



# **SRI LANKA INSTITUTE OF ADVANCED TECHNOLOGICAL EDUCATION**

PROGRAMMING INDIVIDUAL PROJECT FINAL REPORT

**Fashion E – Commerce Website for Clothing Store**

Prepared by: [ Dimuth Adithya]

Student Id: [ KEG/IT/2022/F/0062]

Department of [IT], [ATI Kegalle]

# TABLE OF CONTENT

## Contents

.....	1
TABLE OF CONTENT .....	2
Abstract .....	4
Acknowledgments.....	4
SECTION 1: INTRODUCTION .....	5
Background .....	5
Problem Statement .....	5
Objectives.....	6
Scope and Limitations.....	6
Significance of the Project.....	7
SECTION 2: SYSTEM DESIGN AND METHODOLOGY .....	8
I.    System Architecture Diagram.....	9
II.   Database EER Diagram .....	10
III.  Use Case Diagram .....	11
IV.   UI And Wireframes.....	12
V.    Technology Stack.....	14
VI.   Flow Chart.....	14
VII.  MVC Architecture .....	15
VIII. Class Diagram.....	16
IX.   Gannt Chart .....	17
SECTION 3: IMPLEMENTATION.....	17
Frontend Features.....	17
Backend Functionality .....	18
Database Highlights.....	19
SECTION 4: RESULTS AND DISCUSSION.....	20
Achievements .....	20
User Experience .....	20
Challenges.....	20
Solutions.....	20

SECTION 5: CONCLUSION .....	21
SECTION 6: REFERENCES .....	21
SECTION 7: APPENDIES.....	21

## **Abstract**

The fashion industry is rapidly evolving towards digital platforms, yet many existing e-commerce websites lack user-friendly interfaces, secure payment methods, and efficient inventory management. This project aims to develop a comprehensive and responsive online fashion store that enhances the shopping experience by allowing customers to browse, filter, and purchase clothing items seamlessly. Key features include secure login, profile management, smooth checkout with payment integration, order tracking, and an admin dashboard for managing inventory and customer interactions. The system is developed using Laravel, MySQL, Bootstrap, and JavaScript, employing Agile methodology to ensure iterative development and continuous testing for scalability and reliability.

## **Acknowledgments**

I would like to express my sincere gratitude to my project supervisor for their valuable guidance and support throughout the development of this project. I also appreciate the encouragement and assistance from my lecturers and fellow students at the Advanced Technology Institute, Kegalle. Special thanks to the developers of the tools and frameworks used in this project—Laravel, MySQL, Bootstrap, and JavaScript—for providing robust technologies that made this system possible. Lastly, I thank my family and friends for their continuous motivation.

## **SECTION 1: INTRODUCTION**

### **Background**

The fashion industry has rapidly expanded into the digital marketplace, with clothing stores increasingly shifting towards e-commerce solutions. Despite this growth, many existing platforms fail to provide a seamless shopping experience due to poor user interface design, inefficient inventory management, and insecure payment methods. This project aims to address these challenges by developing a comprehensive online fashion store.

### **Problem Statement**

Online shopping has become the preferred method for purchasing fashion items due to its convenience, variety, and accessibility. With the rising demand for e-commerce solutions, businesses must ensure they offer well-structured, user-friendly, and secure platforms to retain customers and improve operational efficiency. Traditional retail models are being complemented—or even replaced—by digital storefronts that offer enhanced functionality and personalized user experiences.

## Objectives

The key objectives of this project are:

1. **Develop a user-friendly and responsive e-commerce platform** that enhances the online shopping experience.
2. **Enable advanced filtering options** for clothing items based on category, size, color, and price.
3. **Implement a secure login and profile management system** to ensure user data privacy.
4. **Provide order tracking, purchase history, and customer review functionality** for a more interactive shopping experience.
5. **Develop an admin dashboard** that allows efficient inventory, order, and customer management.

## Scope and Limitations

The scope of this project includes:

- Designing and developing an online fashion store with essential e-commerce functionalities.
- Implementing secure authentication and payment processes.
- Providing a robust inventory management system for administrators.

However, the project has certain limitations:

- It will focus primarily on clothing items and may not support other fashion accessories.
- While security measures will be enforced, full-scale cybersecurity protocols, such as AI-based fraud detection, may not be included.

- The initial version may limit international payment methods and shipping logistics.
- **Integrate a seamless checkout process** with reliable payment gateways.

