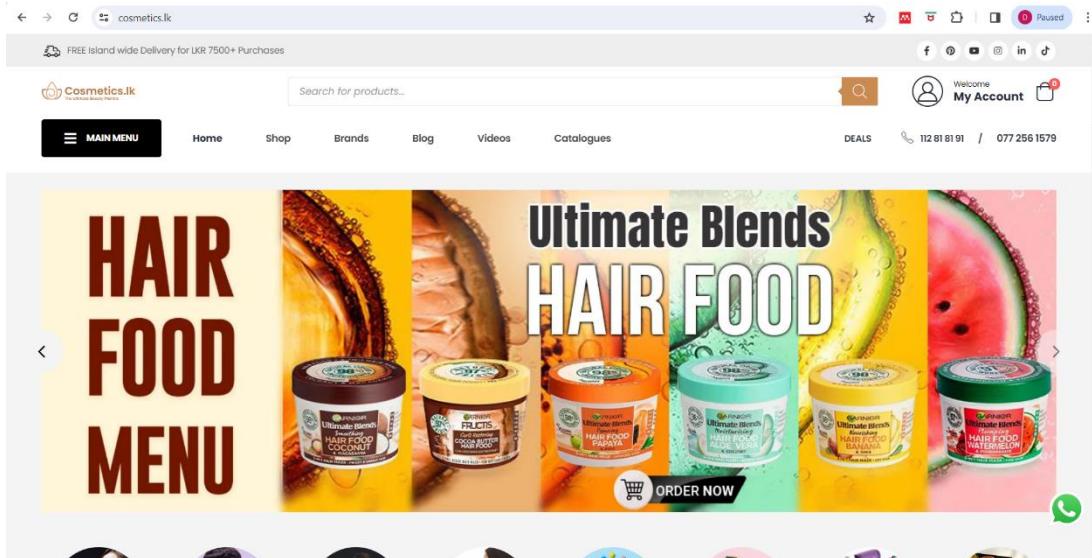


Figure 1: Cosmetic.lk _ Home Page

The advantages, disadvantages, key features and evaluation of the Cosmetics.lk system is further discussed below.

Advantages	Disadvantages
Extensive product catalog with diverse beauty and cosmetics items.	Limited to beauty and cosmetics (no health products).
Detailed product descriptions and reviews.	Limited customer service options.

Free Island delivery for LKR 7500 + Purchases	Higher prices for exclusive brands.
Specialization in beauty and cosmetics.	There is no seller interaction in this system

Table 1: Cosmetics.lk _ Advantages and Disadvantages

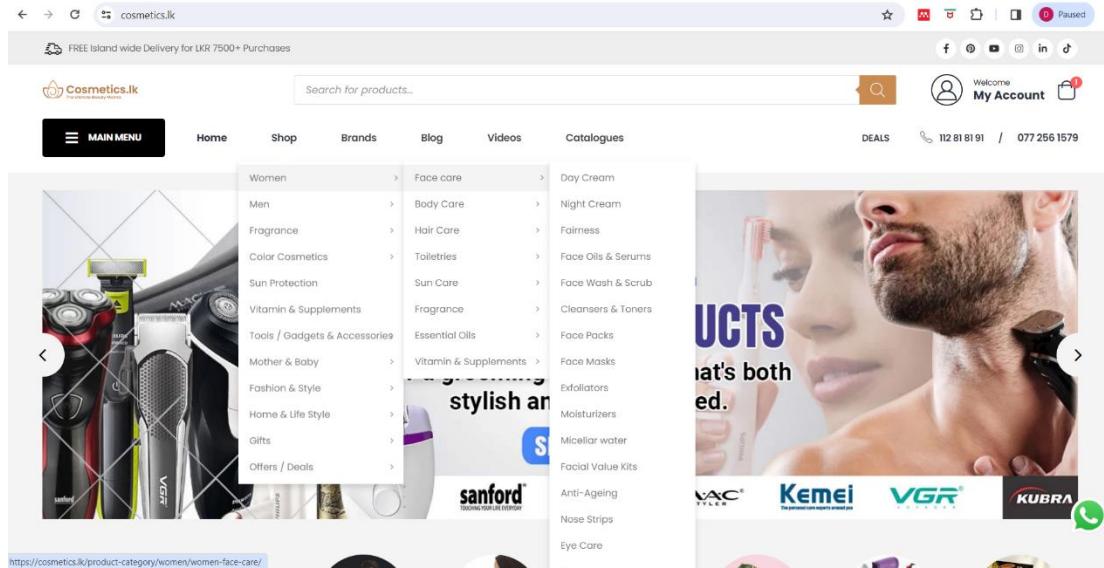


Figure 2: Cosmetics.lk _ Navigation

Evaluation: Cosmetics.lk's specialization and detailed product descriptions are valuable for beauty product customers. However, expanding to include health products and enhancing customer service options could broaden its market appeal.

2.4.2. Healthguard.lk

Healthguard Pharmacy Limited is a subsidiary of Sunshine Healthcare, known as Sri Lanka's 1st Brand Retail Healthcare Network. Also Healthguard.lk is an online extension of Healthguard Pharmacy, a pharmacy and health store offering various health and beauty products online. [4]



Figure 3: Healthguard.lk_HomePage

The advantages, disadvantages, key features and evaluation of the Cosmetics.lk system is further discussed below.

Advantages	Disadvantages
Detailed product descriptions.	Limited product range compared to general e-commerce platforms.
Trusted pharmaceutical brand.	There is no seller interaction in this system
Emphasis on health and wellness.	Basic user interface with limited interactive features.
-	No real time chat facility

Table 2: Healthguard.lk_Advantages and Disadvantages

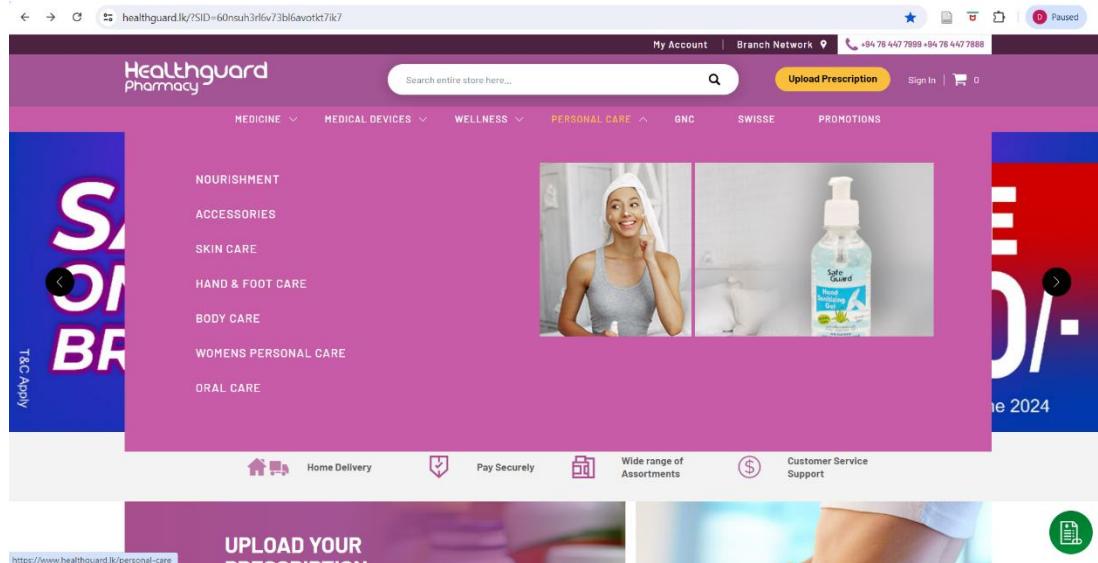


Figure 4: Healthguard.lk_Navigation

Evaluation: Healthguard.lk's specialization in health and beauty products, coupled with its trusted brand, makes it a reliable source for customers. However, expanding the product range and enhancing the user interface could improve the overall user experience.

2.4.3. BEHOLD BEAUTY

BEHOLD BEAUTY is an online platform that offers a variety of health and beauty products with a focus on high-quality and premium brands. Launched in 2020, this system was created as a solution to the difficulties faced by customers in procuring genuine skin care/hair care products. This system has worked to provide customers with nearly 20+ brands. Thus, this system works to bring authentic products closer to all Sri Lankans at a reasonable price as per the wishes of the customers. [5]

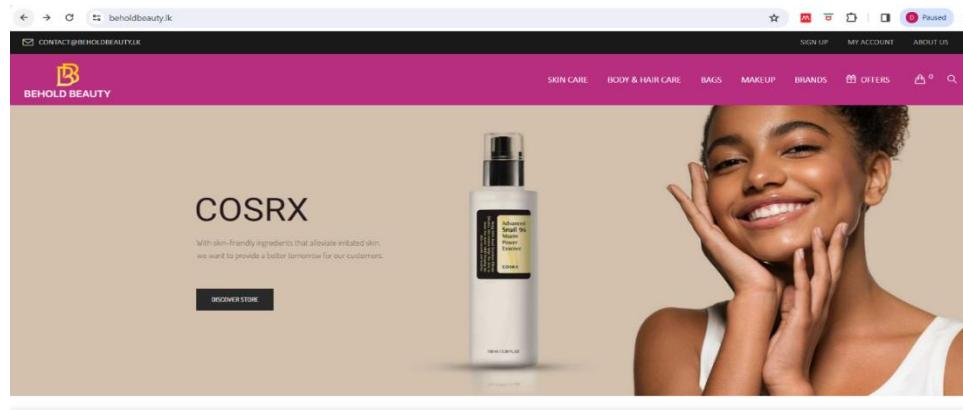


Figure 5: Behold Beauty _ Home Page

The advantages, disadvantages, and key features of the Behold Beauty system are further discussed below.

Advantages	Disadvantages
The elegant and visually appealing design enhances the user experience.	The focus on premium products limits the variety available to customers.
Focus on premium and high-quality brands.	Limited payment options
Responsive and helpful customer support.	There is no seller interaction in this system

Table 3: Behold Beauty System _ Advantages and Disadvantages

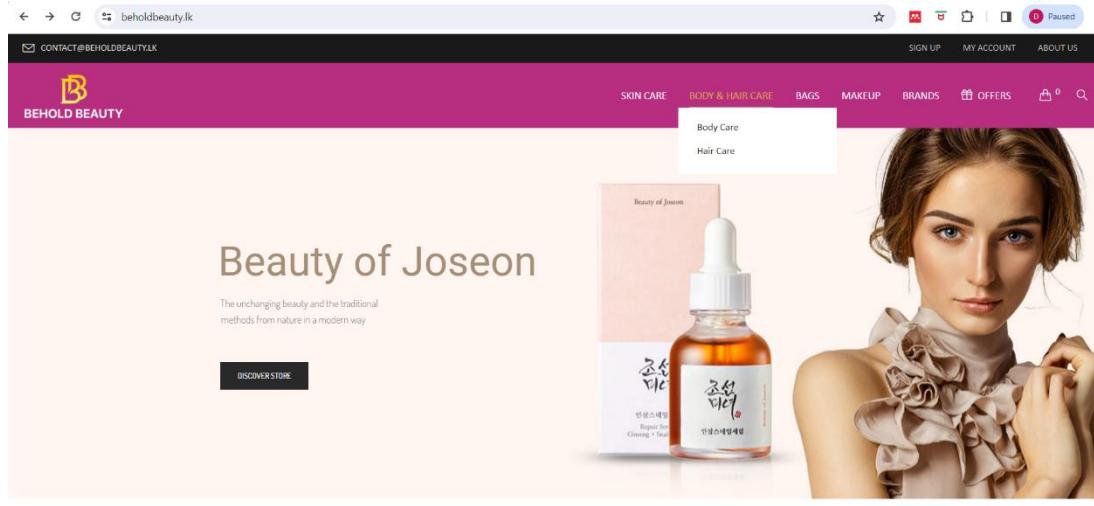


Figure 6: Behold Beauty _ Navigation

Evaluation: BEHOLD BEAUTY excels in user experience and product quality but has a limited product range. Also, there is no direct communication channel between sellers and customers in this system, and by improving it, it will be very easy for the customers using the system to get information from the sellers.

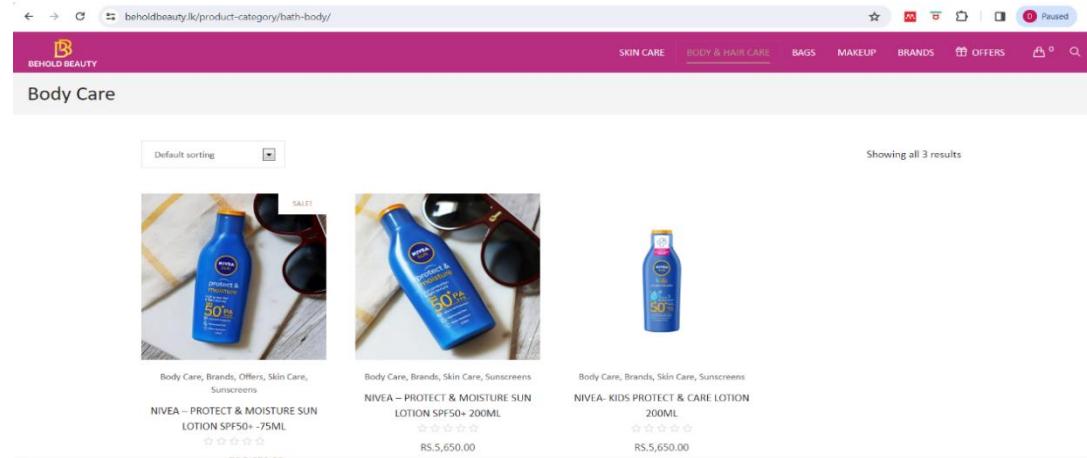


Figure 7: Behold Beauty _ Product Page

2.4.4. Essentials.lk

Founded in 2017, Essentials.lk can be called an online beauty product ordering system for both genders. Customers can also buy internationally branded cosmetics, perfumes, skincare, hair care, and bath and body products made in Europe through this system. Also, this system provides a line of vegetarian and cruelty-free cosmetic products that are non-toxic to hair and skin and can be called another cosmetic product ordering system in Sri Lanka. [6]

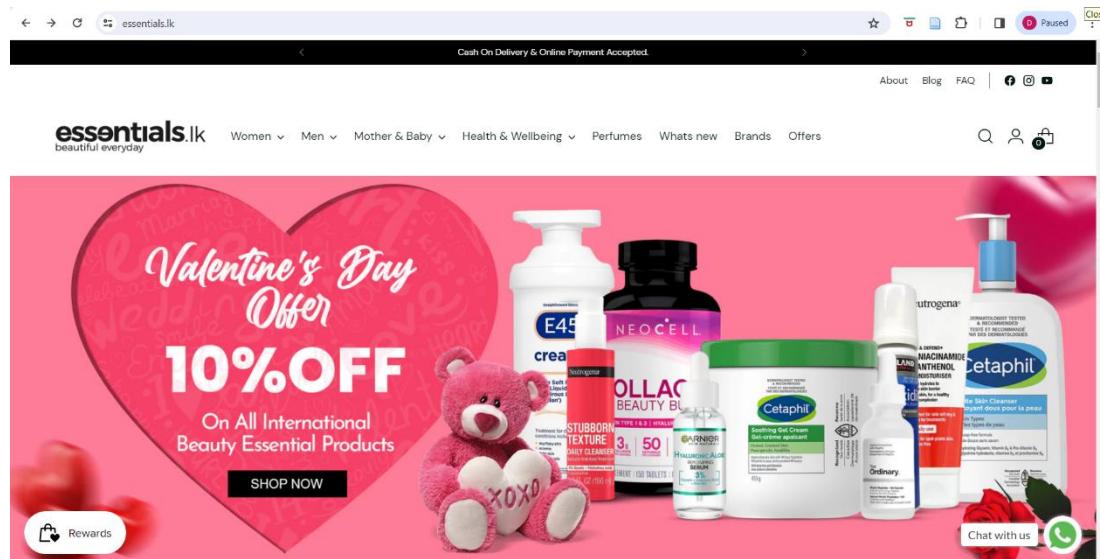


Figure 8: Essentials.lk – Home Page

The advantages, disadvantages, and key features of the system are further discussed below.

Advantages	Disadvantages
A wide variety of health and beauty products cater to diverse customer needs.	The cost of beauty products is extremely high compared to other systems.
The simple and easy-to-navigate interface improves accessibility.	Limited role-based dashboards
Efficient and timely delivery service.	-

Table 4: Essentials.lk System – Advantages and Disadvantages

Evaluation: Essentials.lk offers a wide range of products and efficient delivery, but the prices of the products are relatively high.

2.4.5. Beauty and Body

Beauty and Body Care (Pvt) Ltd is an internationally renowned organization focused on supplying color cosmetics, beauty care, makeup and beauty accessories to the local market, and Beautynbody.lk is its online store. This can be termed as another online platform designed to make it easy for customers to buy cosmetics. [7]

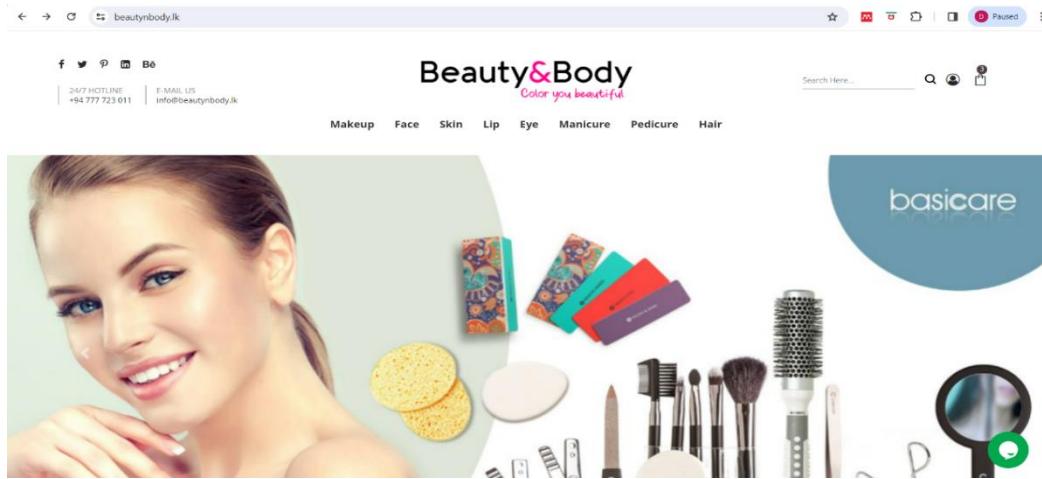


Figure 9: Beauty & Body _ Home Page

The advantages, disadvantages, and key features of the Beauty&Body system are further discussed below.

Advantages	Disadvantages
Allows customers to leave reviews and ratings.	The website can be difficult to navigate for some users.
This system has online chat facility.	The interface can appear cluttered and confusing due to the abundance of information and options on the screen.
Multiple payment methods are available.	There is no seller interaction in this system

Table 5: Beauty & Body System _ Advantages and Disadvantages

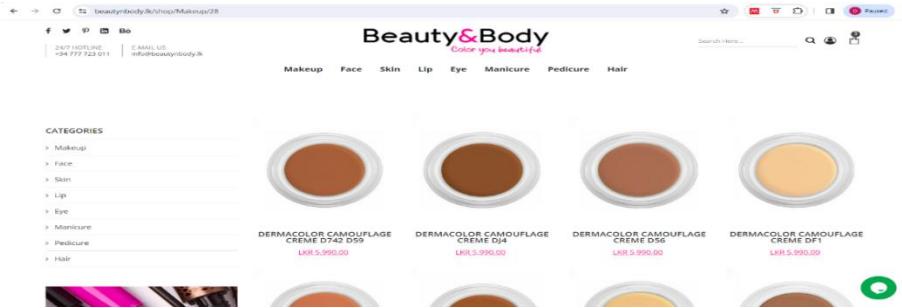


Figure 10: Beauty & Body – Product Page

Evaluation: Beauty & Body offers variety and transparency, but significant improvements in navigation are required. Also, due to the abundance of information and options on the screen, taking care to avoid cluttering and confusing the interface will make it easier for users to use the system.

2.4.6. Summary of Evaluation

Platform Feature	Cosmetics.lk	Healthguard.lk	Behold Beauty	Essentials.lk	Beauty & Body	Golden Aura System (New System)
User Interface	Good	Simple	Good	Good	Complex	Good
Product Range	Wide	Limited	Limited	Wide	Limited	Wide
Role-based Dashboards	No	No	No	Limited	No	Fully Implemented
Seller Interaction	None	None	None	Limited	None	Fully Implemented
Customer Reviews	Yes	Yes	Yes	Yes	Yes	Yes
Real-time Chat	WhatsApp Chat	No	Include	WhatsApp Chat	Include	Include

Table 6: Summary of Evaluation

2.5. Summery

This section provides a broad background, explaining the problem, relevant stakeholders, existing solutions, and the need for the proposed method.

3. Specification & Design

3.1. Introduction

The specification & Design of the online health and beauty product ordering system involve several key components to ensure that the platform meets user, business, and technical requirements. The system, developed using the MERN stack, offers three dashboards for admin, seller, and consumer. Also, it is structured to handle the dynamic needs of a multi-user e-commerce environment. This section outlines the system's specification and the design approach, detailing how it will meet these requirements through various architectural and technical decisions. For further understanding, refer to the use case diagram attached to the appendices. (Appendix B)

3.2. Components of the system

3.2.1. Functional Requirements

The online health and beauty product ordering system (Golden Aura) has several functional requirements. Functional requirements of the Golden Aura system are,

1. Login/ Registration Management
2. Shopping Cart Management
3. Order Processing and Checkout
4. Product Catalog, Filter, and Search
5. Reviews and Ratings
6. Real-time Communication
7. Order Management
8. Category Management
9. Product Management
10. Blog Management
11. User Management/ User Profile

These requirements are described in detail in the SRS document. SRS was attached to the appendices as Appendix-G.

3.2.2. Software components and tasks

This online health and beauty product ordering system uses several software components to facilitate seamless interaction between the three user groups of administrators, sellers, and customers. Accordingly, the following software components and tasks will be implemented:

3.2.2.1. User Login and Registration

To achieve this requirement, this feature allows users to register in the system and log in to the system easily after registering correctly in the system, ensuring the security and authentication of users. Customers can register in the system using their name, email address, and password, and after verifying the correct email address and password, they can log in to the system. Likewise, an administrator can enter the admin dashboard after correctly verifying the email address and password. Also, sellers can enter the seller's dashboard by verifying the correct email address and password after registration in the system.

3.2.2.2. Product Catalog and Search

This feature allows users to perform product checks on the system. The product catalog allows users to browse through a diverse catalog of health and beauty products. A robust search feature that uses search functionality enables users to find products based on keywords, categories, and brands. Also, with advanced filtering and sorting options, the user can find products easily.

3.2.2.3. Shopping Cart Management

This feature allows users to manage carts in the system. Here, customers are given the option to add, remove, and view the items in their shopping cart. The system then calculates the total cost of the items in the cart.

3.2.2.4. Order Processing and Checkout

This feature allows users to complete their purchase and place an order. It allows users to confirm the health and beauty product purchase and provide delivery and payment information at checkout. Thus, after ordering the health and beauty product, an email invoice will be sent to the users. Also, users can view details of all orders placed through their order section.

3.2.2.5. User Profile

This feature allows users to manage their user profiles. After registering in the system, users get a separate user profile, which they can access and update. Here, users can update their profile information, including contact details and passwords.

3.2.2.6. Category Management (Admin)

This feature allows Admin to manage the product category, including adding, updating, and removing product categories.

3.2.2.7. Product Management (Seller)

Sellers can add, update, and remove products from the product catalog using this feature.

3.2.2.8. Blog Management (Seller)

Sellers can add, update, and remove blogs from the blog catalog using this feature.

3.2.2.9. Order Management

This order management feature is crucial because it allows sellers to review, process, and fulfill orders. Also, the admin can manage orders from the time the warehouse receives the order to the time it is delivered to the customer. It is directly impacting business operations and customer satisfaction.

3.2.3. Database Component

MongoDB is an open-source document database that can hold large amounts of data and is capable of working with that data very efficiently. It is a NoSQL (not just SQL) database, as the data is not stored in tables. The reason for choosing this database management system is that it provides scalability, high performance, reliability, and flexibility.

A MongoDB database component will be needed for the proposed system to manage and store the data related to the different entities in the system. The system's primary entities are shown here, with additional entities shown in the ERD. (Appendix D)

- customers: Represents a customer of the system. The Customer entity may have the following attributes:
 - _id, name, email, password, method, createdAt, updatedAt

- products: Represents a product added by the seller in the system. The Product entity may have the following attributes:
 - _id, sellerId, name, slug, category, subcategory, brand, price, stock, discount, description, mdescription, howToUse, ingredient, shopName, images, rating, createdAt, updatedAt
- blogs: Represents a blog added by the seller in the system. The Blog entity may have the following attributes:
 - _id, sellerId, name, slug, brand, title, description, first_topic, first_description, second_topic, second_description, third_topic, third_description, fourth_topic, fourth_description, fifth_topic, fifth_description, shopName, images, createdAt, updatedAt
- banners: Represents banners added by the seller in the system. The banners entity may have the following attributes:
 - _id, productId, banner, link, createdAt, updatedAt
- categories: Represents the category of the system. categories entity may include the following attributes:
 - _id, name, image, slug, subcategories, createdAt, updatedAt
- carts: Represents the cart of the system. The cart entity may include the following attributes:
 - _id, userId, productId, quantity, createdAt, updatedAt
- wishlists: Represents the wishlist of the system. The wishlist entity may include the following attributes:
 - _id, userId, productId, name, slug, price, discount, images, rating, createdAt, updatedAt
- orders: Represents the order placed by the customer in the system. The order entity may have the following attributes:
 - _id, customerId, products, price, deliverInformation, delivery_status, date, createdAt, updatedAt
- authorders: Represents an order placed by a customer in the system, which is linked to a specific seller. The authorder entity may include the following attributes:

- _id, orderId, sellerId, products, price, payment_status, deliveryInformation, delivery_status, date, createdAt, updatedAt
- stripes: Represents the stripes payment details of the system. The stripe entity may have the following attributes:
 - _id, sellerId, stripeId, code, createdAt, updatedAt
- reviews: Represents the review of the system. The review entity may have the following attributes:
 - _id, productId, name, rating, review, date, createdAt, updatedAt
- sellerwallets:
 - _id, sellerId, amount, month, year, createdAt, updatedAt
- Myshopwallets: Represents the received payment details of the system. The myshopwallet entity may have the following attributes:
 - _id, amount, month , year, createdAt, updatedAt
- Withdrawrequests: Represents the withdraw request details of the system. The withdrawrequest entity may have the following attributes:
 - _id, sellerId, amount, status, createdAt, updatedAt
- seller_customers: Represents the seller and customer details of the system. The seller_customer entity may have the following attributes:
 - _id, myId, myFriends, createdAt, updatedAt
- seller_admin_messages: Represents the seller and admin messages of the system. The seller_admin_messages entity may have the following attributes:
 - _id, senderName, senderId, receiverId, message, status, createdAt, updatedAt
- seller_customer_messages: Represents the seller and customer messages of the system. The seller_customer_messages entity may have the following attributes:
 - _id, senderName, senderId, receiverId, message, status, createdAt, updatedAt
- admins: Represents the admin of the system. The admin entity may have the following attributes:
 - _id, email, image, name, password, role

- sellers: Represent the seller of the system. The seller entity may have the following attributes:
 - _id, name, email, password, role, status, payment, method, image, createdAt, updatedAt, shopInformation

The Entity Relationship Diagram (ERD) is attached in Appendix-E of this document. It shows the relationships between these entities in detail.

3.2.4. Hardware Components

Golden Aura system is web-based, the hardware requirements are minimal and primarily concern the servers required to host the database and application. Specifications will depend on the expected load and user base but can scale according to demand.

The computer used to develop this system has the following device specifications.

- System Type - 64-bit Microsoft Windows 10 operating system
- 11th Gen Intel Core processor, 2.40GHz 2.42 GHz
- 8 GB RAM
- Resolution – 1920 x 1080

3.3. Development Methodology

SDLC methodology is employed by software development teams so that they can quickly and cheaply produce software over a very short period.

Currently, there are several SDLC models and it was decided to use the iterative waterfall methodology which is a software development approach that combines the sequential steps of the traditional Waterfall Model with the flexibility of iterative design. [8] It allows for advancements and changes to be made at each stage of the development process, rather than staying until the end of the design.

The iterative waterfall model is pretty much the same as the traditional waterfall model. But is a modified version of the classical waterfall model. The Iterative Waterfall model is designed to incorporate some level of flexibility and iteration within its linear phases. Unlike the classic Waterfall method, where each phase is completed once before moving on to the next with no revisiting, Iterative Waterfall allows for revisiting and refining the

previous stages based on insights gained in later phases. This model attempts to combine the structured and disciplined nature of Waterfall with the adaptability of iterative development approaches. Its main difference is that an iterative waterfall model provides a feedback path from each stage to the previous stage.

The figure below illustrates the feedback paths that the iterative waterfall model introduced.

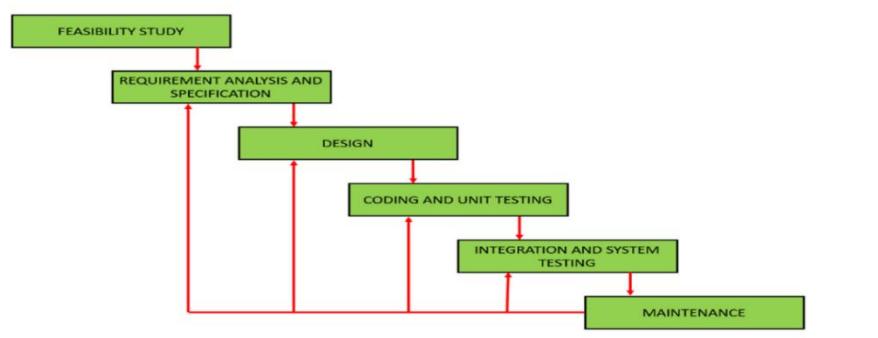


Figure 11: Iterative Waterfall Model

These feedback paths allow programmers to correct mistakes made at a particular stage if an error is detected later. A feedback path allows you to process the stage where the error passed and propagate those changes to the after stages. It's good to catch mistakes at the same stage you made them. Cut down on the time and effort needed to correct mistakes.

Advantages of Iterative Waterfall for an Online Health and Beauty Product Ordering System.

- Structured Yet Flexible

This approach retains the structured nature of Waterfall, which can be beneficial for clear documentation and milestone tracking while allowing for adjustments based on lessons learned during development.

- Risk Mitigation

By enabling revisits to earlier phases, the Iterative Waterfall model can help in identifying and mitigating risks earlier in the development process, which is crucial for complex online health and beauty product ordering system platforms.