## Significance of the Project

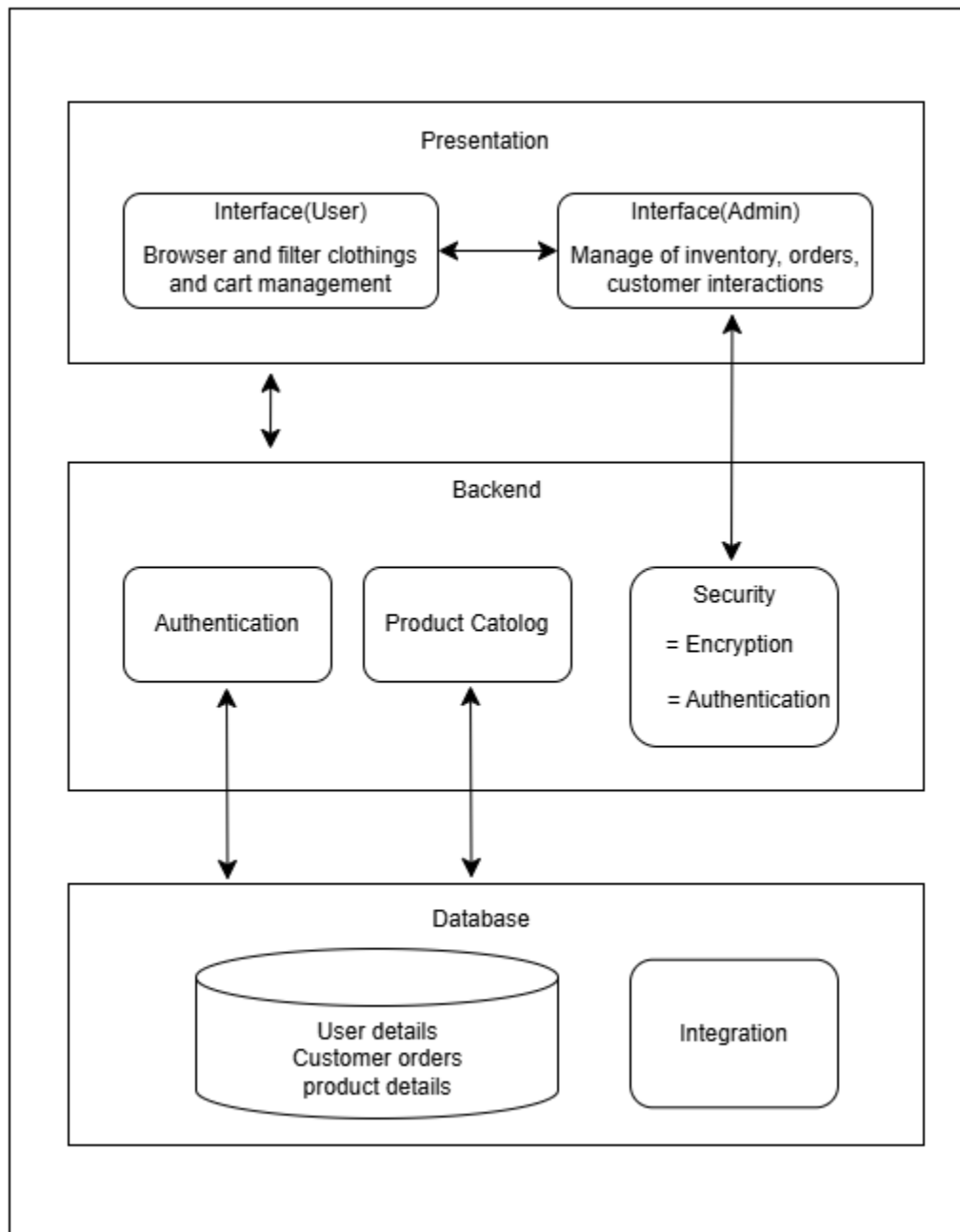
This project is significant for both businesses and consumers. It provides:

- **Improved accessibility** for customers to browse and purchase fashion items conveniently.
- **Enhanced security and trust** with reliable payment options and authentication protocols.
- **Optimized inventory and order tracking** for business owners, reducing operational inefficiencies.
- **Modern digital shopping experience**, ensuring competitiveness in an evolving market.

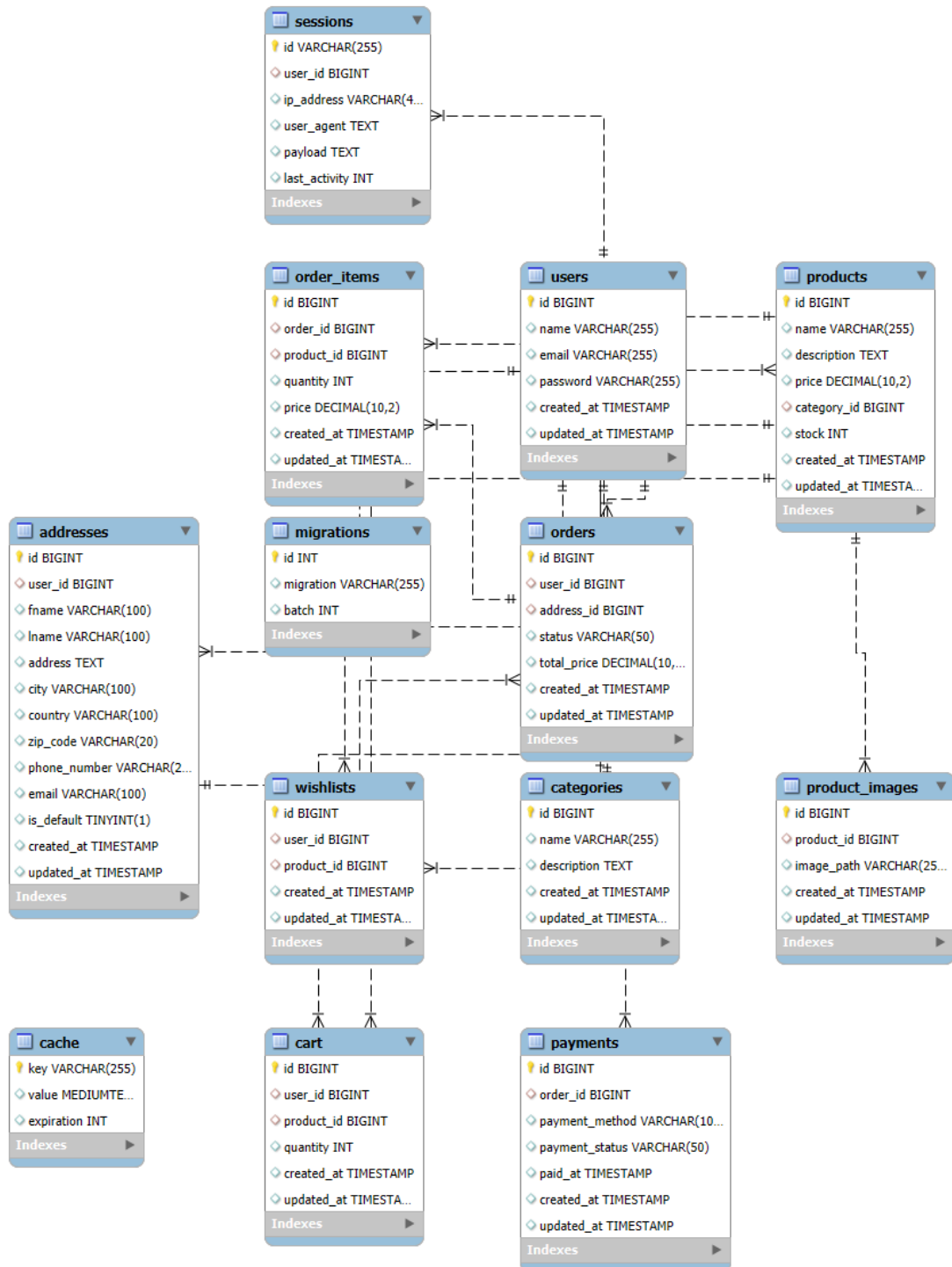
## **SECTION 2: SYSTEM DESIGN AND METHODOLOGY**