- Incremental Testing

Since testing can be conducted in iterations, issues can be identified and addressed sooner, potentially improving the quality of the final product.

Considering all these factors, the iterative waterfall methodology was decided as suitable for the project because it allowed for flexibility in the development process by testing ideas early and frequently.

- Feasibility Analysis

Feasibility analysis mean kind of a test to get idea about weather conducting this project or not. They are 6 types of feasibility study.

- Operational feasibility - That means proposed system will be used effectively, after it has been developed.
- Technical feasibility -This is related with technical resource need to be develop purchase and install or operate the system.
- Schedule feasibility - Schedule feasibility means project can be implemented in an acceptable time frame.
- Legal feasibility - Legal feasibility means investigate whether any aspect of the proposed project conflict with legal requirements like country laws, data protection act or social media low.
- Political feasibility/ Cultural feasibility - Cultural feasibility study is investigating all the environmental factors model to the successfully carried out the proposed project.

- Requirement gathering and analyzing

It is conducted by the system analyst with input from all the stakeholders and domain experts in the industry. For the requirement gathering purpose, system analysts should have to use several facts finding techniques. Some examples of fact-finding techniques are interviews, questioners, direct observation, checking sample documents and conducting literature survey with similar system. After gathering the requirement, using above fact-finding techniques need to carefully analyses to get an idea about what are the correct

requirement for proposed online health and beauty product ordering system. After the requirements and functionality are clearly understood, they are documented in a software requirements specification document.

- System Design

System design means creating a blueprint for the proposed online health and beauty product ordering system. In this phase logically designing the system with the help of use case diagrams, class diagrams, entity relationship diagrams and other relevant diagrams. Also, in this phase sketch the user interfaces for the proposed system. After finalizing all the diagrams and the prototypes need to prepare document called software design specification.

- System Implementation

In this phase, according to the logical design need to start coding the application components using MERN stack focusing on modular and scalable development for proposed online health and Beauty product ordering system. By performing unit testing while coding, coding errors should be found.

- System Testing

In this stage, checking whether the customer requirements are there or not. Therefore, project functionality and performance are checked against the SRS document. Carries out extensive testing, such as user acceptance testing, integration testing, and unit testing, to make sure the system is error-free and meets requirements.

- System maintenance.

At this stage, the system is released and modified according to the latest design and technical trends. Also, the performance of the project is monitored. This phase is also called system support.

The proposed methodology integrates the components presented in the previous section into a clear, organized development strategy. Each stage is designed to build upon the previous one, ensuring a logical flow and thorough validation at each step. Employing the

iterative waterfall model makes the development process structured and predictable while allowing for iterative improvements and refinements.

Key Benefits.

- Clear Structure: Each stage has well-defined objectives and deliverables, ensuring clarity and focus.
- Iterative Refinement: Iterations within each stage allow for continuous improvement and adjustment based on feedback and testing results.
- Thorough Testing: Rigorous testing at multiple levels ensures the system is reliable, secure, and meets user expectations.
- Stakeholder Involvement: Regular interaction with stakeholders ensures the system aligns with their needs and expectations.

By following this methodology, the project demonstrates a comprehensive, systematic approach to developing a robust and user-friendly online health and beauty product ordering system, showcasing dedication and enthusiasm for achieving the project goals.

3.4. Technologies Adapted

This section further discusses some of the selected software components and technologies for developing the online health and beauty product ordering system using the MERN stack.

- Frontend.
 - React.js: Golden Aura system's front end will be developed using this efficient and adaptable framework. Because of its virtual DOM and component-based architecture, it is very performant, which is essential for rendering dynamic content in dashboards quickly. It also makes maintenance easier and enables for reusability.
 - MUI (Material-UI): MUI offers a collection of React components that are easy to use, adaptable, and accessible.
 - Tailwind CSS: Tailwind CSS is used to style websites in the fastest and easiest way.

- Backend
 - Node.js: This runtime environment for Golden Aura's server-side application makes it easy to create fast and scalable network applications. It is incredibly effective, lightweight, and well-suited for distributed data-intensive real-time applications.
 - Express.js: This Node.js web application framework was selected due to its effectiveness in developing mobile and web applications. It expedites and improves the efficiency of server-side development by streamlining middleware setup and routing procedures.
- Database
 - MongoDB: This Golden Aura system will handle a variety of data, including product details, user profiles, and transaction logs. MongoDB, a NoSQL database, provides flexibility in managing multiple data kinds and structures. It is very scalable and proficient in managing substantial amounts of data, both of which are critical as the user base expands.
- Communication Interaction
 - Socket.IO: This JavaScript library provides event-based, bi-directional communication that makes real-time web applications possible. It is especially crucial for putting the Golden Aura system's real-time notifications and live chat into action.
- Payment Gateway
 - Stripe Payment gateway: Stripe offers a secure and easy-to-integrate solution for processing payments within the Golden Aura application. It supports multiple payment methods and currencies, making it ideal for a global user base. The comprehensive documentation and robust security features of Stripe ensure that customer transactions are handled safely and efficiently.

- Email
 - Email using Nodemailer: Nodemailer is used in conjunction with Gmail SMTP to handle the dispatching of transactional emails, such as order confirmations. This setup ensures secure and authenticated email sending, enhancing communication reliability between the system and its users. Nodemailer's simplicity and reliability make it an excellent choice for the Golden Aura system's email needs.
- Upload Images
 - Cloudinary provides a powerful and flexible solution for managing and optimizing images in the Golden Aura application. With its easy-to-use API, developers can seamlessly integrate media uploads, transformations, and delivery into the app. Cloudinary supports a wide range of media formats and offers features like automatic optimization, responsive image delivery, and on-the-fly transformations, ensuring that users have a fast and engaging experience. The platform's scalability and robust security measures make it suitable for handling media assets securely and efficiently.
- Documentation
 - Microsoft Word
 - Star UML - Star UML software engineering tool was used to draw the diagrams.
 - Draw.io – Draw.io diagram software was used to draw the diagrams.

3.5. Designed System Interfaces

3.5.1. Golden Aura System – Customer

3.5.1.1. Home Page

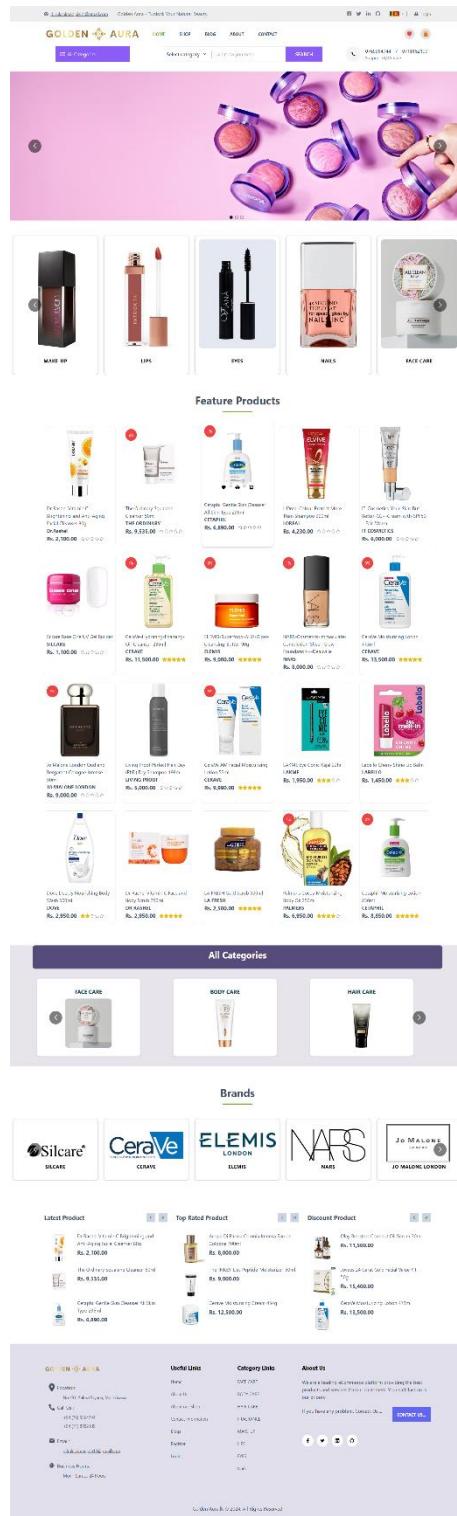


Figure 12: Golden Aura System _ Home Page

3.5.1.2. Shop Page

The screenshot shows the Golden Aura Shop Page. At the top, there's a navigation bar with links for HOME, SHOP, BLOG, ABOUT, and CONTACT. A search bar is also present. The main content area features a grid of 54 products. On the left, there are filters for Category (FACE CARE, BODY CARE, HAIR CARE, FRAGRANCE, MAKE-UP, LIPS, EYES, Nails), Brand (Dr.Rashel, THE ORDINARY, CETAPHIL, L'ORÉAL, IT COSMETICS, SHISEI, CERAVE, ELEMIS, NARS, JO MALONE LONDON, L'ANGEL, LATTELO, DONT, DR.RASHEL, LA FRESH, LA FRESH, PALMERS, ST.MAVIS, OLAY, JOVAN, GARNIER, BEAUTY OF POTOSIN, WILD SFRMS, PONDS, SISLEY, ACQUA DI PARMA, THE INNEY LIST, ICONIC, VIRTUE), Price (Rs. 575 to Rs. 15400), and Rating (5 stars down to 1 star). Below these filters, there are sections for Latest Products and a footer with links for Useful Links, Category Links, and About Us.

Figure 13: Golden Aura System _ Shop Page

3.5.1.3. Cart Page

Stock Products 2

Product	Brand	Description	Price	Quantity	Actions
AE Beauty	Cetaphil	Gentle Skin Cleanser All Skin Type 236ml	Rs. 6,822.00 Rs. 6,999.00 -1%	1	Delete
SN Beauty Care	SILCARE	Base One UV Gel Builder	Rs. 1,100.00 Rs. 1,100.00 -0%	1	Delete

Order Summary

Item	Price
2Item	Rs. 7,922.00
Delivery Fee	Rs. 170.00
Total	Rs. 8,092.00

[PROCEED TO CHECKOUT 2](#)

GOLDEN AURA

Useful Links

- Home
- About Us
- About our Shop
- Contact Information
- Blogs
- Register
- Login

Category Links

- FACE CARE
- BODY CARE
- HAIR CARE
- FRAGRANCE
- MAKE-UP
- LIPS
- EYES
- Nails

About Us

We are a leading eCommerce platform providing the best products and services for our customers. Your satisfaction is our priority.

If you have any problem, Contact Us....

[CONTACT US...](#)

Golden Aura.lk © 2024. All Rights Reserved

Figure 14: Golden Aura System _ Cart Page

3.5.1.4. Wishlist Page

The screenshot shows the Golden Aura Wishlist Page. At the top, there is a header bar with the website name "Golden Aura - 'Unlock Your Natural Beauty'" and a user profile section for "Amali Erandika". Below the header is the main navigation menu with links to HOME, SHOP, BLOG, ABOUT, and CONTACT. A search bar is also present.

The main content area displays a grid of 10 cosmetic products, each with a small image, the product name, price, and a star rating. The products include:

- The Ordinary Squalane Cleanser 50ml (Rs. 9,535.00)
- CeraVe Moisturizing Lotion 473ml (Rs. 13,500.00)
- Silcare Garden of Color - Colored Acrylic Powder - 4g (Rs. 1,190.00)
- CeraVe Moisturising Cream 454g (Rs. 12,500.00)
- L'Oréal Colour Protect More Than Shampoo 200ml (Rs. 4,230.00)
- IT-Cosmetics-Your-Skin-Better-CC+ -Cream-with-SPF50---Fair-Warm (Rs. 6,000.00)
- CeraVe Hydrating Micellar Water 296ml (Rs. 10,500.00)
- Silcare Base One UV Gel Builder (Rs. 1,100.00)
- NARS-Cosmetics-Immaculate-Complexion-Sheer-Glow-Foundation---Deauville (Rs. 8,000.00)
- Cetaphil Gentle Skin Cleanser All Skin Type 236ml (Rs. 6,890.00)

On the left side of the page, there is a sidebar with a navigation menu containing links to Dashboard, My Orders, Wishlist, Chat, Profile, and Logout. The footer contains the Golden Aura logo, useful links, category links, and an about us section. It also includes social media icons and a copyright notice: "Golden Aura.lk © 2024. All Rights Reserved".

Figure 15: Golden Aura System _ Wishlist Page

3.5.1.5. Product Details Page

The screenshot shows the product details page for the CeraVe Hydrating Foaming Oil Cleanser (236ml). The main image displays the product bottle against a background of pink flowers. The product title is "CeraVe Hydrating Foaming Oil Cleanser-236ml". Below the title, it shows a price of "Rs. 11,500.00" and a discounted price of "Rs. 11,385.00 (-1%)". A short product description highlights its ability to remove makeup and impurities while hydrating the skin. The page includes sections for "Availability" (In Stock 10), "Share on" (Facebook, Twitter, etc.), and "Buy Now" and "Chat Seller" buttons. To the right, there are recommended products: "The INKEY List Peptide Moisturizer 50ml" (Rs. 9,000.00) and "Acqua di Parma Colonia Intensa Eau de Cologne 100ml" (Rs. 8,000.00). The bottom section features a "Related Products" grid with items like ELEMIS Superfood AHA Glow Cleansing Butter, Cetaphil Gentle Skin Cleanser, and The Ordinary Squalane Cleanser.

Figure 16: Golden Aura System _ Product Details Page

3.5.1.6. Place Order Page

Delivery Details

Name	Address	
name	House no / building / street /area	
Phone	Post	
phone	post	
Province	District	City
province	district	city
Area		
area		

Save

Order Summary

Total Items - (2)	Rs. 7,922.00
Delivery Fee	Rs. 170.00
Total Payment	Rs. 8,092.00
Total	Rs. 8,092.00

PLACE ORDER

AE Beauty

Cetaphil Gentle Skin Cleanser All Skin Type 236mlSkin Brand : CETAPHIL	Rs. 6,822.00 Rs. 6,090.00 -1%
---	-------------------------------------

SN Beauty Care

Silcare Base One UV Gel BuilderSkin Brand : SILCARE	Rs. 1,100.00 Rs. 1,100.00 -0%
--	-------------------------------------

GOLDEN AURA

Useful Links

- Home
- About Us
- About our Shop
- Contact Information
- Blogs
- Register
- Login

Category Links

- FACE CARE
- BODY CARE
- HAIR CARE
- FRAGRANCE
- MAKE-UP
- LIPS
- EYES
- Nails

About Us

We are a leading eCommerce platform providing the best products and services for our customers. Your satisfaction is our priority.

If you have any problem, Contact Us... **CONTACT US...**

Golden Aura.lk © 2024. All Rights Reserved

Figure 17: Golden Aura System _ Place Order Page

3.5.1.7. Payment Page

The screenshot shows the payment page of the Golden Aura website. At the top, there's a navigation bar with links for HOME, SHOP, BLOG, ABOUT, and CONTACT. On the right side of the header, there are social media icons and contact information: 0769364744 / 0718182109, Support 33/45 time, and Amali Erandika.

The main content area features a payment form for Stripe. It includes fields for Email (you@example.com), Card number (1234 1234 1234 1234), Expiration date (MM / YY), Security code (CVC), and Country (Sri Lanka). A "Pay now" button is at the bottom of the form.

To the right of the form is an "Order Summary" box. It shows 2 items and delivery fee included, with a Total Amount of Rs. 8,092.00. The final amount shown is Rs. 8,092.00.

At the bottom of the page, there's a footer with links for Useful Links, Category Links, and About Us. The footer also contains social media icons and a copyright notice: Golden Aura.lk © 2024. All Rights Reserved.

Figure 18: Golden Aura System _ Payment Page

3.5.1.8. Customer Dashboard

The screenshot shows the customer dashboard of the Golden Aura website. The top navigation bar is identical to the payment page, with links for HOME, SHOP, BLOG, ABOUT, and CONTACT, and contact information on the right.

The left sidebar contains navigation links: Dashboard, My Orders, Wishlist, Chat, Profile, and Logout.

The main content area has four cards: "3 Orders" (with a green icon), "1 Pending Orders" (with a blue icon), "1 Cancelled Orders" (with a red icon), and a "Recent Orders" table.

ORDER ID	PRICE	PAYMENT STATUS	ORDER STATUS	ACTION
678f6ab1041b6aa0f2614c7a	Rs. 14,280.00	paid	pending	view
678f6aab041b6aa0f2614d21	Rs. 4,285.00	paid	placed	view
6799ubcb9768ebd8e0388ee	Rs. 1,185.00	unpaid	cancelled	view Pay Now

At the bottom of the dashboard, there's a footer with links for Useful Links, Category Links, and About Us, along with social media icons and a copyright notice: Golden Aura.lk © 2024. All Rights Reserved.

Figure 19: Golden Aura System _ Customer Dashboard

3.5.1.9. Customer Chat

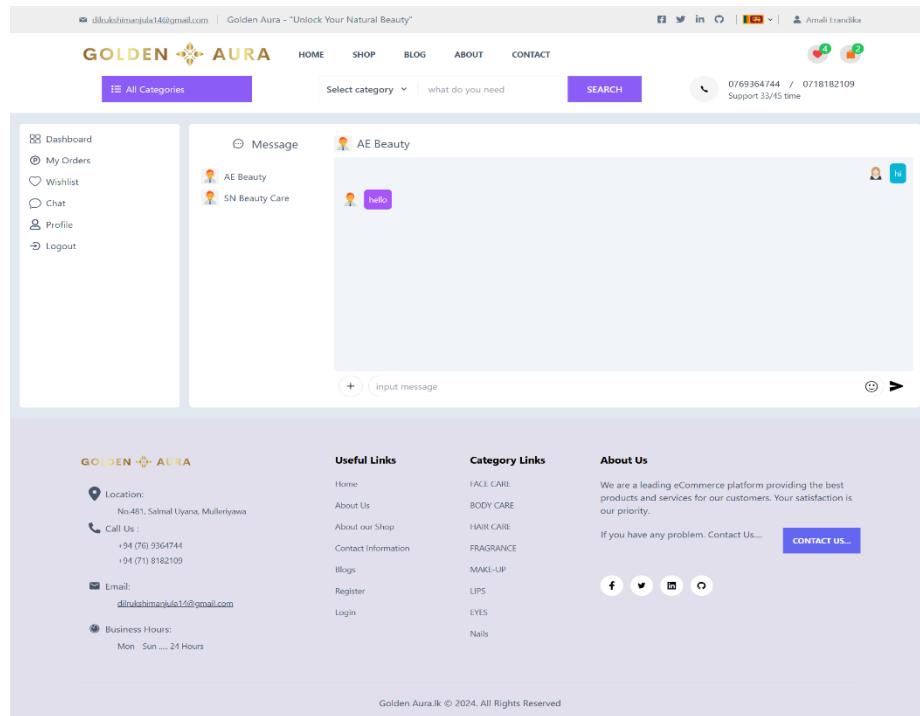


Figure 20: Golden Aura System _ Customer Chat

3.5.1.10. Customer Order Page

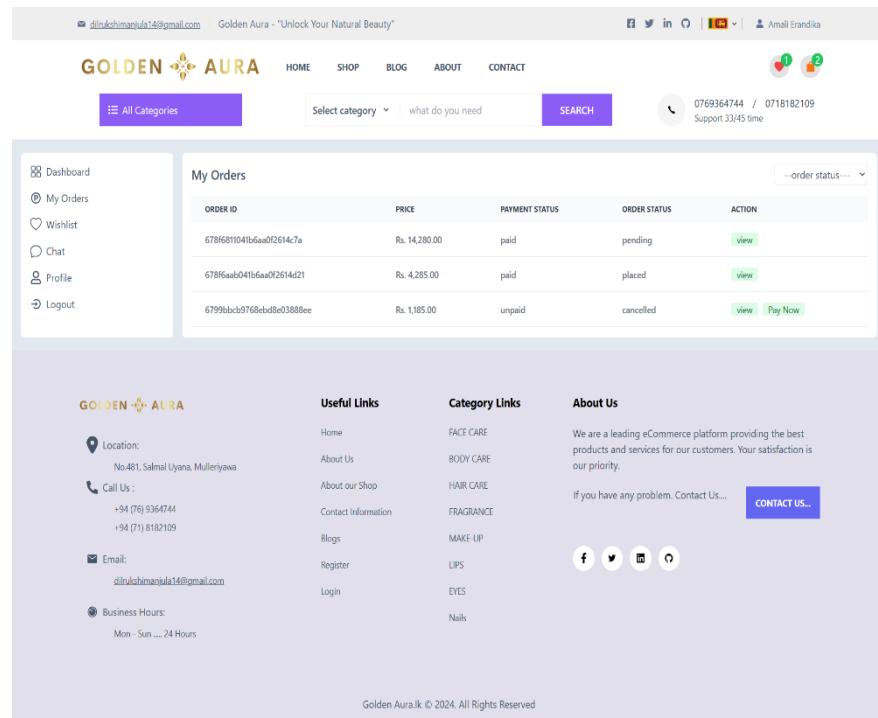


Figure 21: Golden Aura System _ Customer Order Page

3.5.1.11. Customer Profile Page

The screenshot shows the customer profile page for 'dilrukshimanjula14@gmail.com' on the Golden Aura website. The top navigation bar includes links for HOME, SHOP, BLOG, ABOUT, and CONTACT, along with social media icons and user info. A sidebar on the left provides links for Dashboard, My Orders, Wishlist, Chat, Profile, and Logout. The main content area displays 'Customer Profile Information' with fields for Name (Amali Eronika) and Email (amalieronika22@gmail.com). Below this is a 'Change Password' section with fields for Email, Old Password, New Password, and a Submit button. At the bottom, there's a footer with the Golden Aura logo, location details (No.481, Salma Uyana, Mulleriyawa), contact information (+94 (76) 9364744, +94 (71) 8182109), and email (dilrukshimanjula14@gmail.com). The footer also features Useful Links, Category Links, and an About Us section with social media icons.

Customer Profile Information

Name: Amali Eronika
Email: amalieronika22@gmail.com

Change Password

Email: email
Old Password: password
New Password: new password

Useful Links

- Home
- About Us
- About our Shop
- Contact Information
- Blogs
- Register
- Login

Category Links

- FACE CARE
- BODY CARE
- HAIR CARE
- FRAGRANCE
- MAKE-UP
- LIPS
- EYES
- Nails

About Us

We are a leading eCommerce platform providing the best products and services for our customers. Your satisfaction is our priority.

If you have any problem. Contact Us....

CONTACT US...

Golden Aura.lk © 2024. All Rights Reserved

Figure 22: Golden Aura System – Customer Profile Page

3.5.1.12. Customer Blog Page

The screenshot shows the customer blog page of the Golden Aura website. At the top, there's a header with the store name "GOLDEN AURA", navigation links for HOME, SHOP, BLOG (which is highlighted in green), ABOUT, and CONTACT, along with social media icons and user information. Below the header, a search bar and a sidebar with "All Categories" are visible. The main content area is titled "Blog" and features four blog post cards:

- Olive Oil and Your Beauty Routine - Benefits and Our Top Skincare & Haircare Products** (1/29/2025) - An image of a smiling woman. Description: This guide explores the many benefits of olive oil for skincare and haircare.
- Discover Caribbean Breeze's Ultimate Sun Protection Essentials** (12/28/2024) - An image of a woman with a sun tattoo on her shoulder. Description: Offers a range of sun care essentials to protect skin from harmful UV rays.
- How to Keep Your Skin Glowing This Season & Our Top Beauty Picks** (12/28/2024) - An image of a woman touching her face. Description: Provides skincare tips and product recommendations for the holiday season.
- Fragrance Gift Guide - Our Best Perfumes & Body Sprays** (12/28/2024) - An image of wrapped gifts. Description: Lists perfumes and body sprays suitable for gift-giving.

At the bottom, there's a footer with sections for "Useful Links", "Category Links", and "About Us", along with social media icons and a copyright notice.

Figure 23: Golden Aura System – Customer Blog Page

3.5.1.13. Customer About Page

dilrukshimanjula14@gmail.com | Golden Aura - "Unlock Your Natural Beauty"

HOME SHOP BLOG **ABOUT** CONTACT

All Categories Select category what do you need SEARCH

0769364744 / 0718182109
Support 33/45 time

About

Who We Are

Golden Aura is a cutting-edge online marketplace dedicated to delivering the best in health and beauty products. Our mission is to create a seamless shopping experience that combines convenience, quality, and trust. With a wide range of products from trusted sellers and brands, we aim to empower customers to feel confident and radiant in their daily lives.

Our Mission

To connect customers with high-quality health and beauty products while promoting sustainable practices and supporting small and medium-sized businesses.

Our Vision

To become a leader in the health and beauty e-commerce space, fostering a community where every individual feels valued and confident in their journey to wellness and beauty.

What We Offer

- Extensive Product Range: From skincare and cosmetics to wellness supplements and grooming essentials, we cater to all your health and beauty needs.

Why Choose Us?

- User-Friendly Platform: Designed with you in mind, our website is simple, secure, and efficient.
- Verified Sellers: We work only with verified sellers to ensure authenticity and quality.
- Secure Payments: Our payment system uses the Stripe payment method to keep your transactions safe.
- Customer Support with online chat: Sellers are always ready to help, ensuring you have a hassle-free experience.

Contact Us

Have questions or feedback? We'd love to hear from you! Reach out to us at:

- Email: dilrukshimanjula14@gmail.com
- Contact No: +94 (76) 9364744 / +94 (71) 8182109

Useful Links

- Location: No.481, Salma Uyana, Mulleriyawa
- Call Us: +94 (76) 9364744
+94 (71) 8182109
- Email: dilrukshimanjula14@gmail.com
- Business Hours: Mon - Sun 24 Hours

Category Links

- FACE CARE
- BODY CARE
- HAIR CARE
- Fragrance
- MAKE-UP
- LIPS
- EYES
- Nails

About Us

We are a leading eCommerce platform providing the best products and services for our customers. Your satisfaction is our priority.

If you have any problem. Contact Us... [CONTACT US...](#)

Golden Aura.lk © 2024. All Rights Reserved

Figure 24: Golden Aura System _ Customer About Page

3.5.1.14. Customer Contact Page

GOLDEN AURA

HOME SHOP BLOG ABOUT CONTACT

All Categories

Select category | what do you need

SEARCH

0769364744 / 0718182109
Support 33/45 time

Contact Us

CONTACT US

We're here to help! Reach out to us now for any inquiries or concerns.

Call Us
+94 (76) 9364744
+94 (71) 8182109

Email:
dilrukshimanjula14@gmail.com

Location:
No.481, Salmal Uyana, Mulleriyawa

Business Hours:
Mon - Sun ... 24 Hours

We'd love to hear from you - please use the form to send us your message or ideas.

Name

Email

Subject

Message

Send Message

Useful Links

- Home
- About Us
- About our Shop
- Contact Information
- Blogs
- Register
- Login

Category Links

- FACE CARE
- BODY CARE
- HAIR CARE
- FRAGRANCE
- MAKE-UP
- LIPS
- EYES
- Nails

About Us

We are a leading eCommerce platform providing the best products and services for our customers. Your satisfaction is our priority.

If you have any problem. Contact Us....

CONTACT US...

Golden Aura.lk © 2024. All Rights Reserved

Figure 25: Golden Aura System _ Customer Contact Page

3.5.1.15. Customer Register Page

The screenshot shows the customer registration page of the Golden Aura website. At the top, there is a header bar with the logo 'GOLDEN AURA', navigation links for 'HOME', 'SHOP', 'BLOG', 'ABOUT', and 'CONTACT', and social media icons for Facebook, Twitter, LinkedIn, and others. Below the header is a search bar with a placeholder 'what do you need' and a 'SEARCH' button. To the right of the search bar are two phone numbers: 0769364744 and 0718182109, along with a note about support time. The main content area features a registration form titled 'Register'. It includes fields for 'Name' (with placeholder 'name'), 'Email' (placeholder 'email'), and 'Password' (placeholder 'password'). Below these fields is a purple 'Register' button. Underneath the button, there is a link for existing users to 'Login' and another for 'Login seller account'. At the bottom of the page, there is a footer section with contact information: 'Location' (No.481, Salmal Uyana, Mulleriyawa), 'Call Us' (+94 (76) 9364744, +94 (71) 8182109), 'Email' (dilrukshimanjula14@gmail.com), and 'Business Hours' (Mon - Sun 24 Hours). The footer also contains 'Useful Links' (Home, About Us, About our Shop, Contact Information, Blogs, Register, Login) and 'Category Links' (FACE CARE, BODY CARE, HAIR CARE, FRAGRANCE, MAKE-UP, LIPS, EYES, Nails). On the right side of the footer, there is an 'About Us' section with a brief description and a 'CONTACT US...' button. Social media icons for Facebook, Twitter, LinkedIn, and others are located at the bottom right of the footer.

Figure 26: Golden Aura System _ Customer Registration Page

3.5.1.16. Customer Login Page

The screenshot shows the customer login interface of the Golden Aura website. At the top, there is a header bar with the logo 'GOLDEN AURA', navigation links for 'HOME', 'SHOP', 'BLOG', 'ABOUT', and 'CONTACT', and social media icons for Facebook, Twitter, LinkedIn, and others. Below the header is a search bar with dropdown menus for 'Select category' and 'what do you need', and a purple 'SEARCH' button. To the right of the search bar are phone support numbers (0769364744 / 0718182109) and a note about support times. The main content area features a light gray background with a central white login form. The form has fields for 'Email' and 'Password', a purple 'Login' button, and links for 'You have no account? Register' and 'Register seller account'. Below the login form is a footer section with contact information, useful links, category links, and an 'About Us' section. The footer also includes social media icons and a copyright notice.

GOLDEN AURA

HOME SHOP BLOG ABOUT CONTACT

All Categories Select category what do you need SEARCH

0769364744 / 0718182109
Support 33/45 time

Login

Email

Password

Login

You have no account ? [Register](#)
[Register](#) seller account

GOLDEN AURA

Location:
No.481, Salma Uyana, Mulleriyawa

Call Us :
+94 (76) 9364744
+94 (71) 8182109

Email:
dilrukshimanjula14@gmail.com

Business Hours:
Mon - Sun 24 Hours

Useful Links

- Home
- About Us
- About our Shop
- Blogs
- Register
- Login

Category Links

- FACE CARE
- BODY CARE
- HAIR CARE
- Fragrance
- MAKE-UP
- LIPS
- EYES
- Nails

About Us

We are a leading eCommerce platform providing the best products and services for our customers. Your satisfaction is our priority.

If you have any problem. Contact Us....

[CONTACT US...](#)

Golden Aura.lk © 2024. All Rights Reserved

Figure 27: Golden Aura System _ Customer Login Page

3.5.2. Golden Aura System – Seller

3.5.2.1. Dashboard

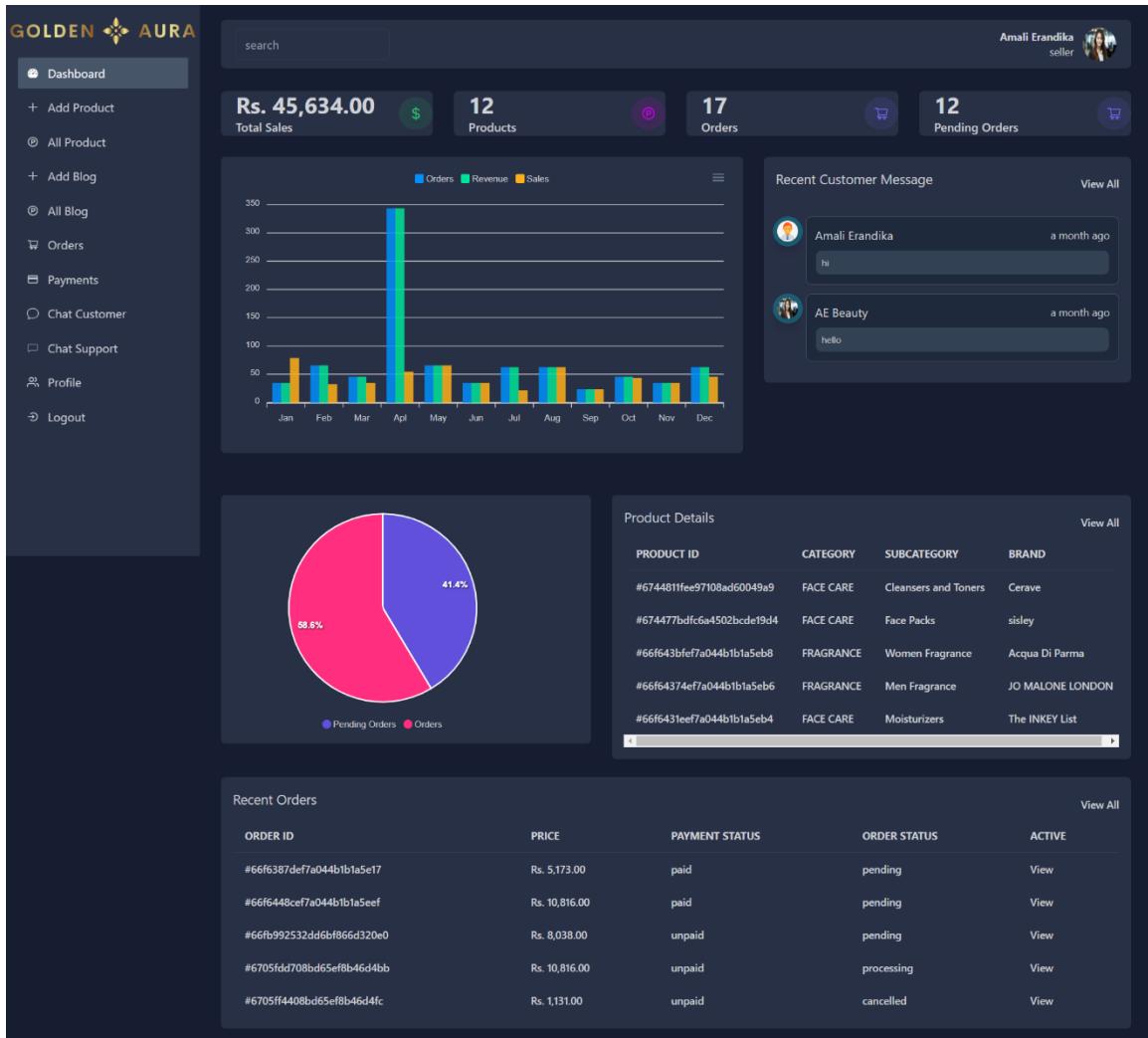


Figure 28: Golden Aura System _ Seller_Dashboard

3.5.2.2. Product Page

The screenshot shows the 'Product Page' of the Golden Aura System. The left sidebar includes links for Dashboard, Add Product, All Product, Add Blog, All Blog, Orders, Payments, Chat Customer, Chat Support, Profile, and Logout. The main area displays a table of products with the following data:

NO	IMAGE	NAME	CATEGORY	SUB-CATEGORY	BRAND	PRICE	DISCOUNT	STOCK	ACTION
1		CeraVe Hydrating...	FACE CARE	Cleansers and Toners	Cerave	Rs. 11,500.00	50%	25	edit view trash more
2		Black Rose Cream...	FACE CARE	Face Packs	Sisley	Rs. 5,000.00	1%	5	edit view trash more
3		Silcare Garden o...	NAILS	Nail Polish	Silcare	Rs. 1,190.00	no discount	20	edit view trash more
4		Silcare Base One...	NAILS	Nail Polish	Silcare	Rs. 1,100.00	no discount	20	edit view trash more
5		ICONIC London-II...	MAKE-UP	Highlighters	ICONIC	Rs. 5,500.00	1%	5	edit view trash more

Pagination at the bottom shows pages 1 through 5.

Figure 29: Golden Aura System _ Seller_Product Page

3.5.2.3. Order Page

The screenshot shows the 'Order Page' of the Golden Aura System. The left sidebar includes links for Dashboard, Add Product, All Product, Add Blog, All Blog, Orders, Payments, Chat Customer, Chat Support, Profile, and Logout. The main area displays a table of orders with the following data:

ORDER ID	PRICE	PAYMENT STATUS	ORDER STATUS	DATE	ACTION
67614dd0739215d1241eb251	Rs. 1,045.00	unpaid	processing	December 17, 2024 3:39 PM	view
675b30ba67526190bc3f51dc	Rs. 4,703.00	unpaid	cancelled	December 13, 2024 12:21 AM	view
675a935b84a14e6afdbbbf83	Rs. 1,045.00	paid	processing	December 12, 2024 1:10 PM	view
67581c8d1d30377ff9874698	Rs. 1,045.00	paid	pending	December 10, 2024 4:18 PM	view
6752eb0dfe8a9bb594cce13e	Rs. 1,131.00	paid	pending	December 6, 2024 5:46 PM	view

Pagination at the bottom shows pages 1 through 5.

Figure 30: Golden Aura System _ Seller_Order Page

3.5.2.4. Order Details Page

The screenshot shows the 'Order Details' page of the Golden Aura System for sellers. The left sidebar contains navigation links: Dashboard, Add Product, All Product, Add Blog, All Blog, Orders, Payments, Chat Customer, Chat Support, Profile, and Logout. The main content area has a search bar at the top right. Below it, the 'Order Details' section displays the Order ID: 6752eb0dfe8a9bb594cce13e, a timestamp of December 6, 2024 5:46 PM, and a status dropdown set to 'Pending'. The 'Deliver Information' section shows the delivery address as 'Golden Aura Warehouse', payment status as 'paid', and price as 'Rs. 1,131.00'. The 'Order Products' section lists a single item: 'Silcare Garden of Color - Colored Acrylic Powder - 4g' with brand 'Silcare' and quantity '1'. The top right corner shows the user profile of Amali Erandika, a seller.

Figure 31: Golden Aura System _Seller_ Order Details Page

3.5.2.5. Chat with Customer

The screenshot shows the 'Chat with Customer' page of the Golden Aura System for sellers. The left sidebar is identical to the Order Details page. The main content area features a 'Customers' list on the left with three entries: Amali Erandika, Tharuki Perera, and Kamal Perera, each with a small profile icon. To the right, a chat window is open with Amali Erandika. The message history shows Amali sending 'hi' and the seller replying with 'hello'. A message input field at the bottom allows for further communication, and a 'Send' button is visible.

Figure 32: Golden Aura System _Seller_ Chat with Customer

3.5.2.6. Chat Support

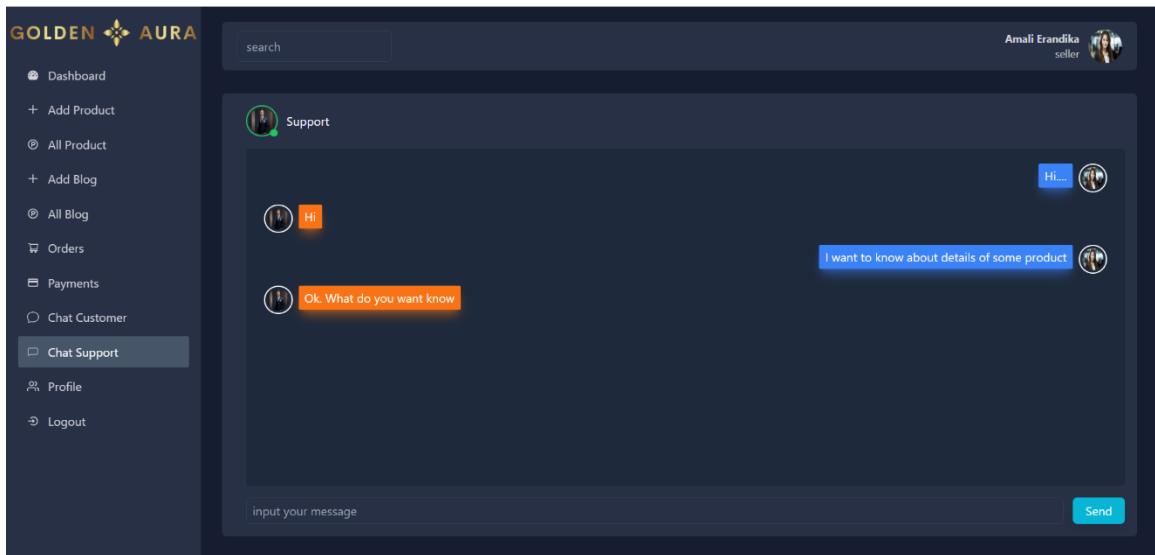


Figure 33: Golden Aura System _Seller_Chat Support

3.5.2.7. Payments

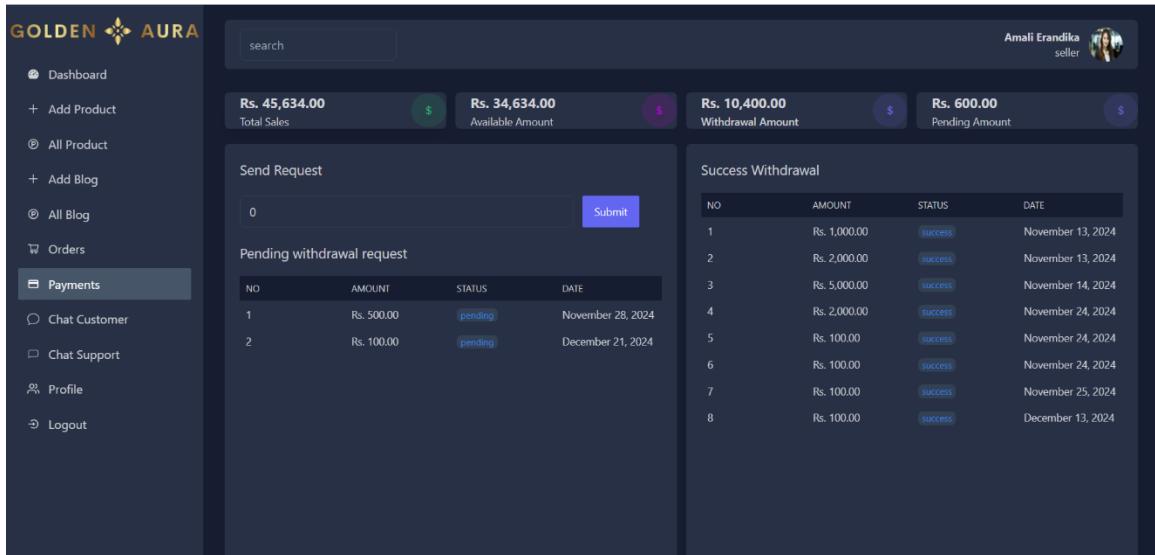


Figure 34: Golden Aura System _Seller_Payment

3.5.2.8. Profile

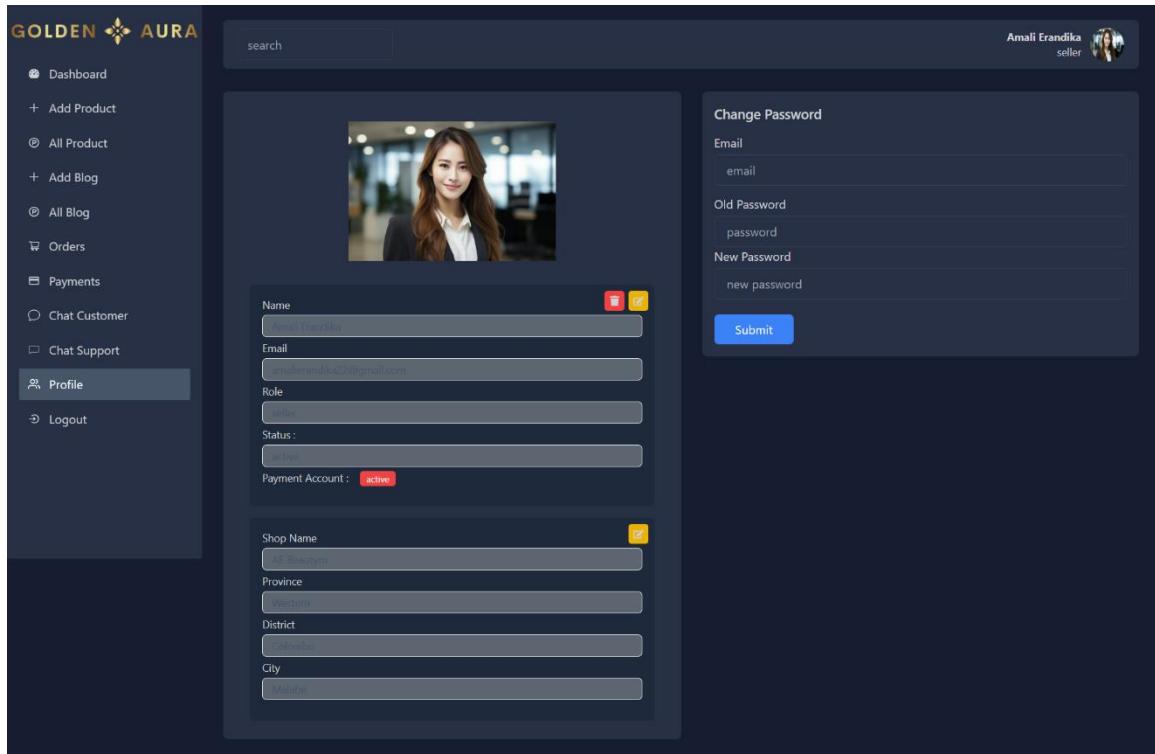


Figure 35: Golden Aura System _Seller_Profile

3.5.2.9. Seller Blog Page

The screenshot shows the 'All Blog' section of the Golden Aura System. The sidebar menu has 'All Blog' selected. The main content area displays a table of blog posts with columns for NO, IMAGE, NAME, TITLE, BRAND, and ACTION. The table contains five entries:

NO	IMAGE	NAME	TITLE	BRAND	ACTION
1		amali...	How to Keep Your Skin Glowing This Season & Our Top Beauty Picks	Caribbean Breeze	
2		amali...	How to Keep Your Skin Glowing This Season & Our Top Beauty Picks	no	
3		amali...	Fragrance Gift Guide - Our Best Perfumes & Body Sprays	no	
4		amali...	Discover Caribbean Breeze's Ultimate Sun Protection Essentials	Caribbean Breeze	
5		Shabeera Firzan ...	The Ultimate Guide to CeraVe Moisturizers for All Skin Types	Cerave	

Pagination at the bottom shows pages 1 through 5.

Figure 36: Golden Aura System _Seller_Blog Page

3.5.3. Golden Aura System – Admin

3.5.3.1. Dashboard



Figure 37: Golden Aura System _Admin_ Dashboard

3.5.3.2. Seller

NO	IMAGE	NAME	SHOP NAME	PAYMENT STATUS	EMAIL	PROVINCE	DISTRICT	ACTION
1		Sugathadasa	SN Beauty Care	active	sugathadasa56@gmail.com	Western	Colombo	
2		Amali Erandika	AE Beauty	active	amalerandika22@gmail.com	Western	Colombo	

Figure 38: Golden Aura System _Admin_ Seller View

3.5.3.3. Category

NO	IMAGE	NAME	SUBCATEGORIES	ACTION
1		EYES	Eyebrows Eyeshadows Eyeshadow Palettes Eyeliners and Pencils Mascara Kajal False Eyelashes Eye Makeup Remover Eye Accessories	
2		LIPS	Lipsticks Lip Gloss Lip Liners Lip Primers Lip Balm Foundations Bb Creams Blushers Bronzers Concealers Contouring Cc Creams Compact Powders Primers Highlighters Face Palettes Paint Cake Paint Stick Makeup Removers Tools and Accessories	
3		MAKE-UP	Women Fragrance Men Fragrance Gender Neutral Fragrance Perfumed Lotions and Creams Body Sprays and Mist Deodorant Shampoo Conditioner Hair Cream and Lotion Hair Masks Hair Styling Treatments and Oils Hair Color Dry Shampoo Accessories Hair Supplement	
4		FRAGRANCE		
5		HAIR CARE		

Figure 39: Golden Aura System _Admin_ Category

3.5.3.4. Chat with seller

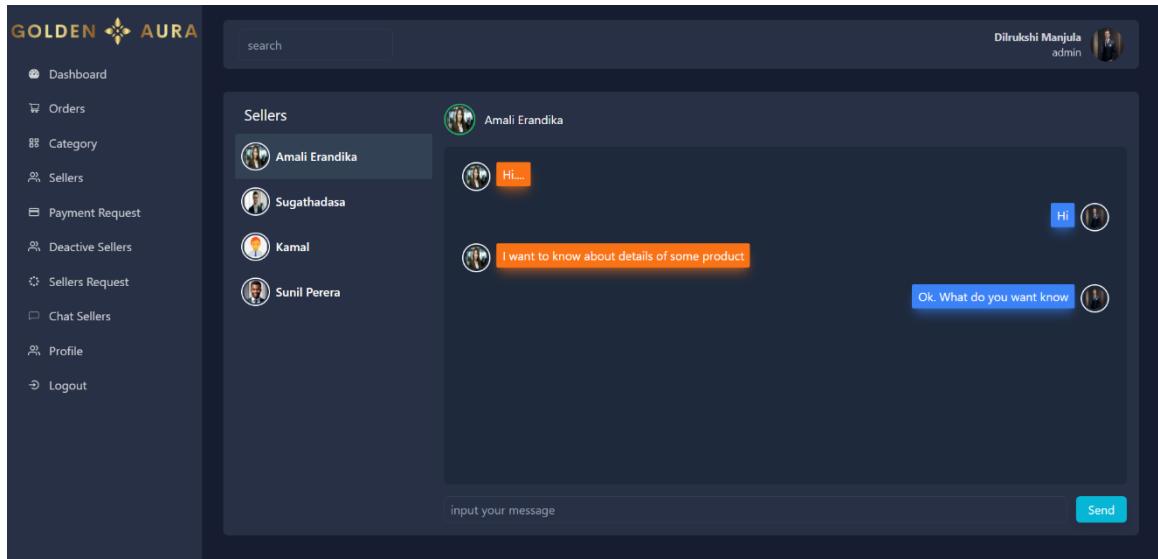


Figure 40: Golden Aura System _Admin_Chat with Seller

3.5.3.5. Order

A screenshot of the Golden Aura System Admin Order interface. The sidebar includes: Dashboard, Orders (selected), Category, Sellers, Payment Request, Deactive Sellers, Sellers Request, Chat Sellers, Profile, and Logout. The main area displays a table of orders with columns: ORDER ID, PRICE, PAYMENT STATUS, ORDER STATUS, and ACTION. The table contains several rows of order data, such as 673cb6ec89827054ccb6290c, Rs. 15,915.00, paid, pending, and a view link. At the bottom, there are pagination controls showing pages 1 through 4.

Figure 41: Golden Aura System _Admin_Order

3.5.3.6. Order Details

The screenshot shows the 'Order Details' section of the Golden Aura Admin interface. At the top right, the user 'Dilrukshi Manjula' is logged in as 'admin'. The main content area displays an order with the ID '673cb6ec89827054cbb6290c'. The order status is 'Pending' and it was placed on 'November 19, 2024 9:33 PM'. The 'Delivery Information' section includes the delivery address: 'Amali Errandika, No.4/3, Uduvumulla, Mulleriyawa Western Mulleriyawa New Town'. The 'Payment Status' is 'paid' and the 'Price' is 'Rs. 15,915.00'. The 'Order Products' section lists two items: 'Silcare Garden of Color - Colored Acrylic Powder - 4g' (Brand: Silcare, Quantity: 2) and 'CeraVe Moisturizing Lotion 473ml' (Brand: CeraVe, Quantity: 1). Below this, the 'Sub Orders' section shows two entries: 'Seller 1 order' and 'Seller 2 order', both of which are currently 'pending'.

Figure 42: Golden Aura System _Admin_Order Details

3.5.3.7. Admin Profile

The screenshot shows the 'Admin Profile' section of the Golden Aura Admin interface. On the left, the navigation menu has 'Profile' selected. The main profile area features a placeholder image of a man in a suit. Below the image, the user's details are listed: Name ('Dilrukshi Manjula'), Email ('dilrukshimanjula14@gmail.com'), and Role ('Admin'). A blue 'Save Changes' button is at the bottom. To the right, there is a 'Change Password' form with fields for 'Email' (placeholder 'email'), 'Old Password' (placeholder 'old password'), 'New Password' (placeholder 'new password'), and a 'Submit' button.

Figure 43: Golden Aura System _Admin_Profile

3.6. Summary

The Specification and Design section explains the structure and functionality of the online health and beauty product ordering system. It describes how the system meets user needs, such as browsing products, placing orders, and communicating with sellers and administrators.

The system is built using the MERN stack, with additional tools like MUI and Tailwind CSS for design, Stripe for secure payments, and Cloudinary for image uploads. Key components include software modules, a structured database, and well-designed interfaces for users, sellers, and admins.

Using the iterative waterfall methodology, the development ensured steady progress and improvements. Visual aids, like database diagrams and interface designs, help illustrate how the system's parts work together to create a user-friendly, secure, and scalable platform.

4. Implementation

4.1. Introduction

The goal of the implementation phase was to transform the system design into an actual working solution. Therefore, the implementation phase translates the high-level specifications and designs into functional components of the Online Health and Beauty Product Ordering System. The system was implemented using the MERN stack, emphasizing modularity, scalability, and user experience. This chapter highlights key implementation details, critical sections of code, challenges faced, and the strategies employed to address them.

4.2. Implementation Process

The system's implementation was structured into the following phases:

4.2.1. Frontend Development

The user interfaces (UI) were developed using React.js. The focus was on creating a responsive and intuitive interface for users to browse products, place orders, and interact with sellers. React components were used to manage the state and handle user interactions dynamically.

- Product Page

One of the critical pieces of code was the product display component, which used React hooks (`useState`, `useEffect`) to fetch and display products dynamically from the backend. The code below illustrates how we fetched product data from the API and displayed it:



```
1 const { products, totalProduct ,loader, successMessage, errorMessage,} = useSelector(state => state.product)
2
3 useEffect(() => {
4   const obj = {
5     parPage: parseInt(parPage),
6     page: parseInt(currentPage),
7     searchValue
8   }
9   dispatch(get_products(obj))
10 }, [searchValue, currentPage, parPage])
```

Figure 44: Golden Aura System _Code of fetch and display products I



```

1 {products.map((product, i) => (
2   <div key={i} className="flex flex-col justify-start gap-2">
3     {product.map((pl, j) => (
4       <Link key={j} className="flex justify-start items-start" to={`/product/details/${pl.slug}`}>
5         <img
6           src={pl.images[0]}
7           alt=""
8           style={{ width: "100px", height: "100px" }}
9         />
10        <div className="px-3 flex justify-start items-start gap-1 flex-col text-slate-600">
11          <h2>{pl.name}</h2>
12          <span className="text-lg font-bold"> {formatPrice(pl.price)}</span>
13        </div>
14      </Link>
15    )));
16  </div>
17))

```

Figure 45: Golden Aura System _Code of fetch and display products II

4.2.2. Backend Development

The backend was developed using Node.js and Express.js to build RESTful APIs. These APIs handled operations, such as user authentication, order processing, and product management.

- Product Routes



```

1 const router = require('express').Router()
2 const { authMiddleware } = require '../../../../../middlewares/authMiddleware'
3 const productController = require '../../../../../controllers/dashboard/productController'
4
5 router.post('/product-add', authMiddleware, productController.add_product)
6 router.get('/products-get', authMiddleware, productController.products_get)
7 router.get('/product-get/:productId', authMiddleware, productController.product_get)
8 router.post('/product-update', authMiddleware, productController.product_update)
9 router.post('/product-image-update', authMiddleware, productController.product_image_update);
10 router.delete('/product/delete/:productId', productController.delete_product);
11
12 module.exports = router

```

Figure 46: Golden Aura System _Code of product routes

The product API is a key part of the backend, managing operations like adding, retrieving, and updating products. The below code shows how routes are secured with authentication middleware.

4.2.3. Database Integration (MongoDB)

The database was integrated using MongoDB, a NoSQL database that stores data in flexible JSON-like documents. It designed MongoDB schemas to represent products, orders, and users, ensuring smooth data operations. Also, these MongoDB schemas have made it possible to organize this data efficiently, and retrieve this data quickly.

- Product Schema

This schema defines the fields and data types for a product, ensuring consistency when interacting with the MongoDB database. Also, Indexes were created on commonly searched fields (name, category, brand, description) to optimize query performance for product searches.



```
1 const { Schema, model } = require('mongoose');
2
3 const productSchema = new Schema({
4     sellerId: {
5         type: Schema.ObjectId,
6         required: true
7     },
8     name: {
9         type: String,
10        required: true
11    },
12    slug: {
13        type: String,
14        required: true
15    },
16    category: {
17        type: String,
18        required: true
19    },
20    subcategory: {
21        type: String,
22        required: false
23    },
24    brand: {
25        type: String,
26        required: true
27    },
28    price: {
29        type: Number,
30        required: true
31    },
32    stock: {
33        type: Number,
34        required: true
35    },
36    discount: {
37        type: Number,
38        required: true
39    },
40    description: {
41        type: String,
42        required: true
43    },
44    mdescription: {
45        type: String,
46        required: false
47    },
48    howToUse: {
49        type: String,
50        required: false
51    },
52    ingredient: {
53        type: String,
54        required: false
55    },
56    shopName: {
57        type: String,
58        required: true
59    },
60    images: {
61        type: [String],
62        required: true
63    },
64    rating: {
65        type: Number,
66        default: 0
67    }
68 }, { timestamps: true });
69
70 // Use name to search
71 productSchema.index({
72     name: 'text',
73     category: 'text',
74     brand: 'text',
75     description: 'text'
76 }, {
77     weights: {
78         name: 5,
79         category: 4,
80         brand: 3,
81         description: 2
82     }
83 });
84
85 module.exports = model('products', productSchema);
```

Figure 47: Golden Aura System _Code of products schema

4.2.4. Real-time Communication

Real-time communication between customers and sellers, seller and admin was implemented using Socket.io. This feature allows users and sellers to communicate instantly, improving the user experience and customer service.



```
1  io.on('connection', (soc) => {
2      console.log('socket server is connected...')
3
4      soc.on('add_user', (customerId, userInformation) => {
5          //console.Log(userInformation)
6          addUser(customerId, soc.id, userInformation)
7          io.emit('activeSeller', allSeller)
8          io.emit('activeCustomer', allCustomer)
9      })
10
11     soc.on('add_seller', (sellerId, userInformation) => {
12         //console.Log(userInformation)
13         addSeller(sellerId, soc.id, userInformation)
14         io.emit('activeSeller', allSeller)
15         io.emit('activeCustomer', allCustomer)
16         io.emit('activeAdmin', { status: true })
17
18     })
19
20
21     soc.on('send_seller_message', (msg) => {
22         const customer = findCustomer(msg.receiverId)
23         //console.Log(customer)
24         if (customer !== undefined) {
25             soc.to(customer.socketId).emit('seller_message', msg)
26         }
27     })
28
29     soc.on('send_customer_message', (msg) => {
30         const seller = findSeller(msg.receiverId)
31         //console.Log(seller)
32         if (seller !== undefined) {
33             soc.to(seller.socketId).emit('customer_message', msg)
34         }
35     })
36 }
```

Figure 48: Golden Aura System _Code of Customer and Seller Chat

4.2.5. Testing and Debugging

After developing the system's components, testing and debugging were crucial. After testing was done to ensure everything worked as expected. Bugs were identified and fixed, and the overall performance was optimized to ensure smooth operation of the system.

4.3. Key Functional Components.

4.3.1. Authentication and Authorization

The System authentication is handled using JSON Web Tokens (JWT) for secure access, and there is role-based authorization to restrict features based on user type (admin, seller, customer).

Critical Section of Code: JWT Implementation



```
1 const jwt = require('jsonwebtoken');
2
3 module.exports.authMiddleware = async (req, res, next) => {
4     const { accessToken } = req.cookies;
5     if (!accessToken) {
6         return res.status(409).json({ error: "Please login first" });
7     } else {
8         try {
9             const deCodeToken = await jwt.verify(accessToken, process.env.SECRET);
10            req.role = deCodeToken.role;
11            req.id = deCodeToken.id;
12            next();
13        } catch (error) {
14            return res.status(409).json({ error: "Invalid token" });
15        }
16    }
17};
```

Figure 49: Golden Aura System _Code of JWT Implementation

This middleware was critical for securing routes, ensuring that only authenticated users could access sensitive data like order details, product details or dashboard functionalities.



```
 1 const router = require('express').Router()
 2 const { authMiddleware } = require('../middlewares/authMiddleware')
 3 const productController = require('../controllers/dashboard/productController')
 4
 5 router.post('/product-add', authMiddleware, productController.add_product)
 6 router.get('/products-get', authMiddleware, productController.products_get)
 7 router.get('/product-get/:productId', authMiddleware, productController.product_get)
 8 router.post('/product-update', authMiddleware, productController.product_update)
 9 router.post('/product-image-update', authMiddleware, productController.product_image_update);
10 router.delete('/product/delete/:productId', productController.delete_product);
11
12 module.exports = router
```

Figure 50: Golden Aura System _Code of Product Routes with Auth Middleware

4.4. Challenges and Solutions

- Database Design Complexity: Designing schemas to handle relationships among users, products, orders, and chats another challenge. For solve this adopted a NoSQL approach with referenced documents for flexibility and scalability.
- Backend Database Integration: One issue we encountered was the initial difficulty in setting up MongoDB due to connection issues. This was resolved by adjusting the configuration settings and ensuring the database was properly connected.
- WebSocket Communication: Initially, the WebSocket server was slow in handling multiple connections, so optimized the code and added error handling to ensure stable communication even under load.
- UI Responsiveness: There were challenges in making the UI responsive across different devices, which were addressed using CSS media queries and testing on various screen sizes.

4.5. Summary

The implementation phase successfully translated the system's design into a fully functional online platform. Despite challenges with real-time communication, the use of modern technologies such as WebSockets, Redux, and MongoDB allowed the system to meet both functional and non-functional requirements efficiently. Also, each component aligns with the project's specifications and design goals, ensuring an intuitive and secure platform for all user types.

5. Results and Evaluation

5.1. Introduction

The Online Health and Beauty Product Ordering System achieved most of the intended goals. The implemented system includes key functionalities such as user authentication, product browsing, filtering, a dynamic dashboard for admins, sellers, and consumers, and a real-time chat feature. Tests and evaluations were carried out to ensure that the system is functioning well in its current state, thereby identifying existing problems and shortcomings and taking steps to resolve them. Thus, this section will provide a good understanding of the areas that meet the expectations of the project, the areas that need to be improved, and the changes that need to be made in the future.

5.2. Achievement and Goals Met

- Multi-Dashboard Functionality
 - Customer Dashboard: Customers can browse products, filter products, view product details, view blog details, write reviews, place orders, manage their accounts, and chat with sellers in real time.
 - Seller Dashboard: After activating the seller dashboard, sellers can manage products, manage orders, respond to customer inquiries accurately through online chat in real time, chat with admin in real time, request the admin to give them the money they need from the proceeds from product sales, manage their profile, and monitor platform activity.
 - Admin Dashboard: Administrators can manage product categories, manage sellers by activating and deactivating sellers, chat online with sellers, manage orders, confirm sellers' money requests, and monitor platform activity.

All critical functionality, such as authentication, product management, blog management, product category management, seller management, order management, online payment, and chat work as intended.

- Responsive Design

The platform adapts to various device types ensuring a smooth user experience across desktops, tablets, and mobile devices.

5.3. Test and deployment plan

The test plan for the Online Health and Beauty Product Ordering System is done to ensure that all components of the system operate within specifications in terms of functionality, usability, and performance. The testing methodology is structured into several stages, each targeting different aspects of the system.

- Test Methods

- Component Testing - Unit/Component testing is type of a software testing is to validate that each unit of software code perform as expected. Use component testing frameworks for backend and frontend components.
- Integration Testing - After the completion of unit testing, units are to be integrated, and the functionality of the integrated component is checked. Conduct integration testing to ensure that different parts of the application work together as expected. Also, testing will focus on data flow between the database, server, and client, as well as between individual components within the backend and frontend.
- System Testing - System testing is used to verify that the complete system functions according to the business requirements. This will include testing all features as a whole, including admin management, seller interactions, and customer functionalities.
- User Acceptance Testing - User acceptance testing is used to confirm that the system meets the user requirements and is ready for live deployment. So selected end users (admins, sellers, and customers) will test the system to validate the user experience, UI/UX elements, and overall system performance in a production-like environment.
- Performance Testing - Performance testing eliminates the reason behind the slow and limited performance of the software. To ensure the system

performs well under expected and peak load conditions, simulate multiple users interacting with the system to test responsiveness and stability.

The process of making the system available use to end users is known as deployment. The deployment strategy for this project will look like this:

- A user manual is provided to ensure ease of use of the Golden Aura system for users.

5.4. Test Cases

Project Name: Online Health and Beauty Product Ordering System (Golden Aura System)

Module Name: Check functionality

Created by: Ganhewage G.D.M. (E1946325)

Date of creation: 25/11/2024

5.4.1. Test Cases for Customer Registration and Login

Test Case Id	Test Description	Prerequisite	Test Steps	Input Data	Expected Result.
TC_OS_01	Customer Registration	Direct to the online health and beauty product ordering system new customer registration page	1. Browse the website. 2. Click on the login icon. 3. Click Register link inside the login page. 4. Fill out the registration form. 5. Click on the Register button.	Relevant details (name, email, and password) in the registration form.	Customer should be registered successfully.

TC_OS_0 1	Customer registration with invalid data type	Direct to the online health and beauty product ordering system's new customer registration page.	<ol style="list-style-type: none"> Browse the website. Click on the login icon. Click Register link inside the login page. Fill out the registration form using an invalid data type. Click on the Register button. 	Fill in customer details using an invalid data type.	Unsuccessful registration. Fill all the data in the expected field with the correct data type.
TC_OS_0 1	Missing compulsory field in registration form	Direct to the online health and beauty product ordering system's new customer registration page.	<ol style="list-style-type: none"> Browse the website. Click on the login icon. Click Register link inside the login page. When fill the registration form using the missing compulsory field, try to click on the 	Fill out the form by missing the compulsory field.	Warning message to inform the missing field.

			submit button.		
TC_OS_02	Enter a valid email and valid password	Registered customers	<ol style="list-style-type: none"> 1. Browse the website. 2. Click on the login icon. 3. Enter a valid email and password. 4. Click on the Login button. 	Valid customer email and valid password	Display the home page of the system's customer dashboard
TC_OS_02	Enter valid email and invalid password	Registered customers	<ol style="list-style-type: none"> 1. Browse the website. 2. Click on the login icon. 3. Enter valid email and invalid password. 4. Click on the Login button. 	Valid customer email and invalid password	"Password Wrong" error message should be displayed.
TC_OS_02	Enter invalid email and valid password	Registered customers	<ol style="list-style-type: none"> 1. Browse the website. 2. Click on the login icon. 3. Enter invalid email and valid password. 	Enter invalid customer email and valid password	"Email Not Found" error message should be displayed.

			4. Click on the submit button.		
TC_OS_02	Enter invalid email and invalid password	Registered customers	1. Browse the website. 2. Click on the login icon. 3. Enter invalid email and invalid password. 4. Click on the Login button.	Enter invalid email and invalid password	“Email Not Found” error message should be displayed.
TC_OS_03	Seller Registration	Direct to the online health and beauty product ordering system new seller registration page	1. Browse the website. 2. Click on the login icon. 3. Click Seller Register link inside the customer login page. 4. Fill out the registration form. 5. Click on the SignUp button.	Relevant details (name, email, and password) in the registration form.	Seller should be registered Successfully.
TC_OS_03	Seller registration	Direct to the online health and	1. Browse the website.	Fill in seller details	Unsuccessful registration. Fill all the

	with invalid data type	beauty product ordering system's new seller registration page.	<p>2. Click on the login icon.</p> <p>3. Click Seller Register link inside the customer login page.</p> <p>4. Fill out the registration form using an invalid data type.</p> <p>5. Click on the Register button.</p>	using an invalid data type.	data in the expected field with the correct data type.
TC_OS_0 3	Missing compulsory field in registration form	Direct to the online health and beauty product ordering system's new seller registration page.	<p>1. Browse the website.</p> <p>2. Click on the login icon.</p> <p>3. Click Seller Register link inside the customer login page.</p> <p>4. When fill the registration form using the missing compulsory field, try to click on the</p>	Fill out the form by missing the compulsory field.	Warning message to inform the missing field.

			submit button.		
TC_OS_04	Enter a valid email and valid password	Registered seller	<ol style="list-style-type: none"> 1. Browse the website. 2. Click on the login icon. 3. Click Seller Login link inside the customer registration page. 4. Enter a valid email and password. 5. Click on the Login button. 	Valid seller email and valid password	Redirect to the seller dashboard
TC_OS_04	Enter valid email and invalid password	Registered seller	<ol style="list-style-type: none"> 1. Browse the website. 2. Click on the login icon. 3. Click Seller Login link inside the customer registration page. 4. Enter valid email and 	Valid seller email and invalid password	"Password Wrong" error message should be displayed.

			invalid password. 5. Click on the Login button.		
TC_OS_0 4	Enter invalid email and valid password	Registered seller	1. Browse the website. 2. Click on the login icon. 3. Click Seller Login link inside the customer registration page. 4. Enter invalid email and valid password. 5. Click on the submit button.	Enter invalid seller email and valid password	“Email Not Found” error message should be displayed.

TC_OS_0 4	Enter invalid email and invalid password	Registered seller	<ol style="list-style-type: none"> 1. Browse the website. 2. Click on the login icon. 3. Click Seller Login link inside the customer registration page. 4. Enter invalid email and invalid password. 5. Click on the Login button. 	Enter invalid email and invalid password	“Email Not Found” error message should be displayed.
--------------	--	-------------------	---	--	--

Table 7: Test Cases for Login and Registration management

5.4.2. Test Cases for Product Search

Test Case Id	Test Description	Prerequisite	Test Steps	Input Data	Expected Result.
TC_OS_05	Verify the search functionality works when searching by product name	Products exist in the database with known names.	<ol style="list-style-type: none"> 1. Browse the website. 2. Go to the search bar on the website. 3. Type the name of an existing product. 4. Press the search button. 	Name of an existing product (e.g., "Moisturizer")	Products with the specified name or similar matches are displayed.
TC_OS_05	Verify the search functionality works when searching by category (e.g., "Skincare").	Products are categorized by categories in the database.	<ol style="list-style-type: none"> 1. Browse the website. 2. Select the category name in the dropdown. 	Select category name	All products belonging to the specified subcategory are displayed.

			down list. 3. Press the search button.		
TC_OS_0 5	Verify the search functionality works when searching by brand name.	Products are tagged with a brand name in the database.	1. Browse the website. 2. Enter a brand name in the search bar. 3. Press the search button	Brand name of an existing product.	Products from the specified brand are displayed.
TC_OS_0 5	Verify the search with partial keywords (e.g., "Moist" for "Moisturizer").	Products with similar names exist in the database.	1. Browse the website. 2. Type partial keyword s into the search bar. 3. Press the search button.	Partial keywords (e.g., "Moist" for "Moisturizer") .	Products with names matching the partial keywords are displayed.

TC_OS_05	Verify behavior when no products match the search query.	Database does not contain products matching the query.	<ol style="list-style-type: none"> 1. Browse the website. 2. Enter a random or non-existent keyword in the search bar. 3. Press the search button. 	Random or non-existent keyword.	website not show any product.
----------	--	--	---	---------------------------------	-------------------------------

Table 8: Test Cases for Product Search

5.4.3. Test Cases for Product Sort and Filtering

Test Case Id	Test Description	Prerequisite	Test Steps	Input Data	Expected Result.
TC_OS_06	Verify filtering products by a specific price range.	Products with varying prices exist in the database.	<ol style="list-style-type: none"> Browse the website. Navigate to the 'Shop' page. Set a price range filter (e.g., Rs. 1,100 – Rs.13,735). 	Set a price range.	Only products within the specified price range are displayed.
TC_OS_06	Verify filtering products by specific rating.	Various ratings available in the product database.	<ol style="list-style-type: none"> Browse the website. Navigate to the 'Shop' page. Select the specific rating from the filter option. 	Select specific rating	Only products within the specified rating are displayed.
TC_OS_06	Verify filtering products by category (e.g., "Hair Care").	Products are categorized by type in the database.	<ol style="list-style-type: none"> Browse the website. Navigate to the 'Shop' page. Select a category from the 	Select a category.	Only products from the selected category are displayed.

			filter options.		
TC_OS_06	Verify filtering products by sub category (e.g., "Shampoo").	Products from multiple sub categories exist in the database.	<ol style="list-style-type: none"> 1. Browse the website. 2. Navigate to the 'Shop' page. 3. Select a specific sub category from the filter options. 	Select sub category.	Only products from the selected sub category are displayed.
TC_OS_06	Verify combining filters (e.g., category + price range + rating).	Products meet the conditions of combined filters in the database.	<ol style="list-style-type: none"> 1. Browse the website. 2. Navigate to the 'Shop' page. 3. Select a category or subcategory 4. Set a price range 5. Select specific rating. 	Select category, subcategory, , price and rating	Only products that belong to the selected category or subcategory , fall within the specified price range and rating are displayed.

TC_OS_06	Verify behavior when no products match the applied filters.	Database does not contain products meeting the filter conditions.	1. Browse the website. 2. Navigate to the 'Shop' page. 3. Apply filters that do not match any products.	Apply filters that do not match any products.	website not show any product.
TC_OS_07	Verify sorting products by price in ascending order.	Products exist in the database with varying prices	1. Browse the website. 2. Navigate to the 'Shop' page. 3. Select the "Sort by Price: Low to High" option from the sorting dropdown.	Sorting criteria: Price: Low to High.	Products are displayed in ascending order of price.
TC_OS_07	Verify sorting products by price in descending order.	Products exist in the database with varying prices.	1. Browse the website. 2. Navigate to the 'Shop' page. 3. Select the "Sort by Price: High to Low"	Sorting criteria: Price: High to Low.	Products are displayed in descending order of price .

			option from the sorting dropdown.		
--	--	--	---	--	--

Table 9 : Test Cases for Product Sort and Filtering

5.4.4. Test Cases for Cart

Test Case Id	Test Description	Prerequisite	Test Steps	Input Data	Expected Result.
TC_OS_08	Verify that a single product can be added to the shopping cart.	1. Registered Customer 2. Products are available in the catalog.	1. Browse the website. 2. Login to the system. 3. Select a product and click the "Add to Cart" icon. 4. Open the shopping cart.	Select product data. - (name, brand, price, quantity, shop name...)	The selected product is displayed in the cart with correct details A pop-up message appears “Product added to cart successfully”
TC_OS_08	Verify that more than one product	1. Registered Customer	1. Browse the website.	Select product data. -	All selected products are

	can be added to the cart.	2. Products are available in the catalog.	2. Login to the system. 3. Select a product and click the "Add to Cart" icon. 4. Add another product in to the cart. 5. Open the shopping cart.	(name, brand, price, quantity, shop name...)	displayed in the cart. The total price of the all items.
TC_OS_0 8	Verify that the quantity of a product in the cart can be updated.	A product is already added to the cart.	1. Browse the website. 2. Login to the system. 3. Select a product and click the "Add to Cart" icon. 4. Add multiple	product data. - (name, brand, price, quantity, shop name...) Click quantity button (Increment or	The cart updates the quantity of the selected product with pop-up message. “Quantity Decrement Success/ Quantity Increment Success”.

			<p>products to the cart.</p> <p>5. Open the shopping cart.</p> <p>6. Change the quantity of a product</p>	Decrement)	The subtotal reflects the updated quantity.
TC_OS_08	Verify that a product can be removed from the cart.	A product is already added to the cart.	<p>1. Browse the web site.</p> <p>2. Login to the system.</p> <p>3. Select a product and click the "Add to Cart" icon.</p> <p>4. Add multiple products to the cart.</p> <p>5. Open the shopping cart.</p>	<p>product data. - (name, brand, price, quantity, shop name...)</p> <p>Click the delete button.</p>	<p>The selected product is removed from the cart and pop-up message appears, "Product Remove form Cart Successfully."</p> <p>The total price is updated accordingly.</p>

			6. Click the "Remove" button for a product.		
TC_OS_0 8	Verify that duplicate products cannot be added to the cart.	1. Registered Customer. 2. The product is already in the cart.	1. Browse the website. 2. Login to the system. 3. Attempt to add same product to the wishlist again.	product data. - (name, brand, price, quantity, shop name...)	An pop-up message is displayed “Product already added to cart”
TC_OS_0 8	Verify the behavior when the cart is empty.	No products are in the cart.	1. Browse the website. 2. Login to the system. 3. Open the shopping cart.	-	The cart displays “Shop Now” button. No subtotal or checkout button is shown.

TC_OS_08	Verify that the cart summary displays correct information .	Products are added to the cart.	4. Browse the website. 5. Login to the system. 6. Select a product and click the "Add to Cart" icon. 7. Open the shopping cart.	product data. - (name, brand, price, quantity, shop name...)	The cart summary shows the total price, subtotal, shipping charges.
TC_OS_08	Verify that the cart data persists for logged-in users after logging out and back in.	1. Registered Customer 2. Products are added to the cart.	1. Log out of the account. 2. Log back in. 3. Open the shopping cart.	product data. - (name, brand, price, quantity, shop name...)	The cart retains all previously added products.

Table 10: Test Cases for Cart

5.4.5. Test Cases for Wishlist

Test Case Id	Test Description	Prerequisite	Test Steps	Input Data	Expected Result.
TC_OS_09	Verify that a user can add a product to the wishlist.	1. Registered Customer 2. Product is available in the catalog.	1. Browse the website. 2. Login to the system. 3. Select a product and click the "Add to Wishlist" icon.	product data. - (name, price)	The product is successfully added to the wishlist. A pop-up message appears “Product added to wishlist successfully”
TC_OS_09	Verify that a customer can view the products added to the wishlist.	1. Registered Customer 2. Customer has added at least one product to their wishlist.	1. Browse the website. 2. Login to the system. 3. Select a product and click the "Add to Wishlist" icon. 4. Open the Wishlist.	product data. - (name, price)	The wishlist displays all added products with details such as name, price, and discount.
TC_OS_09	Verify that a customer can remove a product from the wishlist.	1. Registered Customer	1. Browse the website.	product data. -	The product is removed

	can remove a product from the wishlist.	2. The wishlist contains at least one product.	2. Login to the system. 3. Open the Wishlist. 4. Select the product to be deleted and click on the "Remove" icon.	(name, price)	from the wishlist. A pop-up message appears, "Product removed from wishlist successfully"
TC_OS_09	Verify that a user can navigate to the product details page.	1. Registered Customer 2. The wishlist contains at least one product.	1. Browse the website. 2. Login to the system. 3. Open the Wishlist. 4. Select the product to view details and click on the "view" icon.	product data. - (name, price)	Navigate to the product details page
TC_OS_09	Verify that duplicate products cannot be added to the wishlist.	3. Registered Customer. 4. The product is already in the wishlist.	4. Browse the website. 5. Login to the system. 6. Attempt to add same product to	product data. - (name, price)	An pop-up message is displayed "Product already added to your wishlist"

			the wishlist again.		
TC_OS_09	Verify that the wishlist persists after the user logs out and logs back in.	1. User has added products to the wishlist. 2. User logs out of the account.	1. Log in as the user again. 2. Open the Wishlist Page	Email, passowrd	The previously added products are still present in the wishlist.

Table 11: Test Cases for Wishlist

5.5. Test Data and Test Result

5.5.1. Login Verification

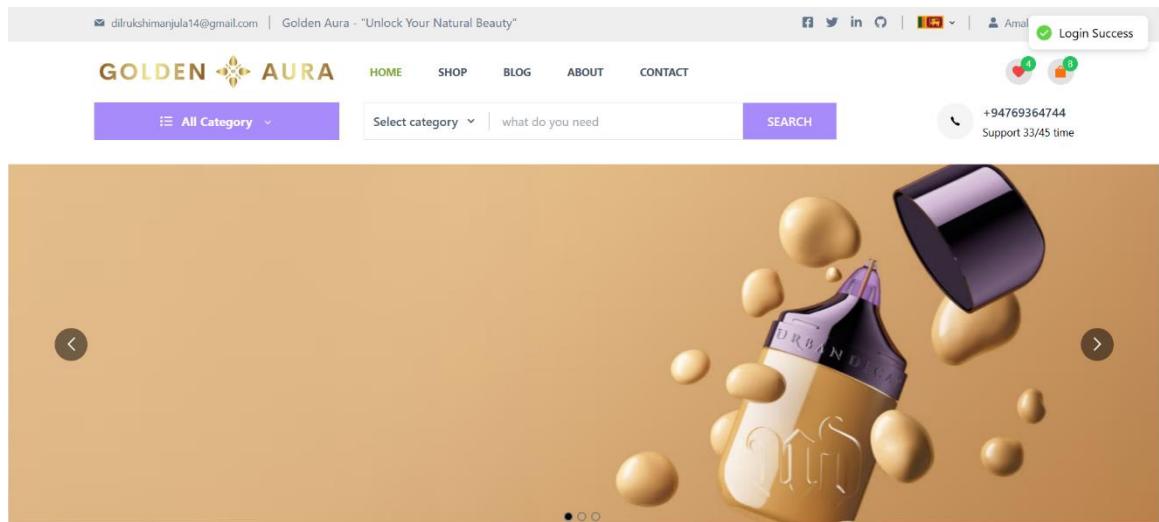


Figure 51: Golden Aura System _Customer Login Success Message

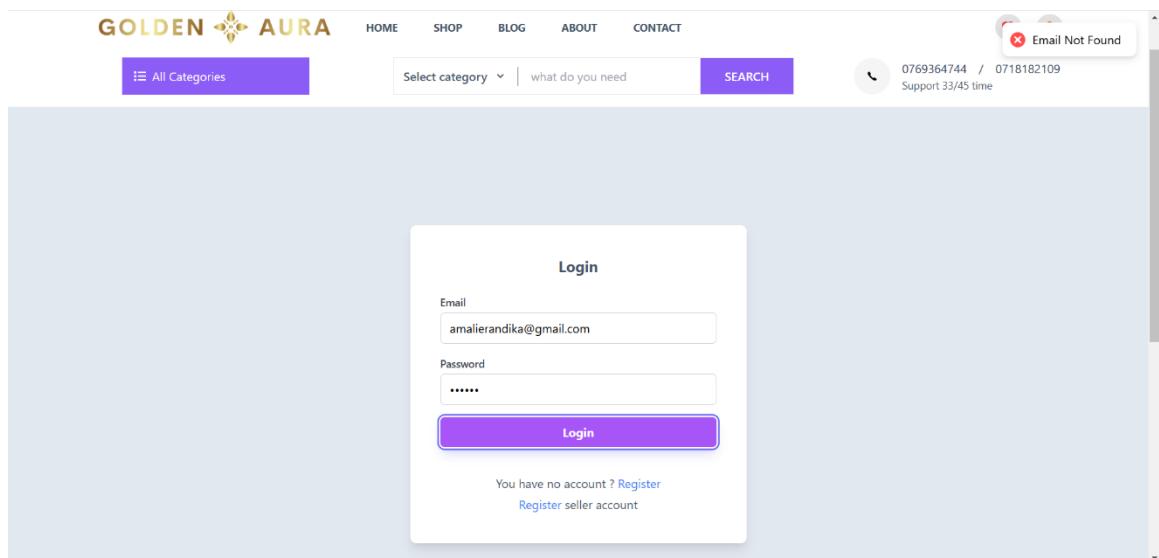


Figure 52: Golden Aura System _Customer Invalid Login Message (Email Wrong)

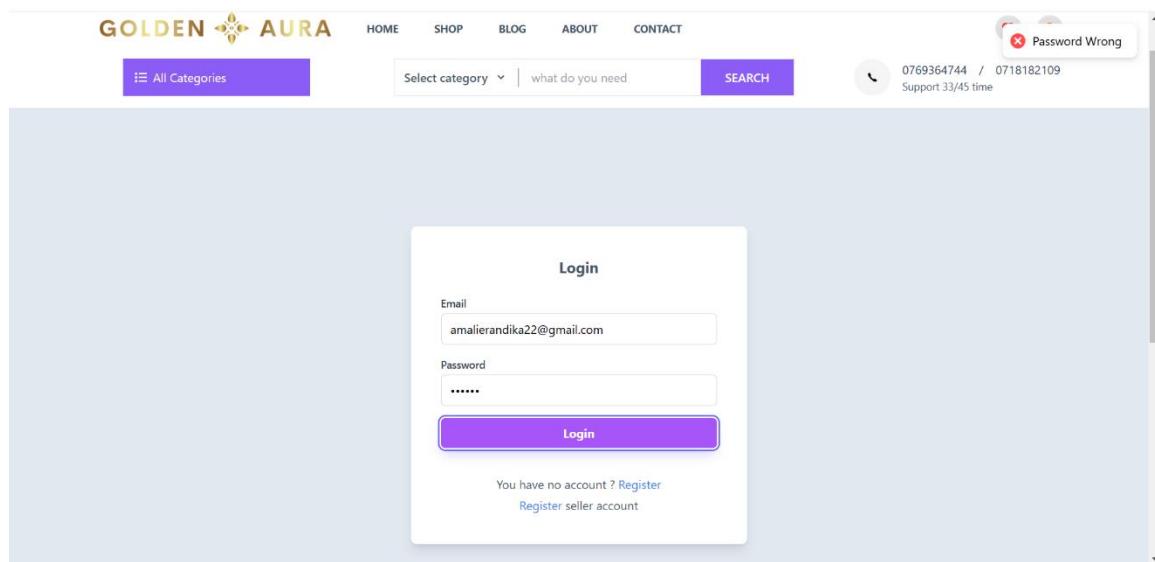


Figure 53: Golden Aura System _ Customer Invalid Login Message (Password Wrong)

5.5.2. Cart

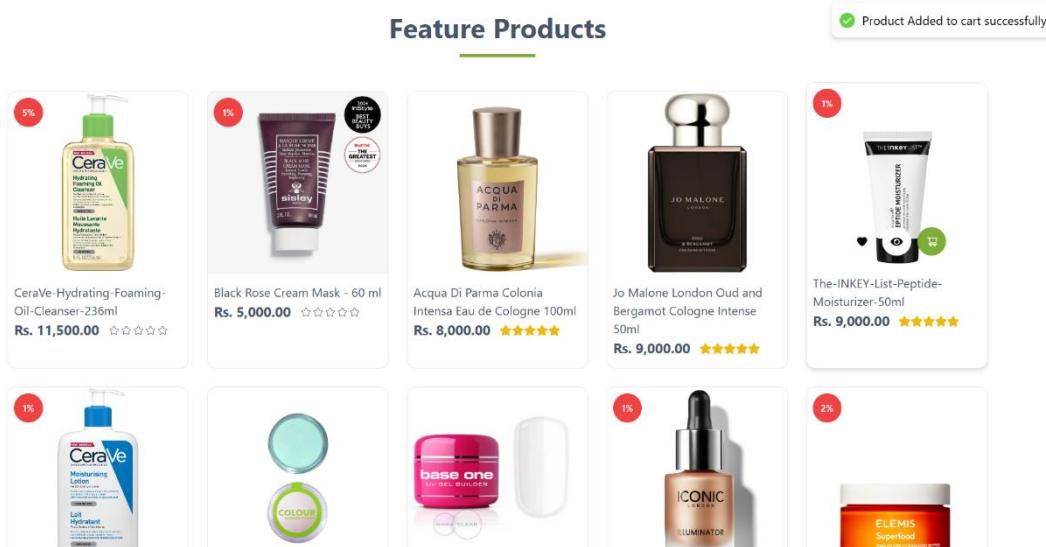


Figure 54: Golden Aura System _ Receiving success message when adding product to cart

Golden_Aura
Home > Cart

Quantity Increment Success

Stock Products 2

Category	Product Details	Price	Quantity	Action
SN Beauty Care	Brand : Acqua Di Parma Colonia Intensa Eau de Cologne 100ml Acqua Di Parma	Rs. 8,000.00 Rs. 0,000.00 -0%	- 1 +	Delete
SN Beauty Care	Brand : Jo Malone London Oud and Bergamot Cologne Intense 50ml JO MALONE LONDON	Rs. 9,000.00 Rs. 0,000.00 -0%	- 1 +	Delete
SN Beauty Care	Brand : CeraVe AM Facial Moisturizing Lotion 52ml Cerave	Rs. 9,791.00 Rs. 0,000.00 -2%	- 2 +	Delete

Order Summary

Item	Rs. 41,532.00
Delivery Fee	Rs. 170.00
Total	Rs. 41,702.00

Input Voucher Coupon APPLY
PROCEED TO CHECKOUT 5

Figure 55: Golden Aura System _ Receiving message when product increment is success

Golden_Aura
Home > Cart

Product Remove from Cart Successfully

Stock Products 2

Category	Product Details	Price	Quantity	Action
SN Beauty Care	Brand : Acqua Di Parma Colonia Intensa Eau de Cologne 100ml Acqua Di Parma	Rs. 8,000.00 Rs. 0,000.00 -0%	- 2 +	Delete
SN Beauty Care	Brand : Jo Malone London Oud and Bergamot Cologne Intense 50ml JO MALONE LONDON	Rs. 9,000.00 Rs. 0,000.00 -0%	- 1 +	Delete
SN Beauty Care	Brand : CeraVe AM Facial Moisturizing Lotion 52ml Cerave	Rs. 9,791.00 Rs. 0,000.00 -2%	- 1 +	Delete

Order Summary

Item	Rs. 39,741.00
Delivery Fee	Rs. 170.00
Total	Rs. 39,911.00

Input Voucher Coupon APPLY
PROCEED TO CHECKOUT 5

Figure 56: Golden Aura System _ Receiving message when product is removed from cart



Feature Products



Figure 57: Golden Aura System – Receiving message when product is already added to the cart

5.5.3. Wishlist

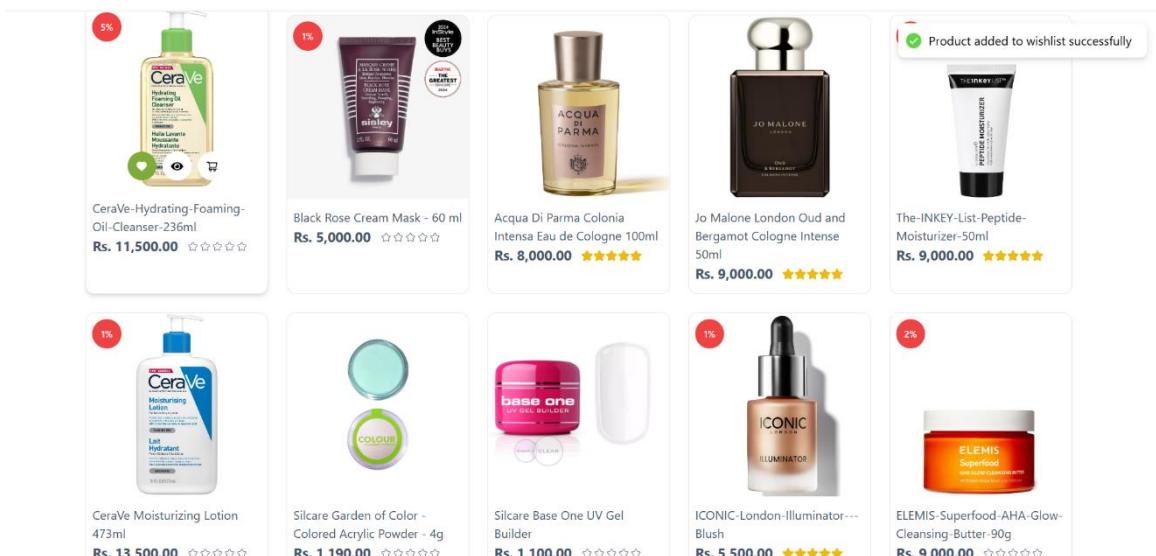


Figure 58: Golden Aura System – Receiving success message when adding product to Wishlist

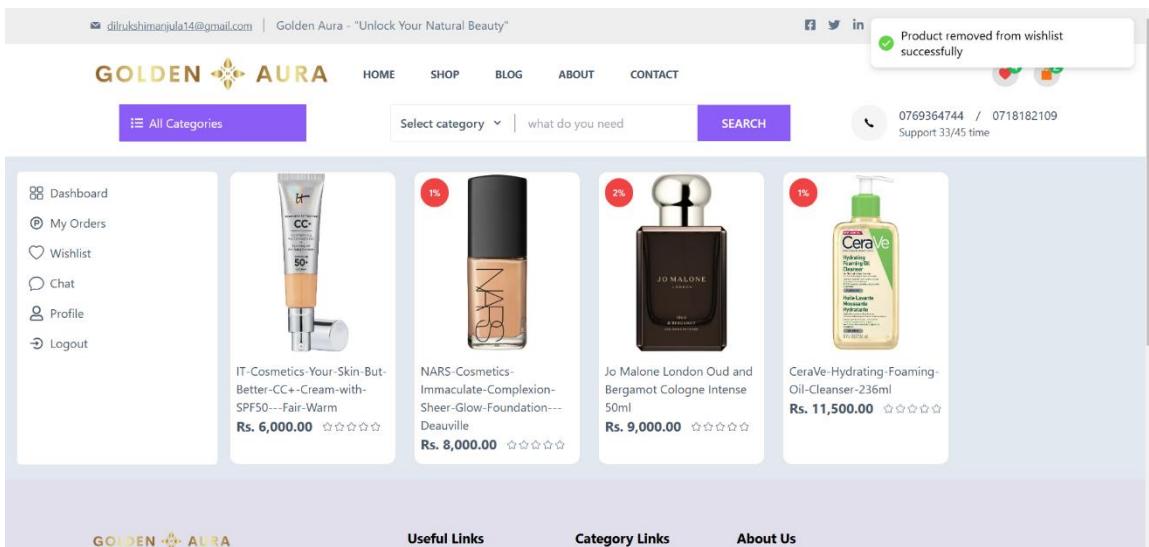


Figure 59: Golden Aura System _ Receiving message when product is removed from Wishlist

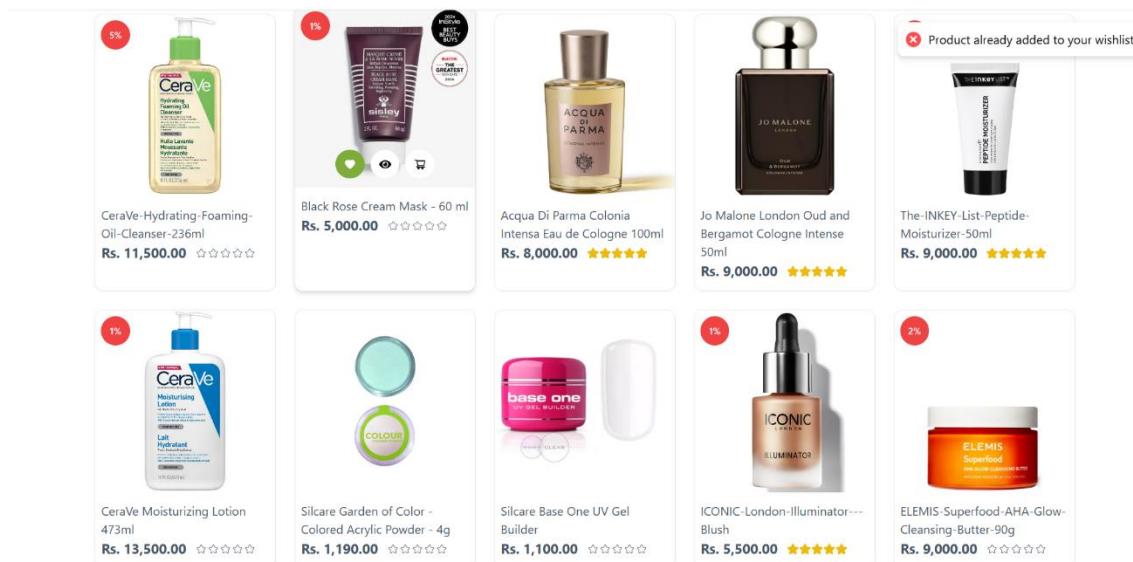


Figure 60: Golden Aura System _ Receiving message when product is already added to the Wishlist

5.6. Summary

This section reviews how well the project achieved its goals and how the system was tested. It highlights the completed features and areas where objectives were met. A test and deployment plan explains how the system was checked during development and after deployment.

Key test cases are shared to show that the system works as expected, with a focus on strengths and areas for improvement. This evaluation helps identify what worked well and what can be improved in the future to make the system more reliable and user-friendly.

6. Future Work

6.1. Introduction

As the project progressed, various new ideas and features emerged. But most of them could not be fully implemented due to time limitations. Additionally, there are various enhancements that can improve the overall performance, functionality, and user experience of the system. This section outlines possible future work to expand the scope of the project and improve existing features.

- Mobile Application Development

Given the popularity of mobile shopping, creating a native mobile application for iOS and Android could greatly improve accessibility and convenience for users. While the web app is mobile-responsive, a dedicated mobile app would offer better performance and user experience on mobile devices.

- Advanced Search and Recommendation System

Currently, the search functionality allows users to filter products based on categories, brands, and names. However, incorporating more advanced search features like personalized recommendations based on browsing history, previous purchases, and product ratings could provide a more personalized shopping experience.

- Loyalty and Reward Program

Adding features such as a loyalty points system, discounts, and promotional campaigns could boost customer retention and engagement.

- Multi Language and Currency Support

Incorporating multi-language and currency support would make the platform more inclusive and ready for international markets.

- Enhanced Analytics and Reporting

Expanding the analytics module for both administrators and sellers to include real-time sales data, customer behavior insights, and inventory forecasting would provide more actionable insights and help with better decision-making.

- Security Enhancements

Security remains a critical concern for e-commerce platforms. In the future, enhancing the system's security measures will be crucial to ensuring data privacy and protection against emerging threats.

- Multi-factor authentication (MFA) for sellers and administrators.
- Advanced fraud detection mechanisms to safeguard payment processes.

6.2. Summary

Although the current system offers solid functionality, there are areas that could be expanded and enhanced in the future. The above suggestions could make considerable enhancements to the user experience, scalability, performance, and security. Concentrating on these areas in future work will make the system not only competitive but also flexible to changing user requirements and technological advancements.

7. Conclusions

This project was set out with the aim of developing a user-friendly and efficient online health and beauty product ordering system using the MERN stack. Throughout the development process, significant progress was made in achieving the objectives, which focused on creating a robust platform to facilitate seamless interactions between customers, sellers, and administrators.

For customers, the system enables browsing a vast catalog of health and beauty products with filtering options, detailed product information, reviews, and seamless order placement. An integrated real-time chat feature for direct communication with sellers enhances the overall user experience and fosters trust in the platform.

Administrators can manage product categories, manage sellers by activating or deactivating their accounts, manage orders, and efficiently oversee platform operations. The ability to chat with sellers in real-time further supports effective communication and issue resolution.

Sellers, once activated, gain access to a dedicated dashboard to manage their products, manage their blogs, process orders efficiently, and respond to customer inquiries through a real-time chat feature. These capabilities ensure that sellers can maintain a high level of service and contribute to the platform's success.

The integration of a secure payment gateway and role-based authentication using JWT ensured the system prioritized security for all user transactions and data. Moreover, the automatic email invoice generation after orders enhanced customer convenience and trust in the system.

This project provided significant learning opportunities, including mastering the MERN stack and implementing key features like role-based authentication, real-time chat functionality, and responsive design. It achieved its primary goal of delivering a scalable and user-friendly system while also providing valuable insights into system design, development, and management.

In conclusion, this project achieved its goal of delivering a functional, secure, and user-friendly system. It not only met the outlined objectives but also provided insights into modern web development practices. The experience has been instrumental in enhancing technical expertise as well as creating a better understanding of designing and managing large-scale systems, paving the way for future projects and professional growth.

8. Reflection

This project development has a dual nature; it was both problematic and rewarding. At first, I had never encountered the MERN stack, and this project turned out to be a great chance for me to get the hang of and to be a master of new technologies. I had not worked with utilities like React.js, Node.js, Express.js, or MongoDB before, and the process of acquiring these skills while developing the online health and beauty product ordering system was a thrilling and steep learning curve.

The most difficult aspect was getting used to a completely different programming environment. I have had to become familiar with the newest standards, such as the creation of RESTful APIs, usage of Redux for state control, and the effective joining of frontend and backend. In every stage, meticulous planning was needed to make sure that the system fulfills the requirements of users and works efficiently.

An essential lesson learned from this process was the notion of "double-loop learning," where I perpetually re-evaluated my relationships and beliefs. To explain, developing functionalities like real-time chat with WebSocket and role-based authentication using JWT made me realize crucial ideas about scalability and security in web applications. This not only benefited the system but also was a valuable learning experience for me in how to resolve complicated issues more effectively.

I was able to do theory and practice side by side throughout the project, with the help of real-life problems like debugging, performance optimization, and user experience improvements. Through these, I became more skilled technically and personally.

This project, on the one hand, made me a better MERN stack user, but on the other hand, taught me precious lessons concerning system design, user-oriented development, and problem-solving. It has empowered my ability to cope with future problems, and it has also made me feel the necessity of continuous learning and flexibility in the area of software development.

Table of Abbreviations

MERN	MongoDB, Express, React, Node
SRS	Software Requirements Specification
SMTP System	Simple Mail Transfer Protocol
UI	User Interface
DBMS	Database Management System
SDLC	Software Development Life Cycle
RAM	Random Access Memory
ERD	Entity Relationship Diagram
JWT	JSON Web Tokens

Appendices

Appendix A – Timeline – Gantt Chart

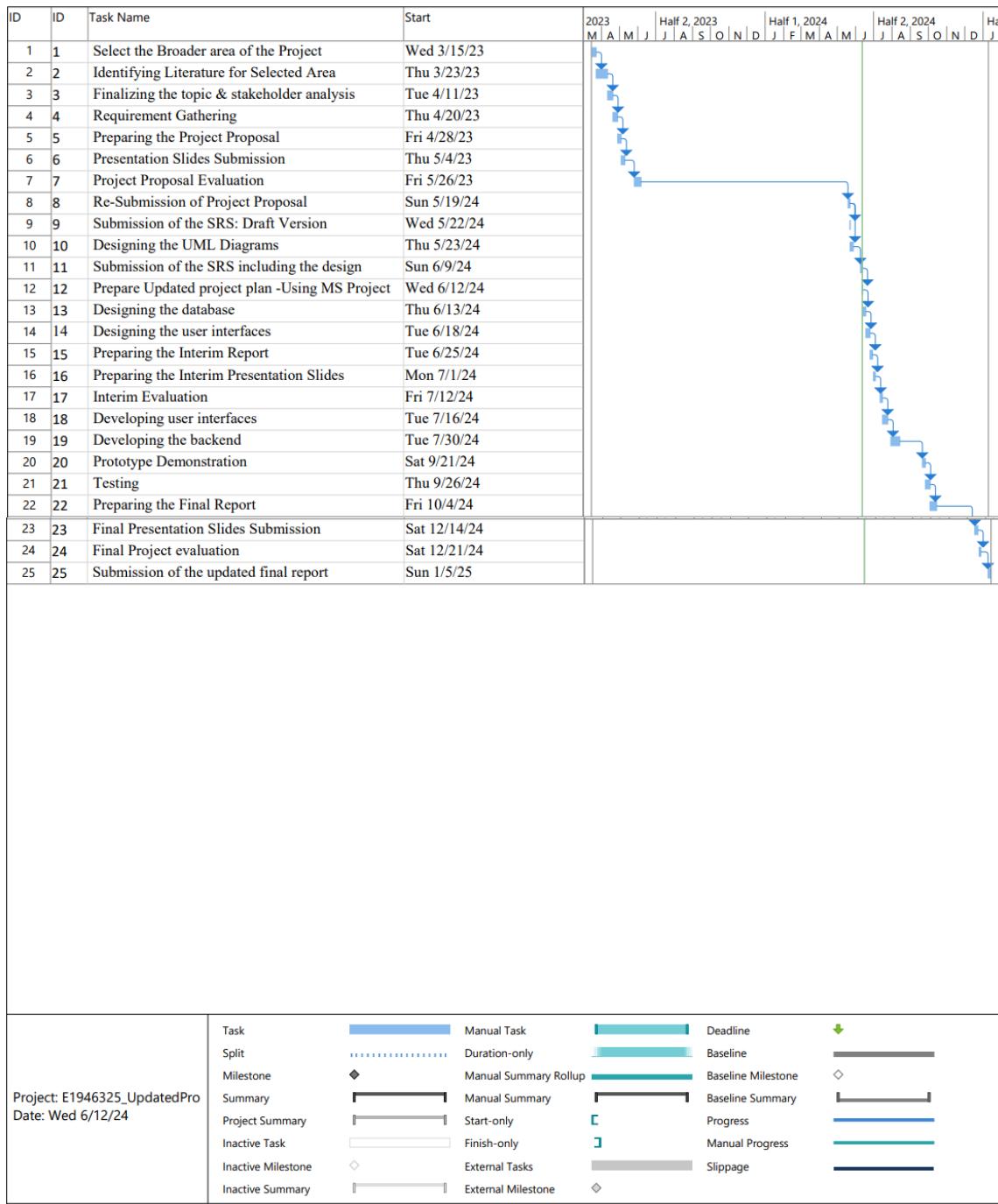


Figure 61: Gantt chart

Appendix B – Use Case diagrams

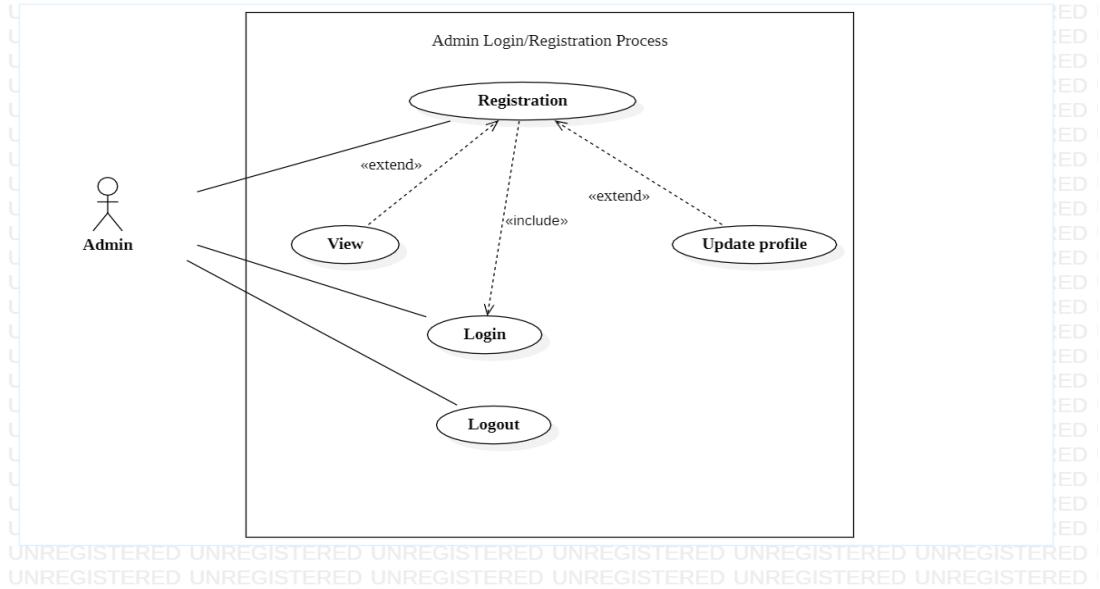


Figure 62: Use Case Diagram for Admin Registration and Login

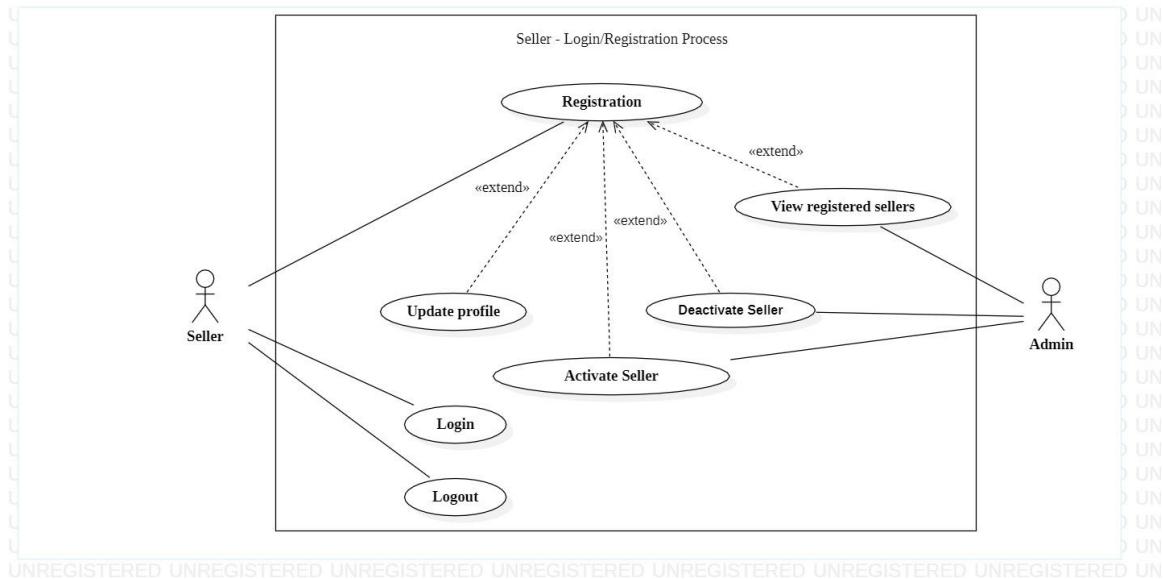
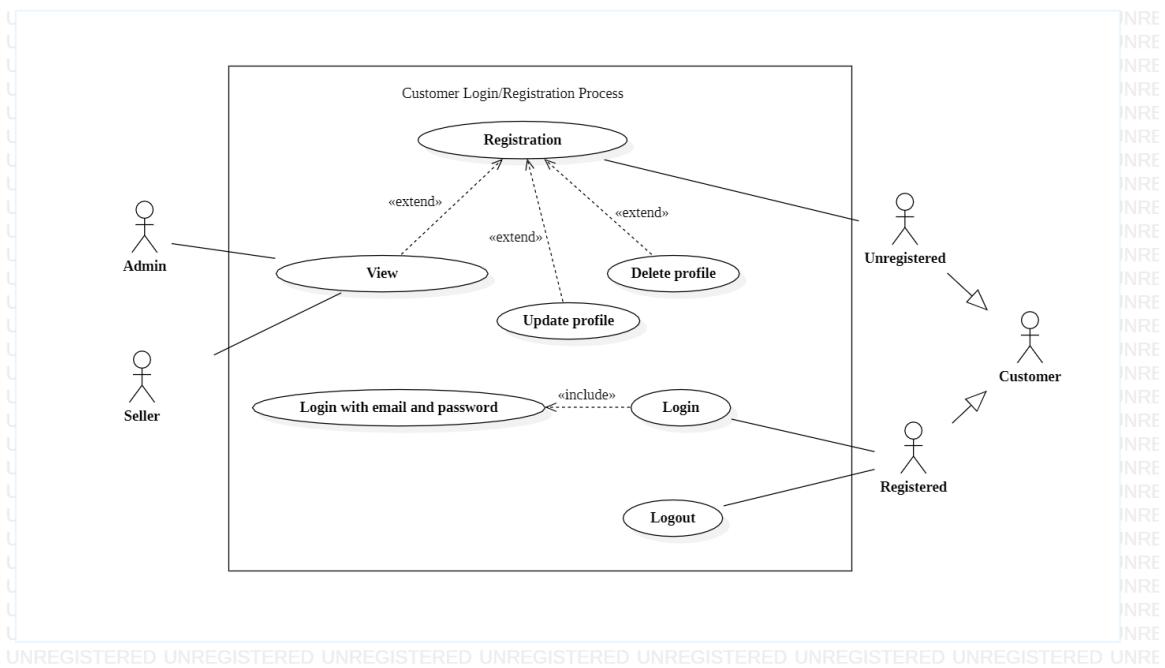
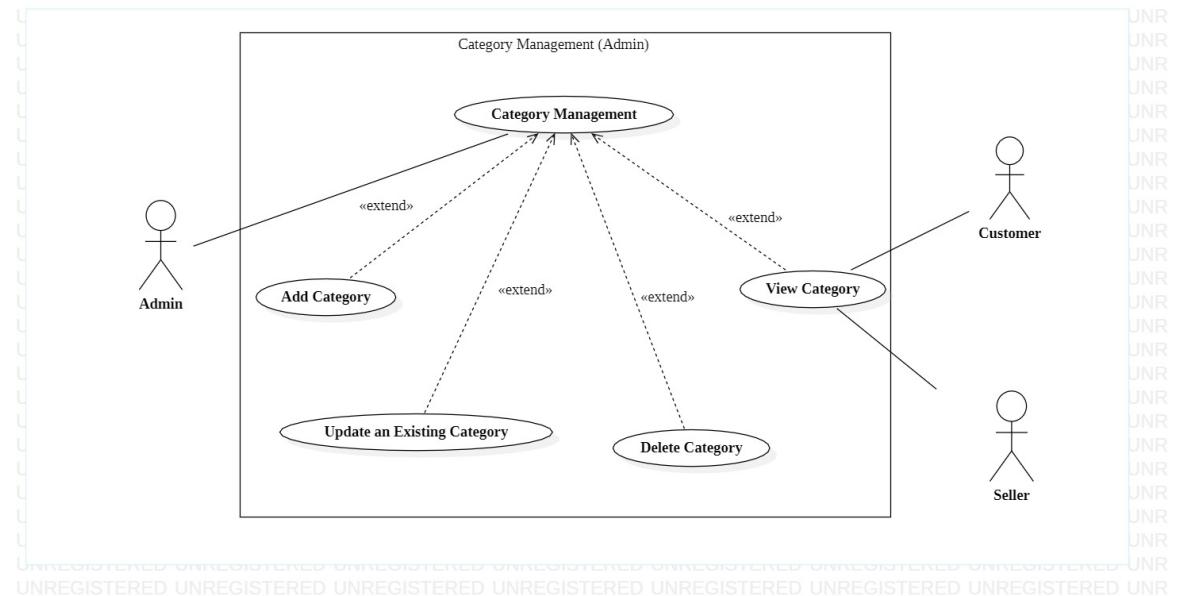


Figure 63: Use Case Diagram for Seller Registration and Login



UNREGISTERED UNREGISTERED UNREGISTERED UNREGISTERED UNREGISTERED UNREGISTERED UNR

Figure 64: Use Case Diagram for Customer Registration and Login



UNREGISTERED UNREGISTERED UNREGISTERED UNREGISTERED UNREGISTERED UNREGISTERED UNR

Figure 65: Use case Diagram for Category Management (Admin)

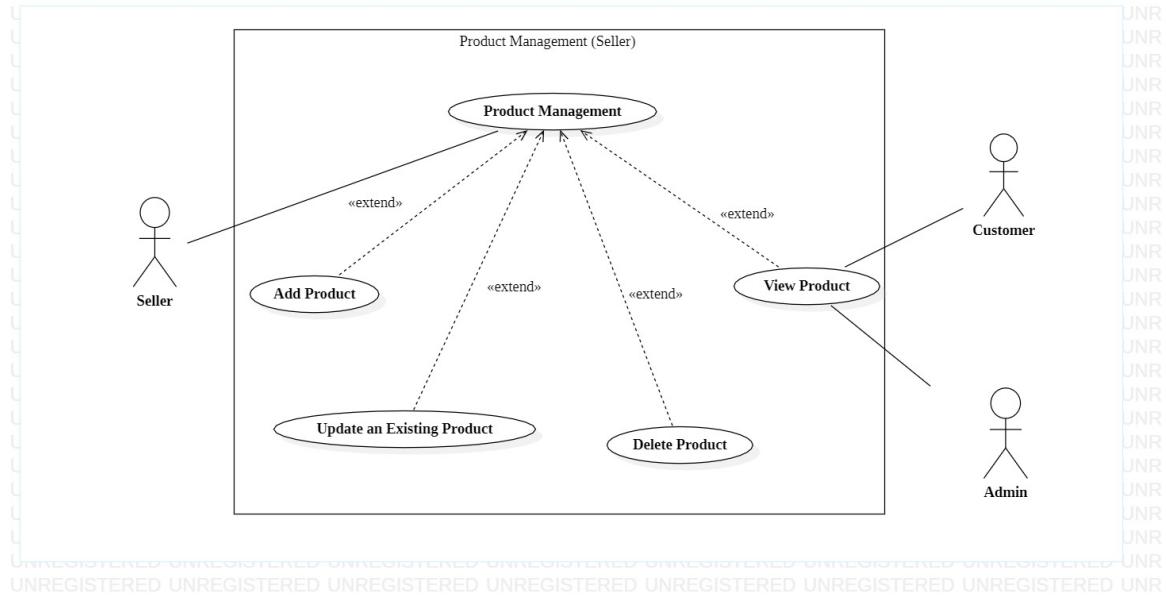


Figure 66: Use case Diagram for Product Management (Seller)

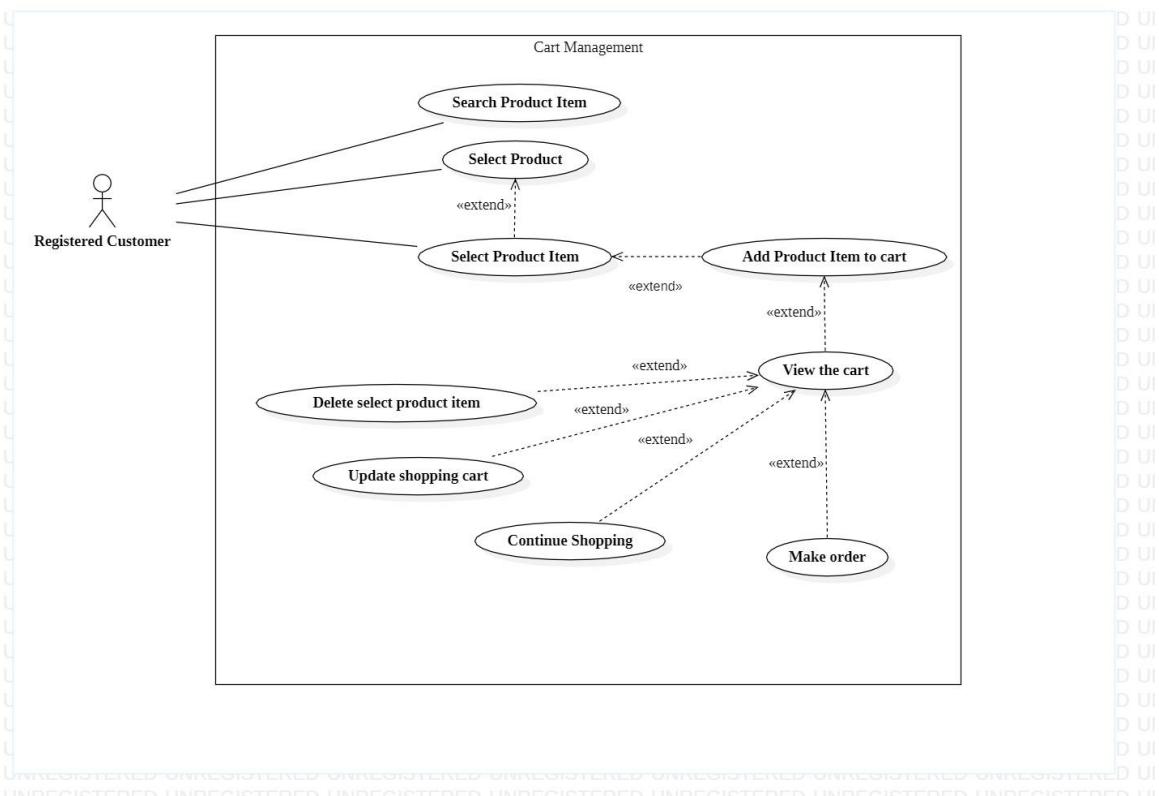


Figure 67: Use Case Diagram for Cart Management

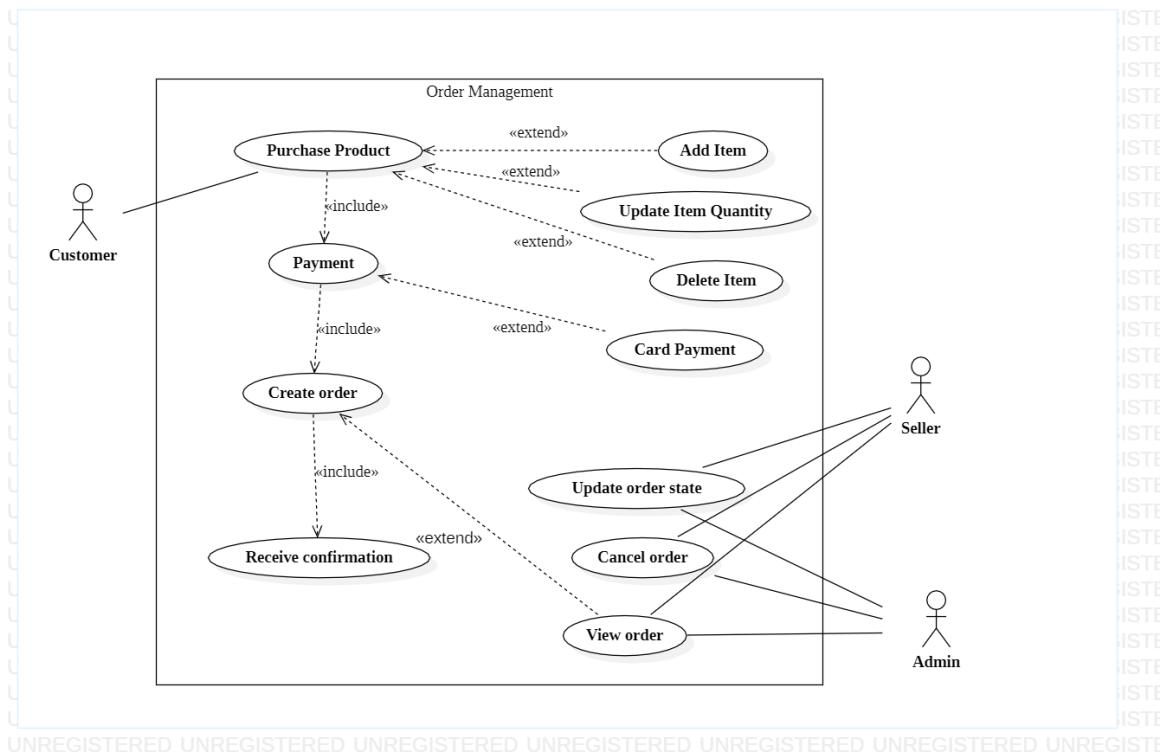


Figure 68: Use Case Diagram for Order Management

Appendix C – Activity Diagrams

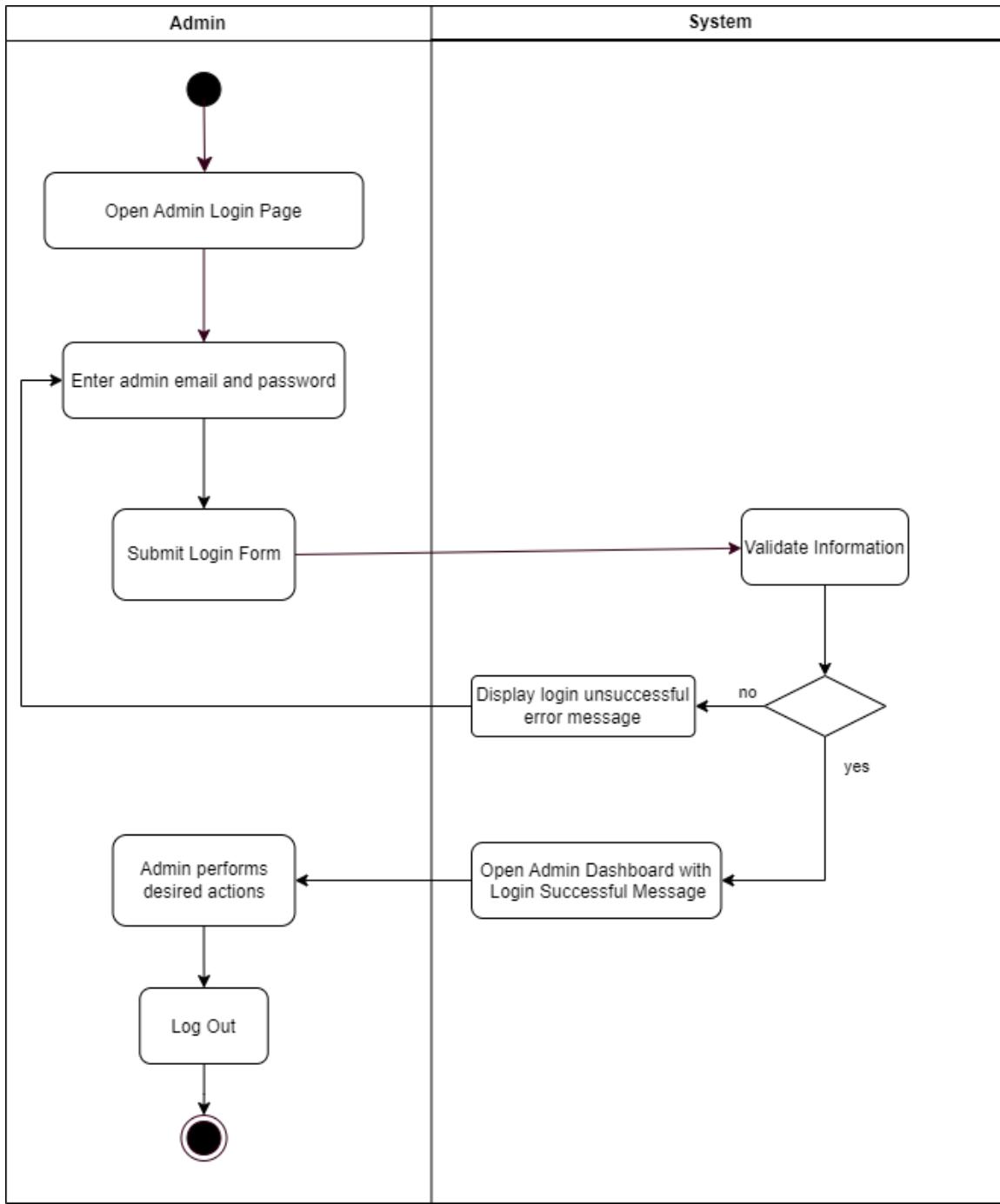


Figure 69: Activity Diagram for Admin Login

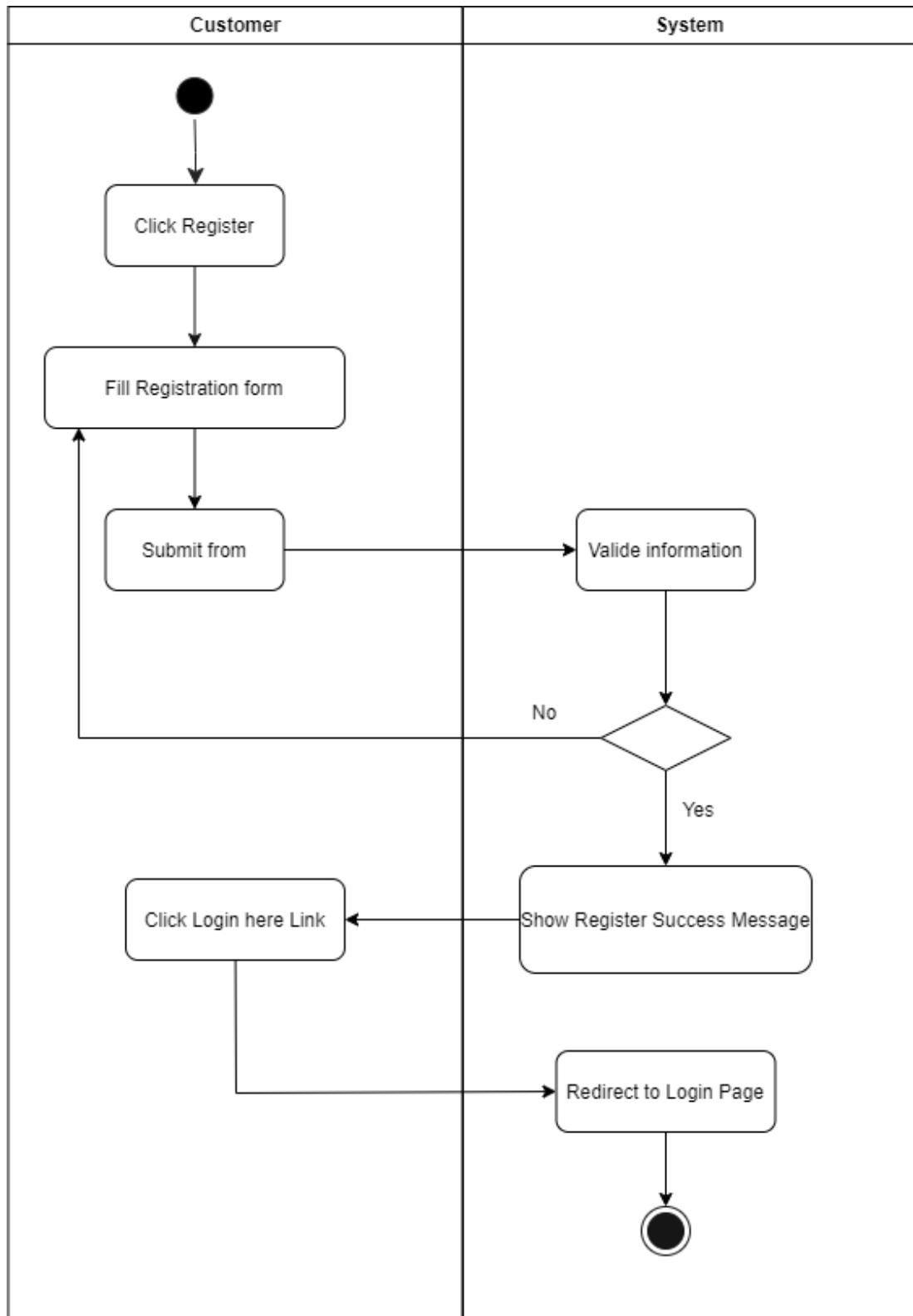


Figure 70: Activity Diagram for Customer Registration

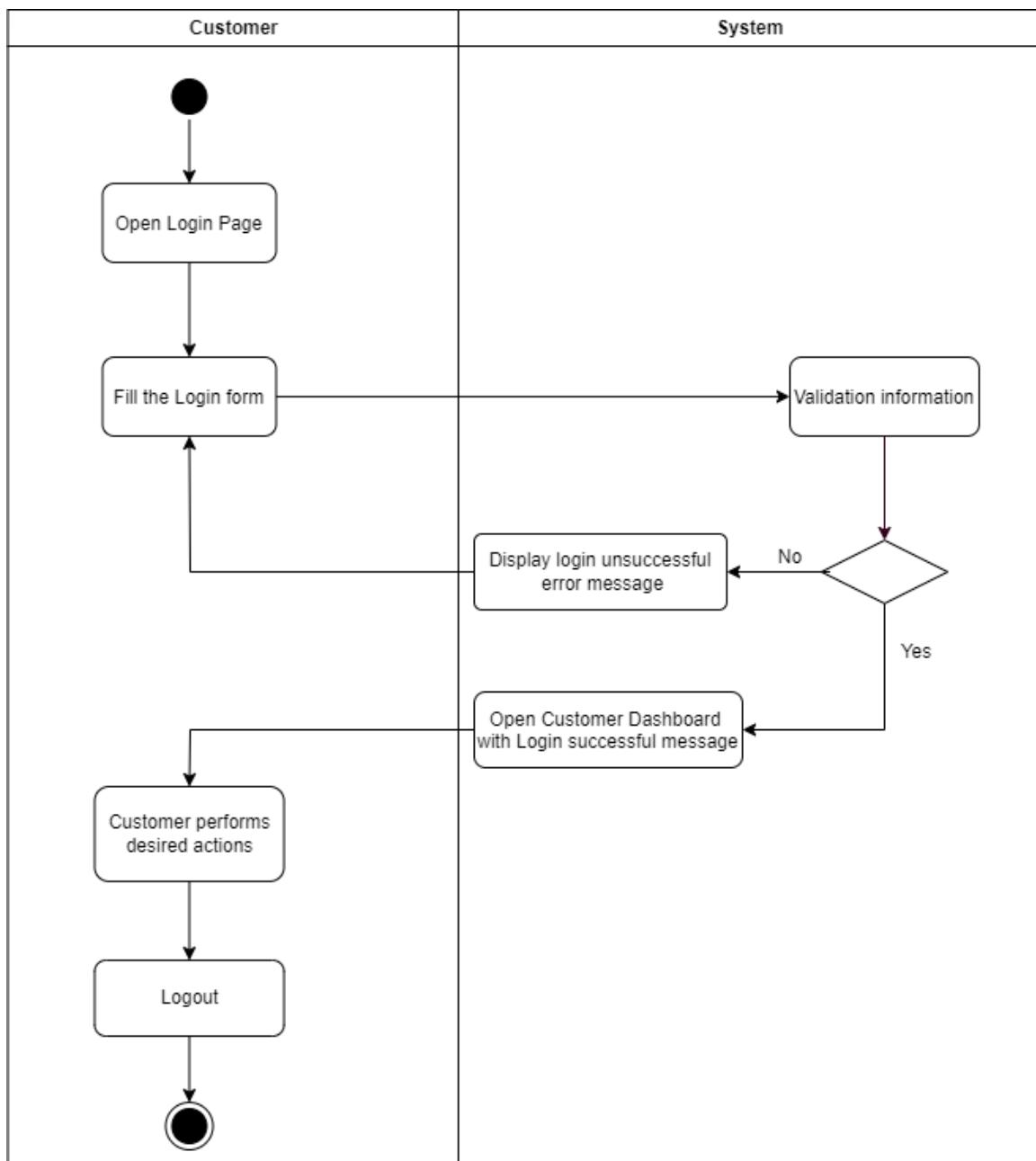


Figure 71: Activity Diagram for Customer Login

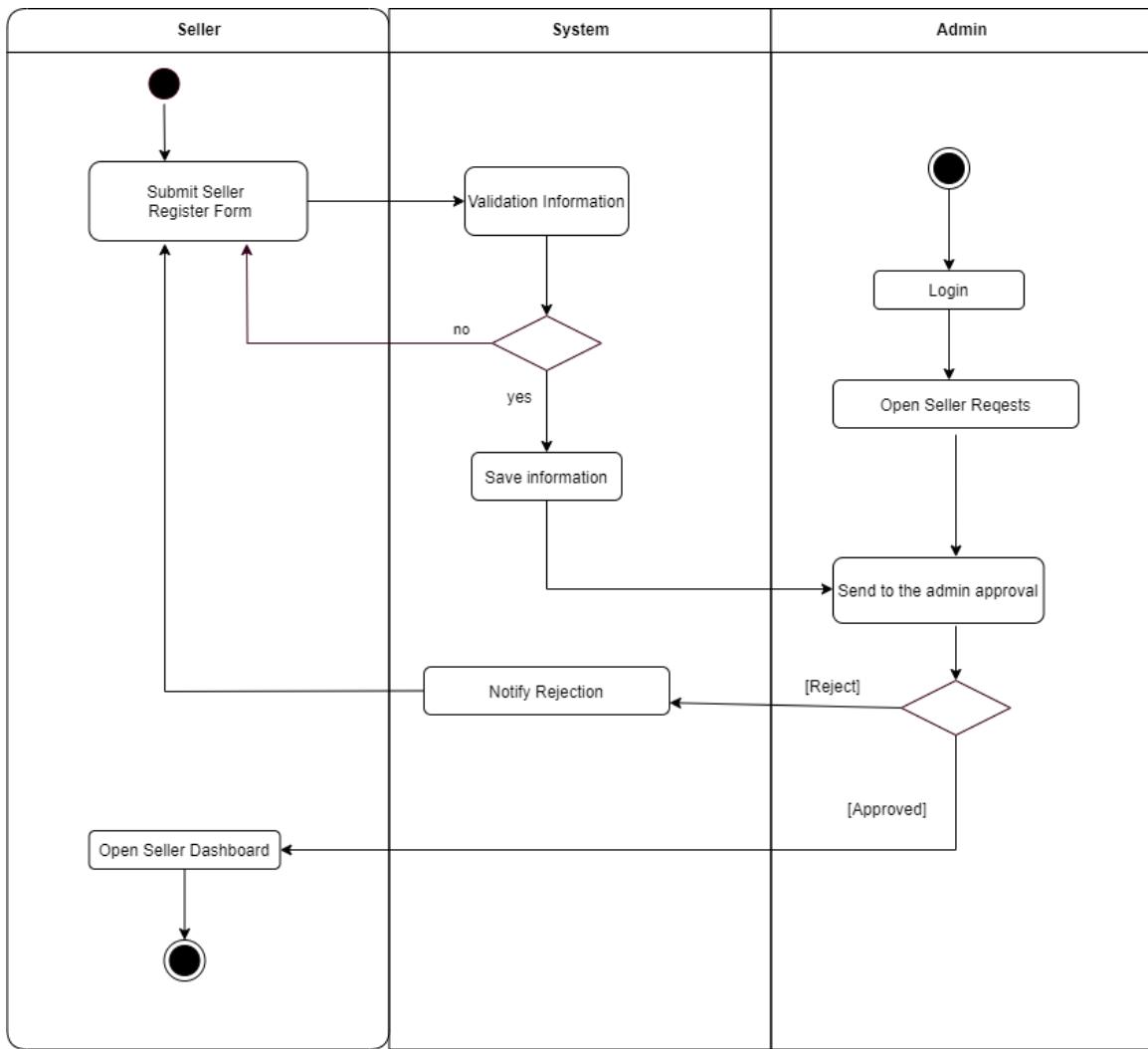


Figure 72: Activity Diagram for Seller Registration

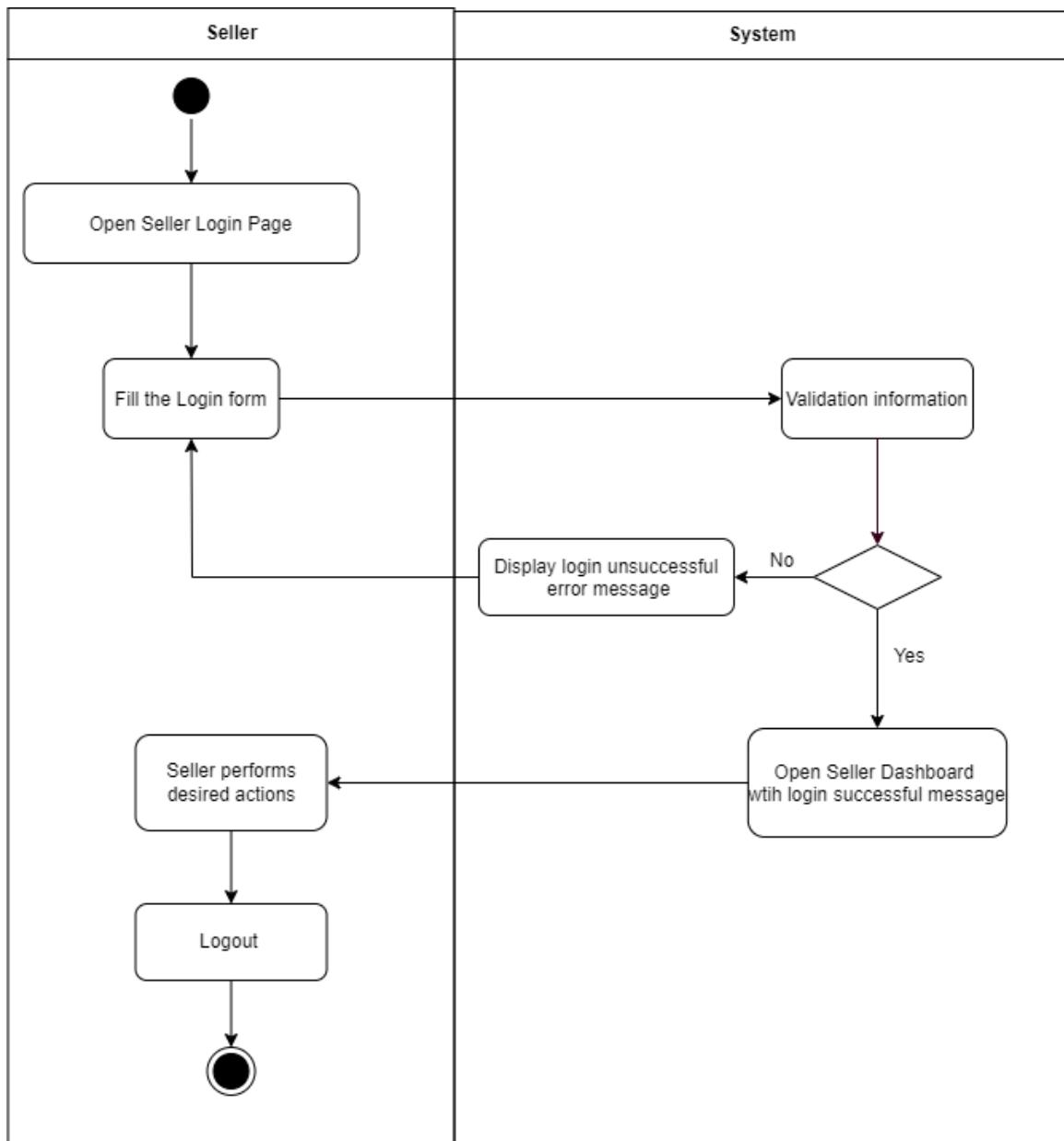


Figure 73: Activity Diagram for Seller Login

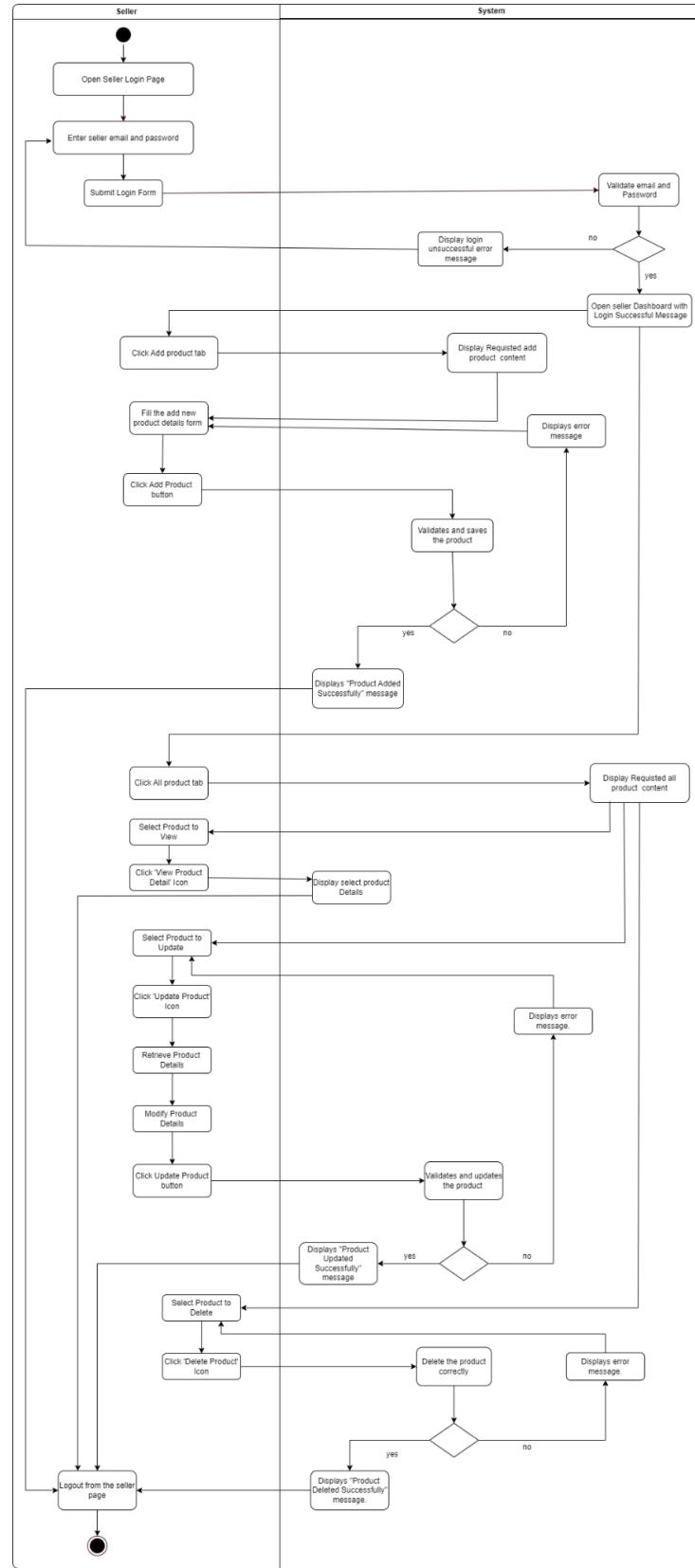


Figure 74: Activity Diagram for Product Management

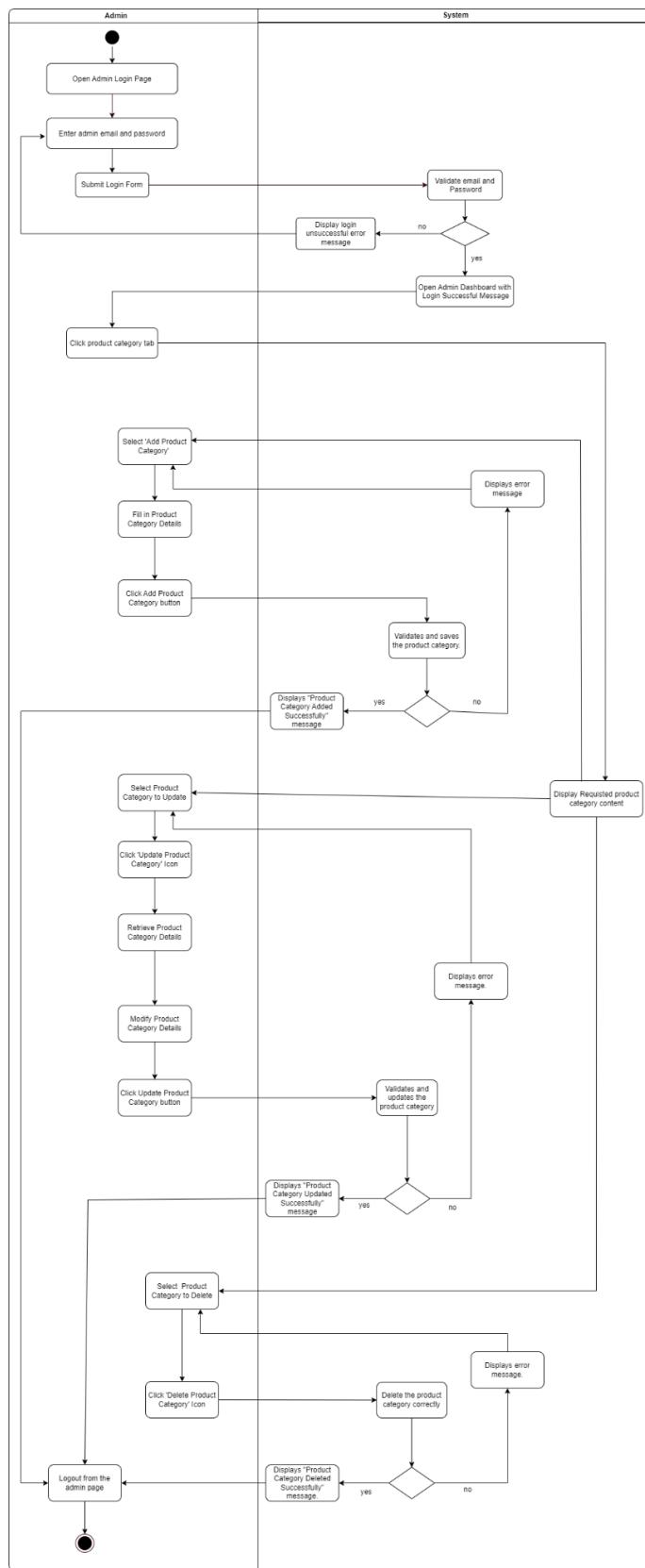


Figure 75: Activity Diagram for Category Management

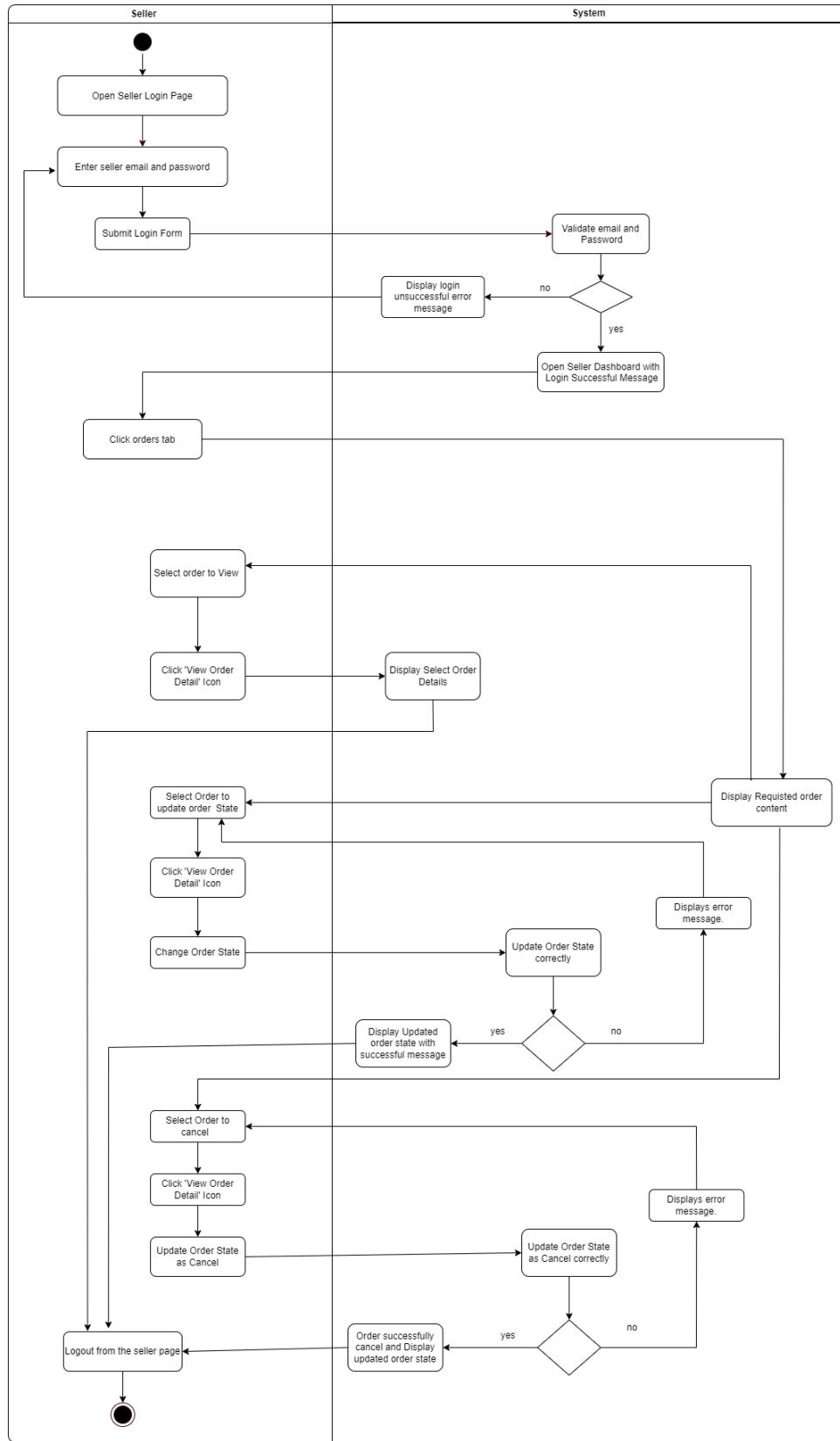


Figure 76: Activity Diagram for Order Management

Appendix D – ERD

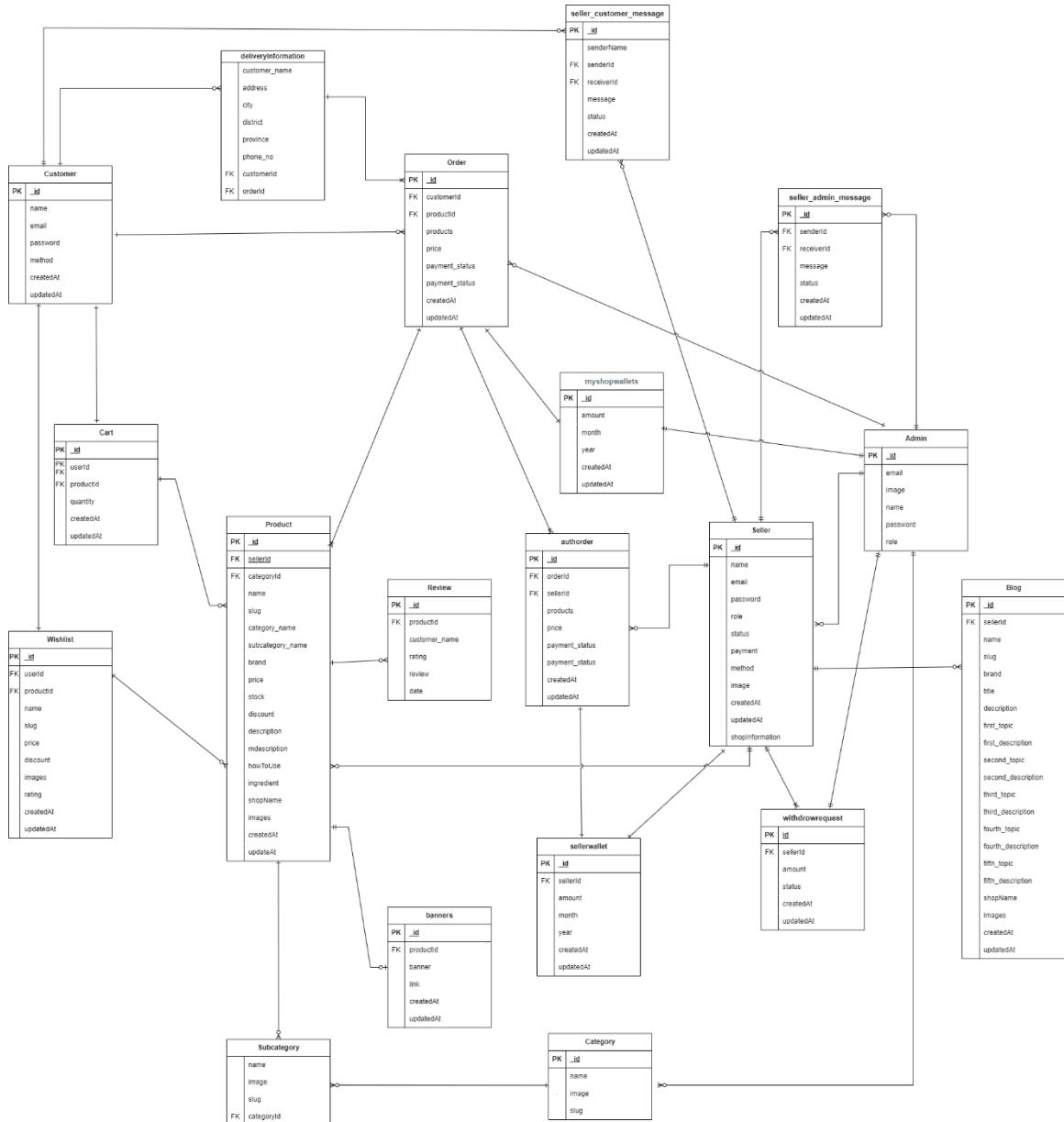


Figure 77: Entity Relationship Diagram

Appendix E – User Manual

**ONLINE HEALTH AND BEAUTY PRODUCT ORDERING
SYSTEM**

“Golden Aura” System

User Manual

Ganhewage GDM

E1946325

Faculty of Information Technology

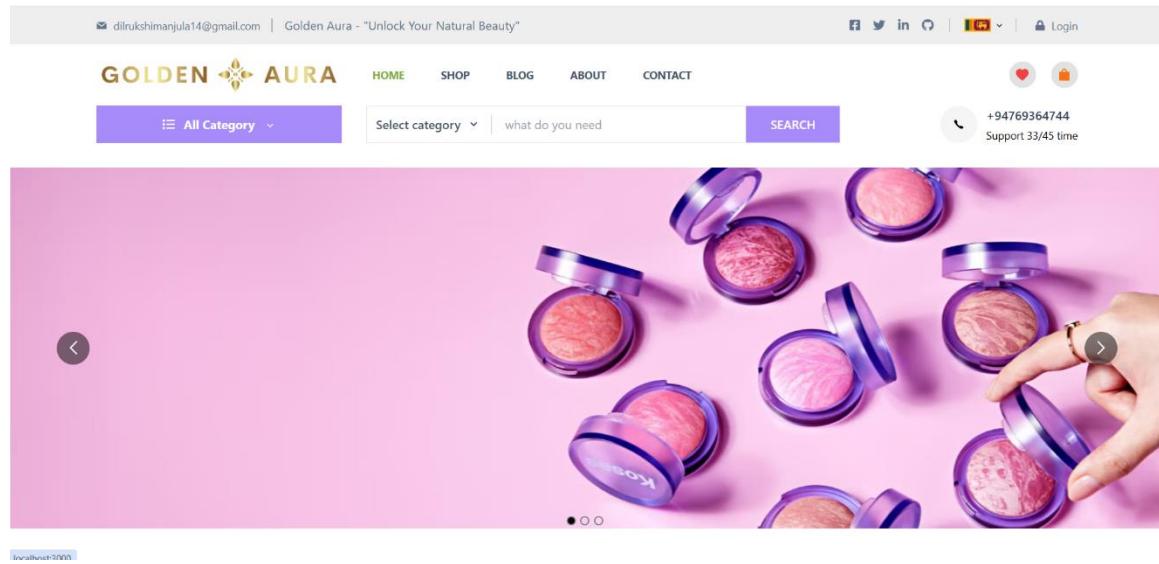
University of Moratuwa

December 2024

This user manual provides step-by-step instructions for using this online health and beauty product ordering system. This user manual helps three types of users: customers, sellers, and admin.

1. Customer Dashboard

- This is the first interface that customers see as soon as they come into the system.

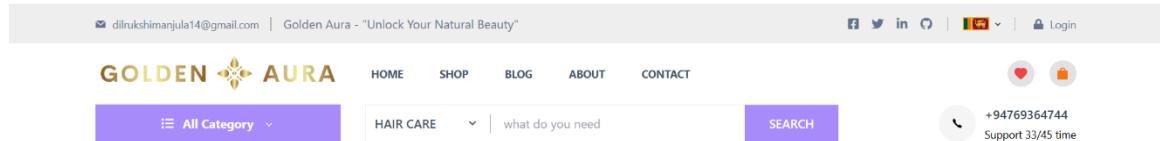


There are several features that customers can use in the system before logging into the system. Those features and instructions are given below.

1.1. Browse and Search Products

Use the search bar to filter products by category, name, or brand.

- Product search can be done using category only. For that, first, select the category and click the search button.



- Product search can be done using product name or brand name. For that, type the product name or brand and click on the search button.

The screenshot shows the homepage of the Golden Aura website. At the top, there's a header bar with the URL "dilrukshimanjula14@gmail.com" and the tagline "Golden Aura - 'Unlock Your Natural Beauty'". To the right are social media icons for Facebook, Twitter, LinkedIn, and Google+, followed by a flag icon, a login link, and a support phone number "+94769364744" with the note "Support 33/45 time". Below the header is the main navigation menu with links for HOME, SHOP, BLOG, ABOUT, and CONTACT. A logo for "GOLDEN AURA" is centered above the menu. On the left, a purple button says "All Category". In the center, there's a search bar with dropdown menus for "Select category" and "Cerave", and a blue "SEARCH" button. On the right, there are icons for a heart, a shopping bag, and a phone.

- Product searching can be done using both category and product name/brand. For that, select the product category and then type the product name or brand name and click on the search button.

This screenshot shows a search result page. The header and navigation are identical to the previous screenshot. The search bar now contains "cerave" and the dropdown menu shows "FACE CARE". The search results are displayed below, showing items like "Day Cream", "Night Cream", etc., under the "FACE CARE" category.

- You can only browse products by selecting both the category and the subcategory. To do this, you must first click on the “All Categories” button. Then all the product categories available in the system will appear. From those product categories, you must select the product category you want. Then all the subcategories related to that product category will appear. You must select the subcategory you want and click on it. Then you can go to the page with the products related to the selected subcategory.

This screenshot shows the "All Categories" dropdown menu open. It lists several categories: FACE CARE, BODY CARE, HAIR CARE, FRAGRANCE, MAKE-UP, LIPS, EYES, and NAILS. The "FACE CARE" category is expanded, showing its subcategories: Day Cream, Night Cream, Fairness, Face Oils and Serums, Face Wash and Scrub, Cleansers and Toners, Face Packs, Face Masks, and Exfoliators.

All Categories	FACE CARE
All Categories	Day Cream
FACE CARE	Night Cream
BODY CARE	Fairness
HAIR CARE	Face Oils and Serums
FRAGRANCE	Face Wash and Scrub
MAKE-UP	Cleansers and Toners
LIPS	Face Packs
EYES	Face Masks
NAILS	Exfoliators

1.2. View Product Details

- Click on a product view icon to see its details, including images, price, description, stock, and discount. Then you can directly go to the product details page.

Black Rose Cream Mask - 60 ml
Rs. 5,000.00 ★★★★★

Acqua Di Parma Colonia Intensa Eau de Cologne 100ml
Rs. 8,000.00 ★★★★★

Jo Malone London Oud and Bergamot Cologne Intense 50ml
Rs. 9,000.00 ★★★★★

ELEMIS-Superfood-AHA-Glow-Cleansing-Butter-90g
Rs. 9,000.00 Rs. 8,820.00 (-2%)
Melt away make up and daily impurities while leaving skin looking healthy, fresh and glowing with this buttery, brightening Superfood AHA Glow Cleansing Butter. This glow-getting facial cleanser from Elemis removes every last trace of make up, daily pollutants and daily grime to reveal a healthy-looking radiance. A unique blend of a fermented Pumpkin enzymes and Acerola Cherry, naturally rich in AHAs helps to brighten skin, while Mango Butter and Chia Seed Oil, rich in omega fatty acids, nourish and hydrate the skin. The brightening, buttery formula can be used as a daily cleanser, a deep cleansing mask or as a hydrating makeup remover for the eyes and face.

- 1 + Add To Card

Availability In Stock(7)
Share on [f](#) [t](#) [l](#) [o](#)
Buy Now Chat Seller

- To learn more information about the product, how to use the product, and the ingredients used, click the Description button on the details page.

- The details page also shows other products from the same seller that sell the product, as well as products similar to this product.

Reviews Description

Buy Original ELEMIS-Superfood-AHA-Glow-Cleansing-Butter-90g in Sri Lanka

Description

Melt away make up and daily impurities while leaving skin looking healthy, fresh and glowing with this buttery, brightening Superfood AHA Glow Cleansing Butter. This glow-getting facial cleanser from Elemis removes every last trace of make up, daily pollutants and daily grime to reveal a healthy-looking radiance. A unique blend of a fermented Pumpkin enzymes and Acerola Cherry, naturally rich in AHAs helps to brighten skin, while Mango Butter and Chia Seed Oil, rich in omega fatty acids, nourish and hydrate the skin. The brightening, buttery formula can be used as a daily cleanser, a deep cleansing mask or as a hydrating makeup remover for the eyes and face.

How To Use

- Use every morning and evening.
- To use as a makeup remover, apply to a cotton pad and wipe gently over the face and eyes.
- To use as a daily cleanser, massage a coin-sized amount into dry skin and rinse off with warm water.
- To use as a deep cleansing mask, apply a thin layer to the face and leave on for 10 minutes before rinsing.

Ingredients

Caprylic/Capric Triglyceride, Glycerin, Aqua/Water/Eau, Polyglyceryl-3 Methyleglucoside Distearate, Polysorbate 80, Cetearyl Olivate, Sorbitan Olivate, Hydroxyacetophenone, Phenoxyethanol, Acrylates/Beheneth-25 Methacrylate Copolymer, Citric Acid, Mangifera Indica (Mango) Seed Butter, Salvia Hispanica Seed Oil, Lactobacillus/Acerola Cherry Ferment, Lactobacillus/Pumpkin Fruit Ferment Filtrate, Saccharomyces/Rice Ferment Filtrate, Camellia Sinesis Seed Oil, Candida Bombicola/Glucose/Methyl Rapeseedate Ferment, Sodium Hydroxide, Helianthus Annuus (Sunflower) Seed Oil, Beta-Carotene, Capsanthin/Capsorubin, Butylene Glycol, Tocopherol, Leuconostoc/Radish Root Ferment Filtrate, Olea Europaea (Olive) Fruit Oil, 1,2-Hexanediol, Polyglyceryl-3 Diisostearate, Ascorbyl Palmitate, Rosmarinus Officinalis (Rosemary) Leaf Extract, Ascorbic Acid.

For the latest information, it is recommended to review the ingredient list printed on the packaging of the product prior to usage or consumption.

AE Beauty

CeraVe AM Facial Moisturizing Lotion 52ml
Rs. 9,990.00 ★★★○○

L'Oréal ELVIVE Colour Protect MORE THAN SHAMPOO 300 ml
Rs. 1,990.00 ★★★★★

Related Products

CeraVe-Hydrating-Foaming-Oil-Cleanser-
236ml
Rs. 11,500.00 ★★★○○

There are some features that customers can use only after logging into the system. Those features are listed below.

1.3. Place Orders

- Add a product to the cart by clicking "Add to Cart."

Black Rose Cream Mask - 60 ml
Rs. 5,000.00 ★★★★☆

Acqua Di Parma Colonia Intensa Eau de Cologne 100ml
Rs. 8,000.00 ★★★★★

Jo Malone London Oud and Bergamot Cologne Intense 50ml
Rs. 9,000.00 ★★★★★

- Proceed to the checkout, enter delivery details, and confirm payment.

Stock Products 2

AE Beauty	Brand : Cetaphil Gentle Skin Cleanser All Skin Type 236ml CETAPHIL	Rs. 6,822.00 Rs. 6,090.00 -1%	-	1	+	Delete
SN Beauty Care	Brand : Silcare Base One UV Gel Builder SILCARE	Rs. 1,100.00 Rs. 1,100.00 -0%	-	1	+	Delete

Order Summary

2Item	Rs. 7,922.00
Delivery Fee	Rs. 170.00
Total	Rs. 8,092.00

[PROCEED TO CHECKOUT 2](#)

Delivery Details

Name	Address	
<input type="text" value="name"/>	<input type="text" value="House no / building / street /area"/>	
Phone	Post	
<input type="text" value="phone"/>	<input type="text" value="post"/>	
Province	District	City
<input type="text" value="province"/>	<input type="text" value="district"/>	<input type="text" value="city"/>

Area

<input type="text" value="area"/>

[Save](#)

Order Summary

Total Items - (2)	Rs. 7,922.00
Delivery Fee	Rs. 170.00
Total Payment	Rs. 8,092.00
Total	Rs. 8,092.00

[PLACE ORDER](#)

AE Beauty

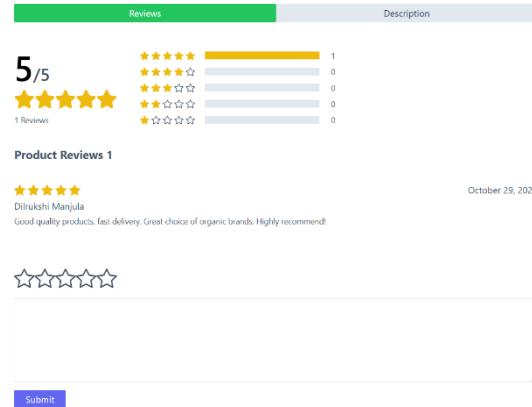
	Cetaphil Gentle Skin Cleanser All Skin Type 236mlSkin Brand : CETAPHIL	Rs. 6,822.00 Rs. 6,090.00 -1%
---	---	-------------------------------------

SN Beauty Care

	Silcare Base One UV Gel BuilderSkin Brand : SILCARE	Rs. 1,100.00 Rs. 1,100.00 -0%
---	--	-------------------------------------

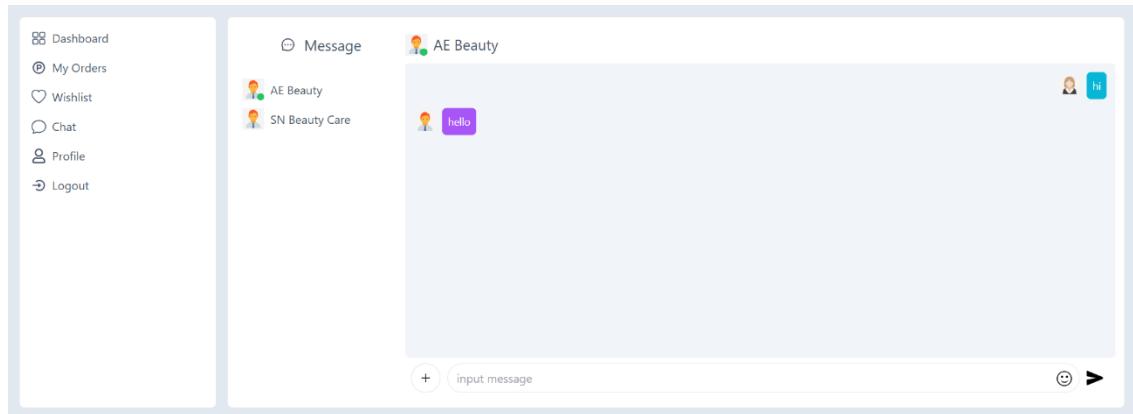
1.4. Write Review

- Click on the product view icon and go to the product details page.
- After clicking the review button, write the review, rate the product, and click the submit button to submit the feedback.



1.5. Chat with Sellers

- Click on the product view icon and go to the product details page. Then click the chat seller button on the product details page and go to the chat section.



- If you have chatted with the sellers before then you can go to the chat section in the customer dashboard after clicking on the username.



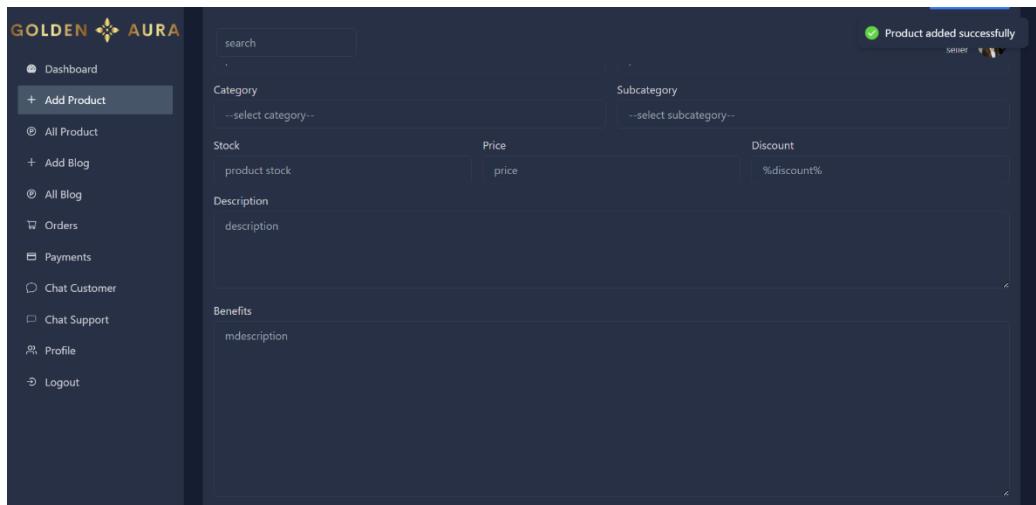
2. Seller Dashboard

Features and Instructions

2.1. Manage Products

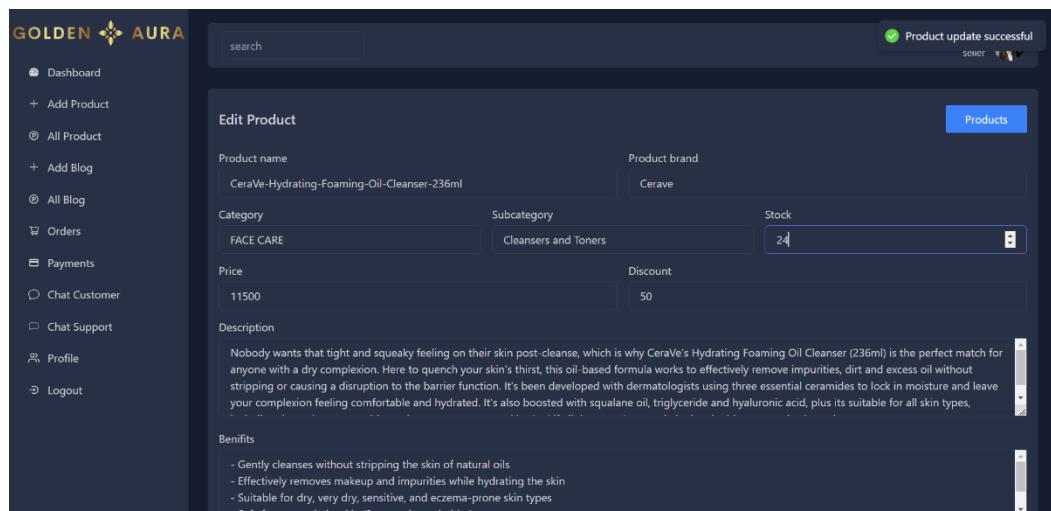
2.1.1. Add Product

- Go to the Add Product section.
- Fill out the form with product details (name, category, price, stock, images, etc.).
- Click the "Add Product" button and save the product in the system.



2.1.2. Edit Product

- Go to the “All Product” section.
- Select a product from the list.
- Click the edit icons and after updating the details click the "Update Product" button.



2.1.3. Delete Product

- Go to the “All Product” section.
- Select a product from the list.
- Click the delete icon and delete product from the system.

The screenshot shows the 'All Product' section of the 'GOLDEN AURA' application. On the left is a sidebar with navigation links: Dashboard, Add Product, All Product (which is selected), Add Blog, All Blog, Orders, Payments, Chat Customer, Chat Support, Profile, and Logout. The main area displays a table with columns: NO, IMAGE, NAME, CATEGORY, SUB-CATEGORY, BRAND, PRICE, DISCOUNT, STOCK, and ACTION. There are five products listed:

NO	IMAGE	NAME	CATEGORY	SUB-CATEGORY	BRAND	PRICE	DISCOUNT	STOCK	ACTION
1		Caribbean Breez...	LIPS	Lipsticks	Caribbean Breez	Rs. 10.00	10%	10	
2		CeraVe-Hydrating...	FACE CARE	Cleansers and Toners	Cerave	Rs. 11,500.00	50%	24	
3		Black Rose Cream...	FACE CARE	Face Packs	sisley	Rs. 5,000.00	1%	5	
4		Silcare Garden o...	NAILS	Nail Polish	Silcare	Rs. 1,190.00	no discount	20	
5		Silcare Base One...	NAILS	Nail Polish	Silcare	Rs. 1,100.00	no discount	20	

At the top right, a success message says "Product deleted successfully". At the bottom right, there are page navigation buttons (1, 2, 3, 4, 5, >>).

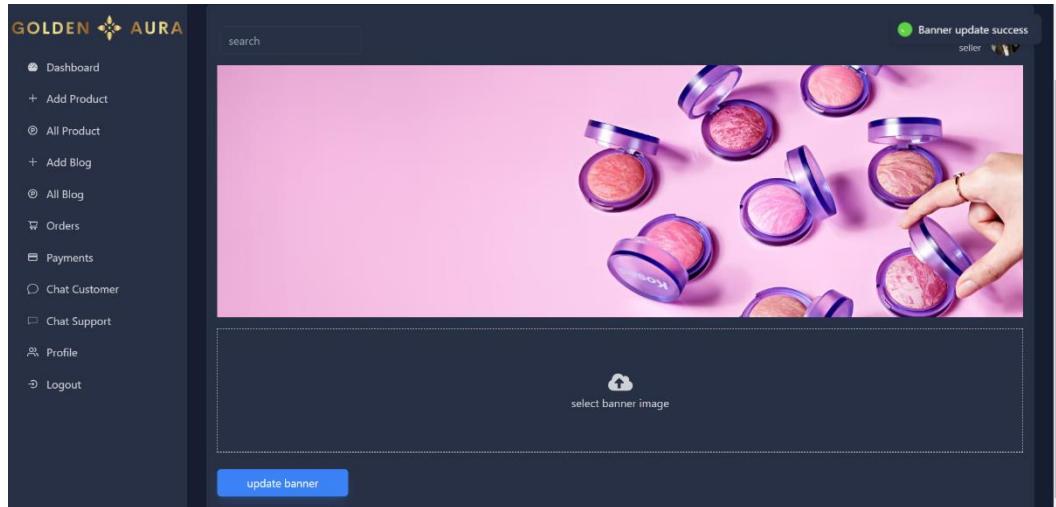
2.1.4. Add Banner

- Go to the “All Product” section.
- Select a product from the list.
- Click the banner icons and add a new banner of this product, and click “Add banner” and save the banner.

The screenshot shows the 'Add banner' section of the 'GOLDEN AURA' application. On the left is a sidebar with the same navigation links as the previous screenshot. The main area has a heading 'Add banner' and a large input field with a placeholder 'select banner image'. Below the input field is a 'update banner' button. In the top right corner, there is a blue button labeled 'All Products'.

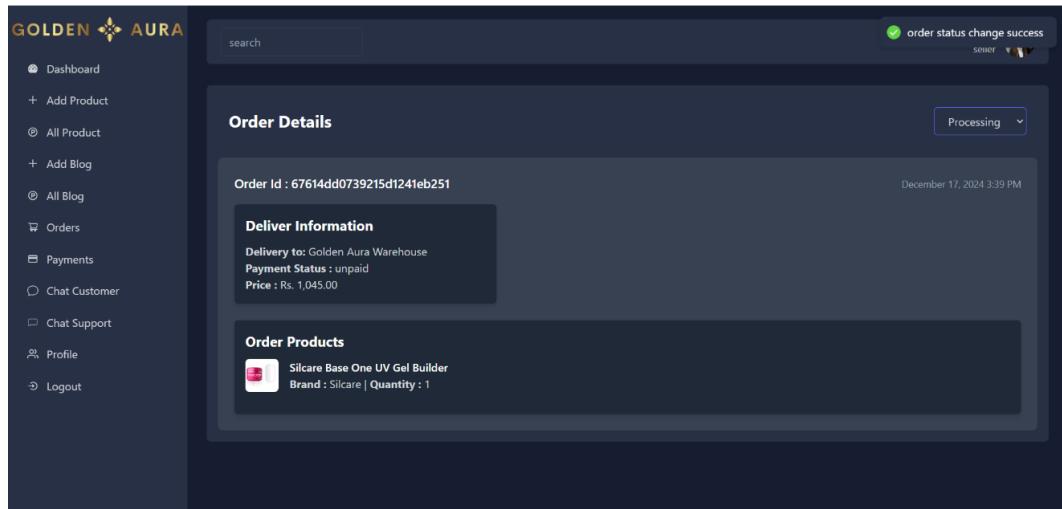
2.1.5. Edit Banner

- Go to the “All Product” section.
- Select a product that already has a banner added.
- Click the banner icon.
- Select a new banner image from the computer, and click the “update banner” button.



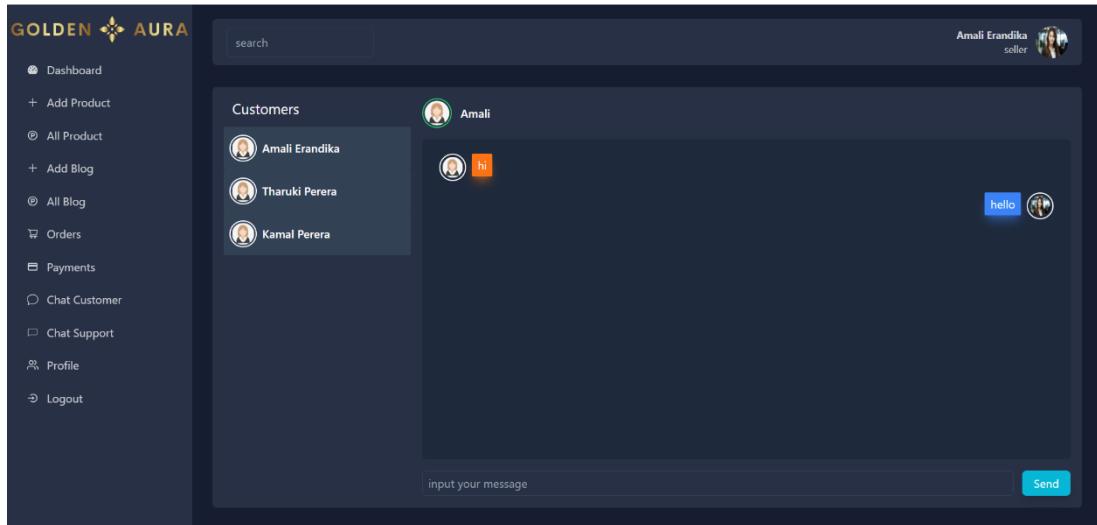
2.2. Order Management

- Access the Orders section to view and process orders.
- Update Order Status: Change the status of orders based on fulfillment progress. (Updates made here are visible to the admin through the orders section of the admin dashboard)



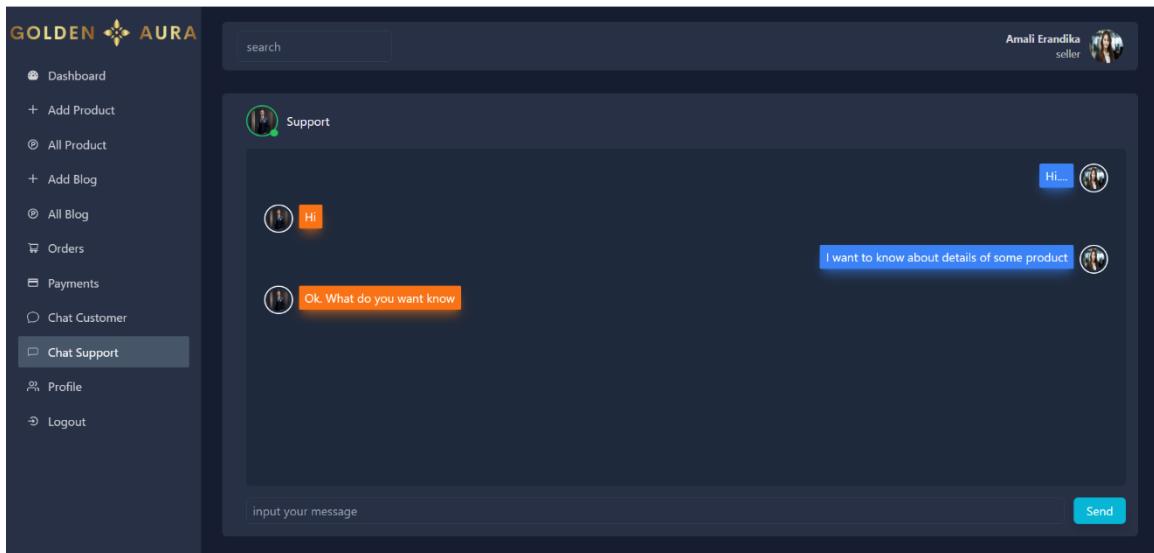
2.3. Chat with Customer

- Go to the Chat Customer section.
- Select a customer to start a conversation.



2.4. Chat Support

- Go to the Chat Support section.
- Have real-time chat with admin.



2.5. Payment Request.

- Go to the Payment section.
- Ask the admin for the amount you want to withdraw and click on the "Submit" button.

GOLDEN AURA

Dashboard Add Product All Product All Banner Discount Product Orders **Payments** Chat Customer Chat Support Profile Logout

Rs. 10,816.00 Total Sales Rs. 16.00 Available Amount Rs. 10,300.00 Withdrawal Amount Rs. 500.00 Pending Amount

Send Request

100 Submit

Pending withdrawal request

NO	AMOUNT	STATUS	DATE
1	Rs. 500.00	pending	November 28, 2024

Success Withdrawal

NO	AMOUNT	STATUS	DATE
1	Rs. 1,000.00	success	November 13, 2024
2	Rs. 2,000.00	success	November 13, 2024
3	Rs. 5,000.00	success	November 14, 2024
4	Rs. 2,000.00	success	November 24, 2024
5	Rs. 100.00	success	November 24, 2024
6	Rs. 100.00	success	November 24, 2024
7	Rs. 100.00	success	November 25, 2024

Withdrawal request send to Amali Erandika seller

GOLDEN AURA

Dashboard Add Product All Product Add Blog All Blog Orders **Payments** Chat Customer Chat Support Profile Logout

Rs. 45,634.00 Total Sales Rs. 34,634.00 Available Amount Rs. 10,400.00 Withdrawal Amount Rs. 100.00 Pending Amount

Send Request

0 Submit

Pending withdrawal request

NO	AMOUNT	STATUS	DATE
1	Rs. 500.00	pending	November 28, 2024
2	Rs. 100.00	pending	December 21, 2024

Success Withdrawal

NO	AMOUNT	STATUS	DATE
1	Rs. 1,000.00	success	November 13, 2024
2	Rs. 2,000.00	success	November 13, 2024
3	Rs. 5,000.00	success	November 14, 2024
4	Rs. 2,000.00	success	November 24, 2024
5	Rs. 100.00	success	November 24, 2024
6	Rs. 100.00	success	November 24, 2024
7	Rs. 100.00	success	November 25, 2024
8	Rs. 100.00	success	December 13, 2024

Withdrawal request send to Amali Erandika seller

2.6. Profile Management

- Go to the Profile section.

2.6.1. Add Image

- Click ‘Select image’ and select Profile image from the computer.

The screenshot shows the 'Profile' section of the Golden Aura application. On the left sidebar, 'Profile' is highlighted. The main area has a 'Select Image' button with a camera icon. Below it are input fields for Name, Email, Role, Status, and Payment Account. To the right is a 'Change Password' form with fields for Email, Old Password, New Password, and a 'Submit' button. A user profile icon for 'amali seller' is at the top right.

The screenshot shows the same profile management interface after an image has been uploaded. A success message 'Image upload success' is displayed above the 'Change Password' form. The profile picture field now contains a thumbnail of a man in a suit. The rest of the interface remains the same, with the 'Profile' section highlighted in the sidebar.

2.6.2. Add Shop Details

- Fill in the shop details section and click on the ‘Update Info’ button.

The screenshot shows a dark-themed web application interface. On the left is a sidebar with navigation links: Dashboard, Add Product, All Product, Add Blog, All Blog, Orders, Payments, Chat Customer, Chat Support, Profile (which is selected), and Logout. The main content area has a form for adding shop details. It includes fields for Name (with placeholder 'Email'), Email (placeholder 'Emailerandika2@gmail.com'), Role (placeholder 'Seller'), Status (placeholder 'Pending'), Payment Account (button 'click active'), Shop Name (placeholder 'Ae beauty'), Province (placeholder 'Western'), District (placeholder 'Malabe'), and City (placeholder 'New'). At the top right, there is a message 'Profile info add success' with a checkmark icon. Below the message is a 'Submit' button.

2.6.3. Edit Shop Details

- Click the edit icon.
- Edit shop details and click the ‘Save Changes’ button.
- Refresh the Page.

The screenshot shows a modal dialog box for editing shop details. It contains fields for Shop Name (placeholder 'Ae beauty'), Province (placeholder 'Western'), District (placeholder 'Malabe'), and City (placeholder 'New'). At the bottom right is a large blue 'Save Changes' button.

The screenshot shows the same dark-themed application interface as the previous screenshot. The sidebar and main form are identical. At the top right, there is a message 'Shop profile updated successfully' with a checkmark icon. Below the message is a 'Submit' button.

2.6.4. Edit Seller Details

- Click the edit icon.
- Edit seller details and click the ‘Save Changes’ button.
- Refresh the Page.

A screenshot of a dark-themed web application interface for editing a seller's profile. The form includes fields for Name (amali), Email (amalierandika2@gmail.com), Role (seller), Status (pending), and Payment Account (click active). A large blue 'Save Changes' button is at the bottom.

A screenshot of the same dark-themed web application after saving changes. The seller's status is now 'active'. The payment account status is also 'active'. A success message 'Profile updated successfully' is displayed in the top right corner.

2.6.5. Active Payment Account

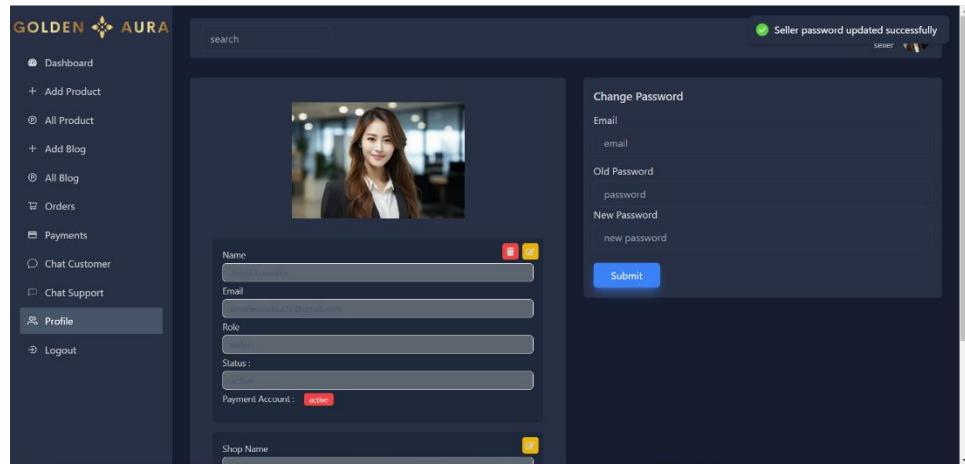
After the administrator activates the seller dashboard, the payment account can be activated by clicking the “click active” button in front of the payment account and filling the payment account details offered by the stripe payment method.

A screenshot of the seller profile edit form again, showing the 'pending' status and the 'click active' placeholder for the payment account field.

A screenshot of the seller profile edit form after activating the payment account. The status is now 'active', and the payment account status is also 'active'. The payment account field shows a red placeholder indicating it is active.

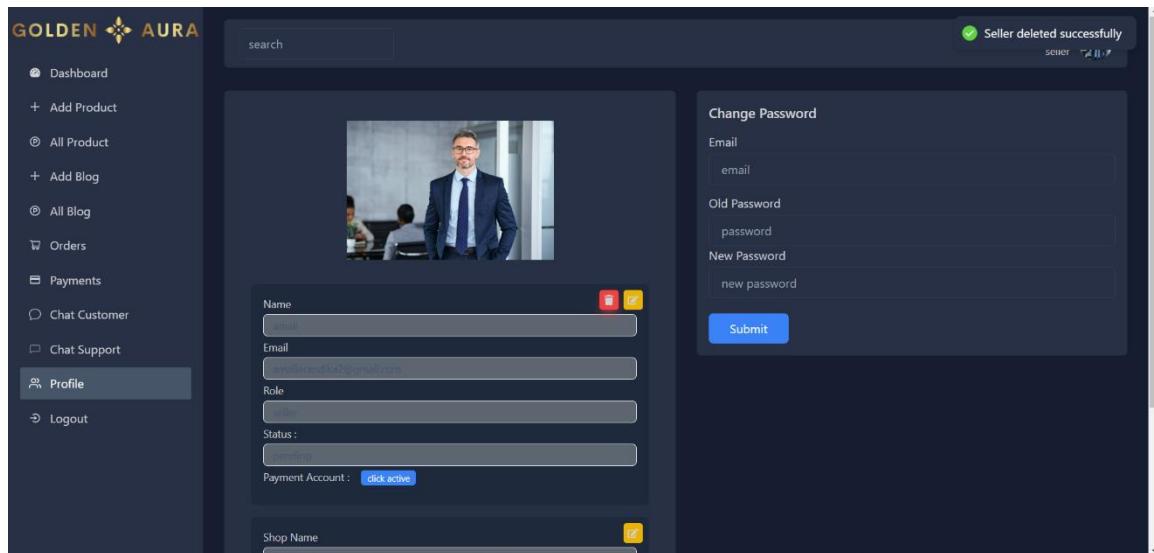
2.6.6. Change Password

- Fill in the email, old password, and new password section in the ‘Change Password’ form.
- Click the ‘Submit’ button.



2.6.7. Remove Seller Profile

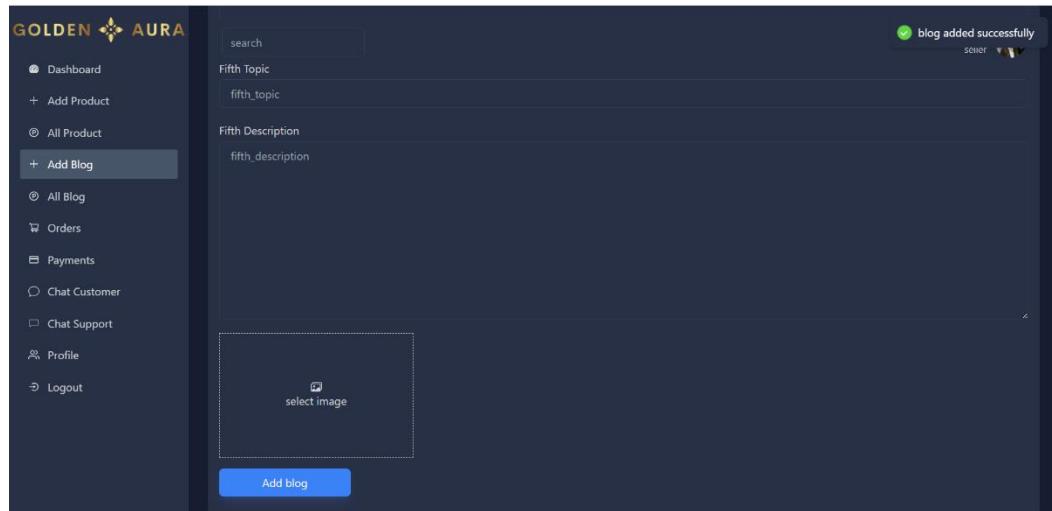
- Click the delete icon and delete the seller profile from the system.



2.7. Manage Blogs

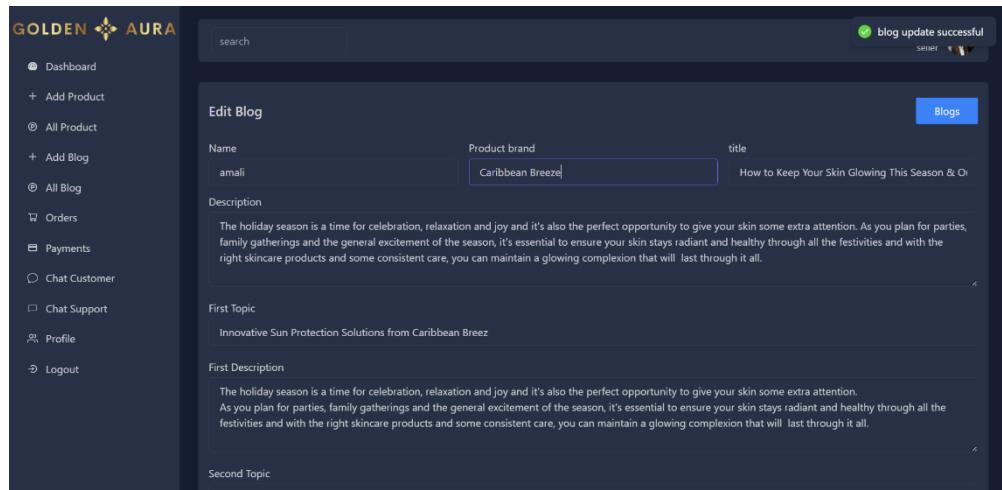
2.7.1. Add Blog

- Go to the Add Blog section.
- Fill out the form with blog details (name, title, brand, images, etc.).
- Click the "Add Blog" button and save the blog in the system.



2.7.2. Edit Blog

- Go to the “All Blog” section.
- Select a blog from the list.
- Click the edit icons and after updating the details click the "Update Blog" button.



2.7.3. Delete Blog

- Go to the “All Blog” section.
- Select a blog from the list.
- Click the delete icon and delete blog from the system.

NO	IMAGE	NAME	TITLE	BRAND	ACTION
1		amali...	How to Keep Your Skin Glowing This Season & Our Top Beauty Picks	Caribbean Breeze	
2		amali...	How to Keep Your Skin Glowing This Season & Our Top Beauty Picks	no	
3		amali...	Fragrance Gift Guide - Our Best Perfumes & Body Sprays	no	
4		amali...	Discover Caribbean Breeze's Ultimate Sun Protection Essentials	Caribbean Breeze	
5		Shabeera Firzan ...	The Ultimate Guide to CeraVe Moisturizers for All Skin Types	Cerave	

2.8. Customer/ Seller Login and Registration.

- Click the login icon at the top right corner of the dashboard. The customer or seller will be redirected to the login page.

Login

Email

Password

You have no account ? [Register](#)
[Register seller account](#)

Register

Name

Email

Password

Register

You already have account ? [Login](#)
[Login seller account](#)

Welcome to Golden Aura System

Please register to your account and start your business

Name

Email

Password

I agree to privacy and policy & terms

SignUp

Already have an Account ? [Sign in here](#)

- The system will then automatically redirect the customer to the customer login page and the seller to the seller login page.

Login

Email

Password

Login

You have no account ? [Register](#)
[Register seller account](#)

GOLDEN AURA

Welcome to Golden Aura System

Please sign-in to your account and start your business

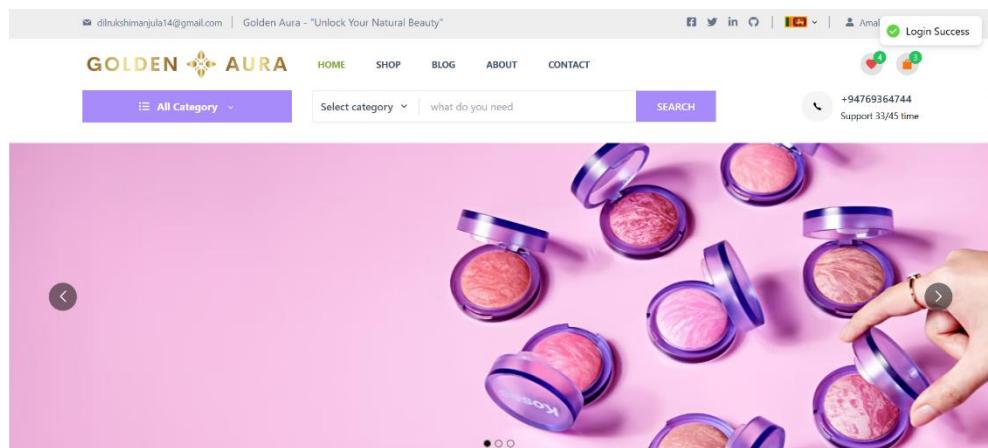
Email

Password

Login

Already have an Account ? [Signup here](#)

- When the customer enters the correct email and password and clicks the login button, the customer is redirected to the customer dashboard.



- When the seller enters the correct email and password and clicks the login button, the seller is redirected to the seller dashboard.



3. Admin Dashboard

3.1. Manage Categories

3.1.1. Add Category

- Go to the Categories section.
- Add Category: Enter the category name, image, subcategories and click the "Add Category" button to save the category in the system.

The screenshot shows the 'Add Category' interface. On the left, a sidebar menu includes 'Dashboard', 'Orders', 'Category' (selected), 'Sellers', 'Payment Request', 'Deactive Sellers', 'Sellers Request', 'Chat Sellers', and 'Logout'. The main area displays a table with one row, 'Mother and Baby', under 'NAME'. A modal window titled 'Add Category' contains fields for 'Category Name' (with placeholder 'Category Name') and 'select image' (with a dashed box). Below these are 'Subcategories' and two buttons: 'Add Subcategory' (green) and 'Add Category' (blue).

3.1.2. Edit Category.

- Select a category from the list.
- Click the edit icons and after updating the details click the "Update Category" button.

The screenshot shows the 'Edit Category' interface. The sidebar and table structure are identical to the 'Add Category' screen. The modal window is titled 'Edit Category' and contains a 'Category Name' field with 'EYES' entered. To the right, a 'Subcategories' list is displayed, including: Eyebrows, Eyeshadows, Eyeshadow Palettes, Eyeliners and Pencils, Mascara, Kajal, False Eyelashes, Eye Makeup Remover, and Eye Accessories. A blue 'All Categories' button is located at the top right of the modal.

3.1.3. Delete Category

- Select a category from the list.
- Click the delete icon and delete category from the system.

The screenshot shows the 'Category' section of the Golden Aura admin interface. On the left is a sidebar with navigation links: Dashboard, Orders, Category (selected), Sellers, Payment Request, Deactive Sellers, Sellers Request, Chat Sellers, Profile, and Logout. The main content area displays four categories: 1. MAKE-UP (sub-items: CC Creams, Compact Powders, Primers, Highlighters, Face Palettes, Paint Cake, Paint Stick, Makeup Removers, Tools and Accessories); 2. FRAGRANCE (sub-items: Women Fragrance, Men Fragrance, Gender Neutral Fragrance, Perfumed Lotions and Creams, Body Sprays and Mist, Deodorant); 3. HAIR CARE (sub-items: Shampoo, Conditioner, Hair Cream and Lotion, Hair Masks, Hair Styling, Treatments and Oils, Hair Color, Dry Shampoo, Accessories, Hair Supplement); 4. Mother. Each category has a delete icon. At the top right, a green banner says 'Category deleted successfully'. The bottom right shows a user profile for Dilrukshi Manjula, admin.

3.2. Manage Sellers

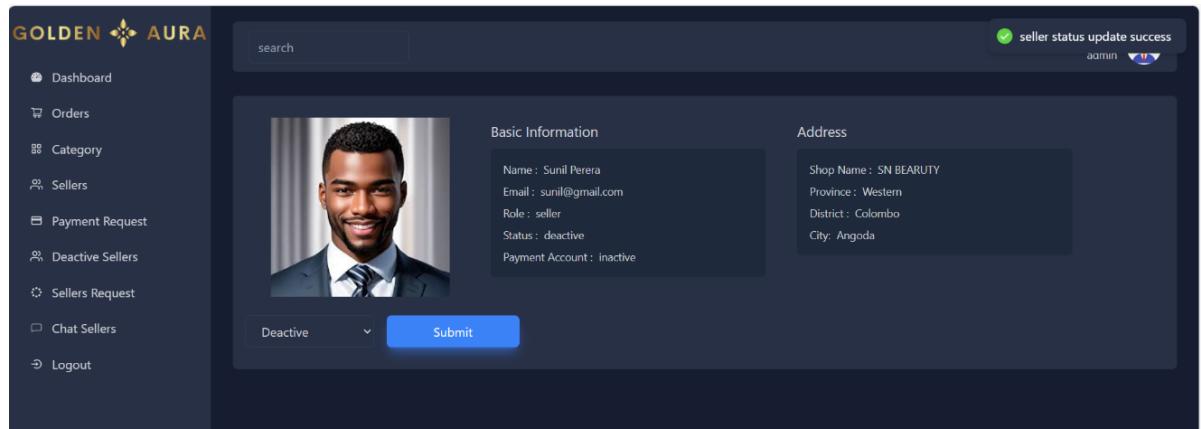
- Go to the Seller Request or Sellers section or the ‘Deactive Sellers’ section.
- View the list of sellers in the Seller Request section or Sellers section or the ‘Deactive Sellers’ section and click the action icon of the seller whose active status you want to change.
- Clicking the action icon will take you to the seller details page.

The screenshot shows the 'Sellers' section of the Golden Aura admin interface. The sidebar is identical to the previous screenshot. The main content area displays a table of sellers:

NO	IMAGE	NAME	SHOP NAME	PAYMENT STATUS	EMAIL	PROVINCE	DISTRICT	ACTION
1		Sugathadasa	SN Beauty Care	active	sugathadasa56@gmail.com	Western	Colombo	
2		Amali Erandika	AE Beautym	active	amalerandika22@gmail.com	Western	Colombo	

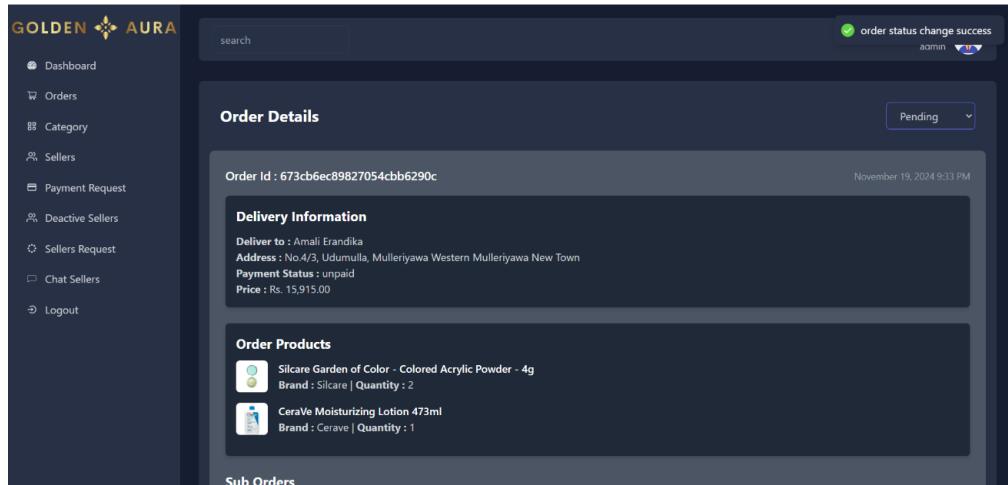
At the bottom right of the table, there is a blue button with the number '1' on it. The top right corner shows a user profile for Dilrukshi Manjula, admin.

- Change the sellers' active status using the drop-down list and click the "Submit" button to control the seller's access. Active sellers go to the Sellers section and inactive sellers go to the 'Deactive Sellers' section.



3.3. Order Management

- Access the Orders section to view and process orders.
- Update Order Status: Change the status of orders based on fulfillment progress. (Updates made here are visible to customers through the My Orders section of the customer dashboard)



3.4. Payment Request

- Go to the Payment Request page.
- If the seller is allowed to receive requested the money, click the "Confirm" button.

The screenshot shows the 'Payment Request' section of the Golden Aura admin interface. On the left sidebar, 'Payment Request' is highlighted. The main area displays a table titled 'Withdrawal Request' with one row. The row contains the following data:

NO	AMOUNT	STATUS	DATE	ACTION
1	Rs. 100.00	Pending	November 25, 2024	loading...

The status 'Pending' is shown in a light blue box. The 'ACTION' column contains a button labeled 'loading...'. The top right corner shows the user 'Dilrukshi Manjula' with the role 'admin' and a profile picture.

3.5. Chat with Sellers

- Go to the Chat Sellers section.
- Select a seller to start a conversation.

The screenshot shows the 'Chat Sellers' section of the Golden Aura admin interface. On the left sidebar, 'Chat Sellers' is highlighted. The main area displays a list of sellers on the left and a chat interface on the right. The sellers listed are Amali Erandika, Sugathadasa, Kamal, and Sunil Perera. The chat interface shows a conversation with Amali Erandika. The messages are:

Amali Erandika: Hi...

User: I want to know about details of some product

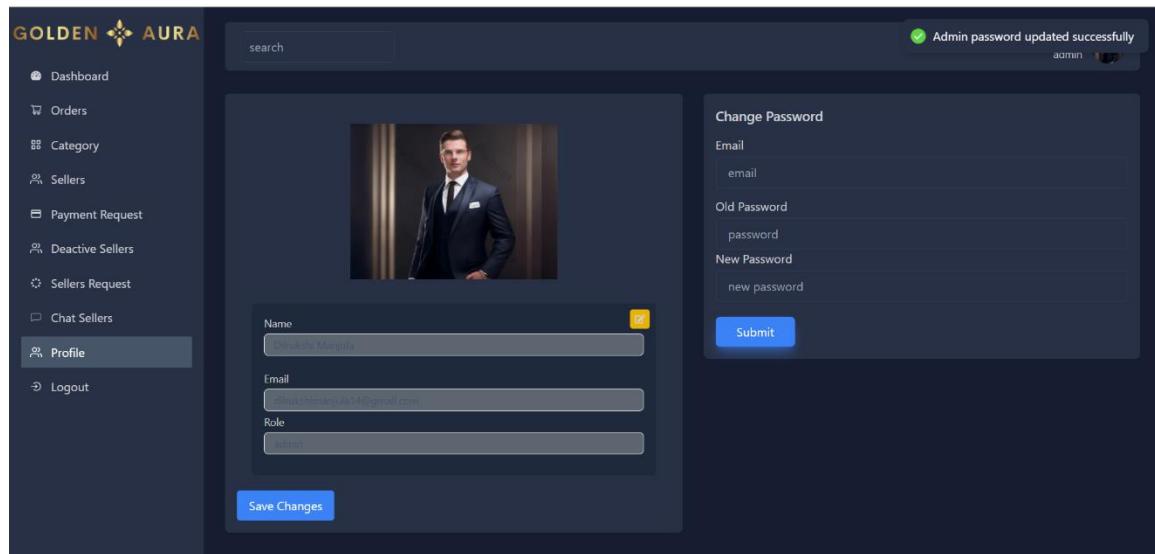
Amali Erandika: Ok. What do you want know

At the bottom, there is an input field labeled 'input your message' and a 'Send' button.

3.6. Profile Management

3.6.1. Change Password.

- Fill in the email, old password, and new password section in the ‘Change Password’ form.
- Click the ‘Submit’ button.



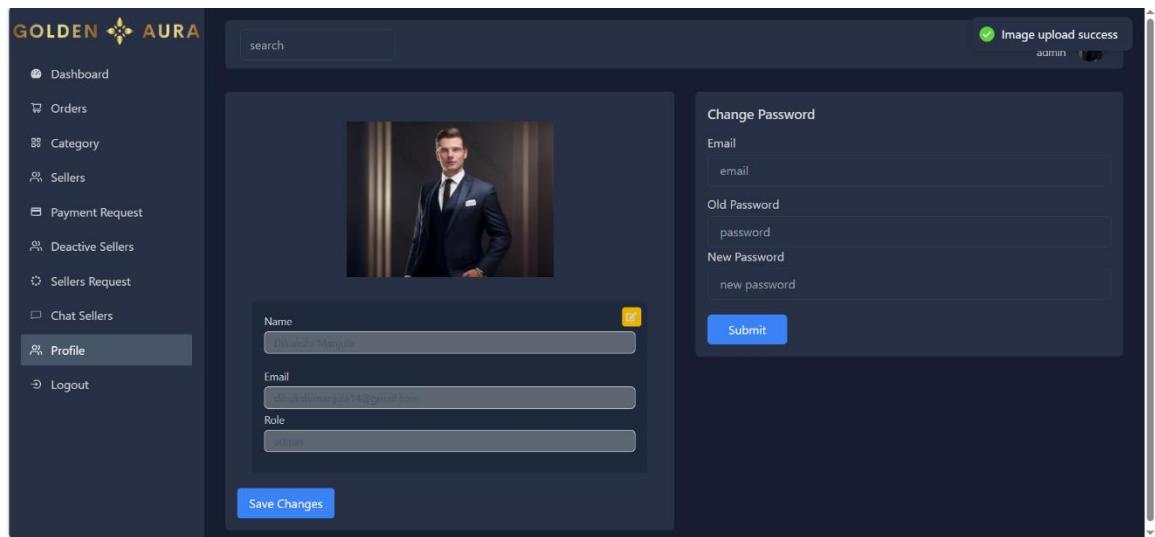
3.6.2. Edit Profile Details

- Click the edit icon.
- Edit admin details and click the ‘Save Changes’ button.
- Refresh the Page.



3.6.3. Update Profile Image

- Click on the admin profile image previously added to the system and select and add a new profile image from the computer to replace the previous profile image.



Appendix G – SRS

Google Drive link for SRS document: -

<https://drive.google.com/file/d/12OUVmSQcHAjMeX1KC-Tb4b5dQxwp-2Ai/view?usp=sharing>

References

- [1] C.-C.-J. Wan-YuLiua, "On gender differences in consumer behavior for online financial transaction of cosmetics," *Mathematical and Computer Modelling*, vol. 58, no. 26 August 2012, p. 253, 1July2011.
- [2] T. B. Ture, "The fundamentals of the ubiquitous online shopping cart development and online ordering system," *The Ubiquitous Online Ordering System And Shopping Cart*, p. 61, 2014.
- [3] "Tools / Gadgets & Accessories Archives," cosmetics.lk, 2018. [Online]. Available: <https://cosmetics.lk/>. [Accessed 25 06 2024].
- [4] ""Best Online Pharmacy in Sri Lanka | Healthguard," Healthguard Pharmacy , [Online]. Available: <https://www.healthguard.lk/>. [Accessed 25 06 2024].
- [5] ""BeholdBeauty | Beauty, cosmetic & personal care," 2020. [Online]. Available: <https://beholdbeauty.lk/>. [Accessed 25 06 2024].
- [6] "Beauty, Health & Cosmetics Sri Lanka - Online Shopping Sri Lanka," essentials.lk, 2017. [Online]. Available: <https://www.esentials.lk/>. [Accessed 25 06 2024].
- [7] "Beauty n Body - Beauty and Cosmetics Online Shopping Sri Lanka," [Online]. Available: <https://beautynbody.lk/>. [Accessed 25 06 2024].
- [8] "Software Engineering | Iterative Waterfall Model - GeeksforGeeks," [Online]. Available: <https://www.geeksforgeeks.org/software-engineering-iterative-waterfall-model/>. [Accessed 25 06 2024].