## I. System Architecture Diagram

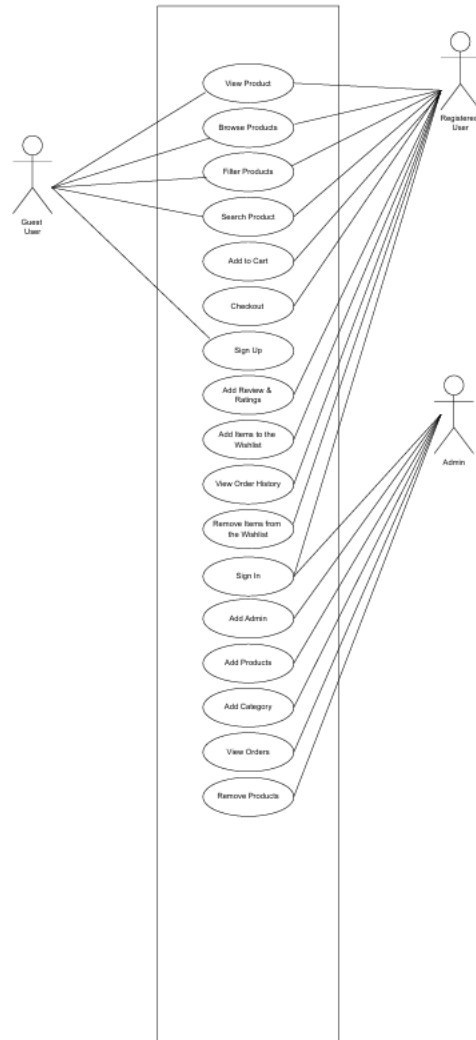


## II. Database EER Diagram



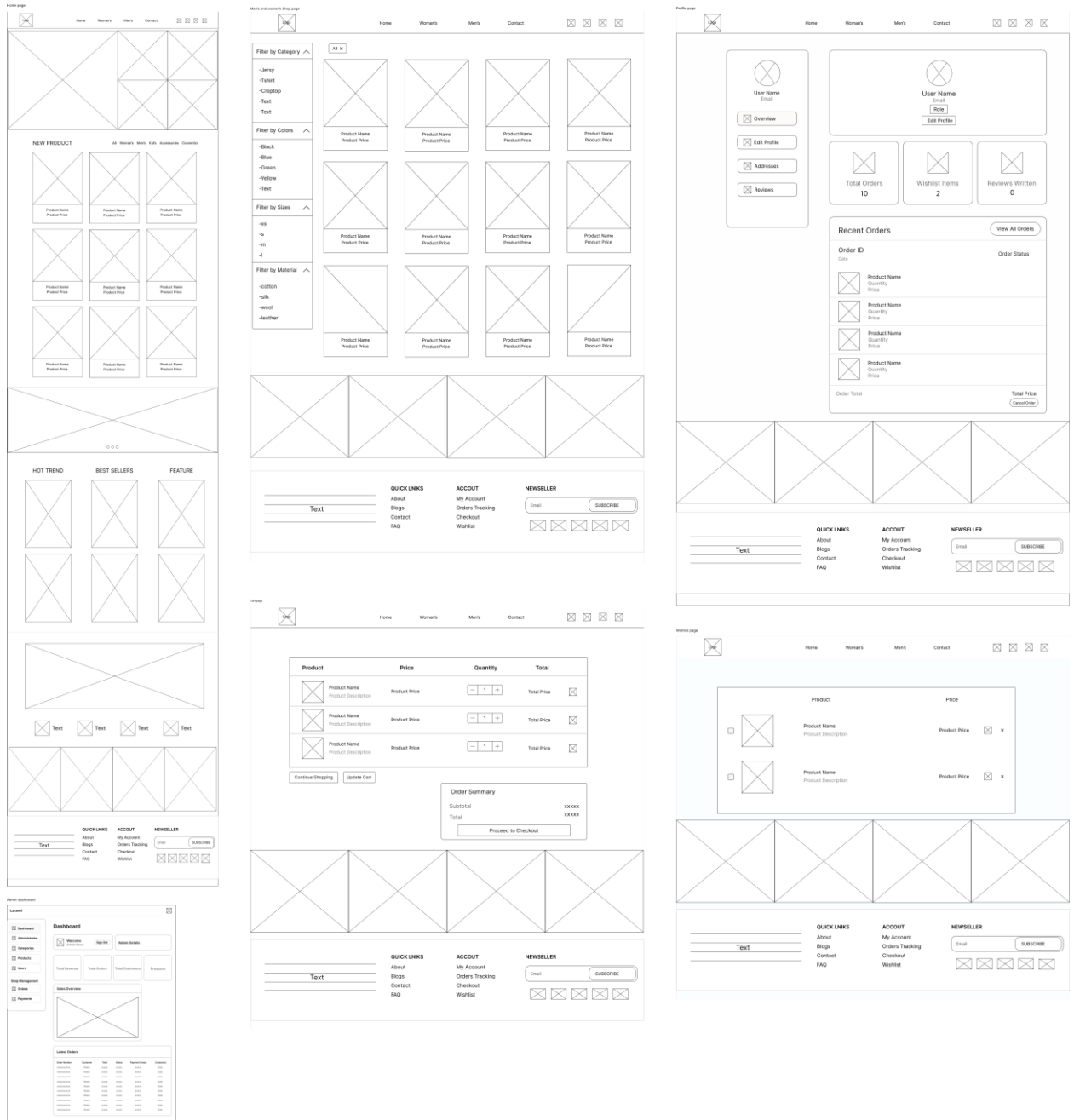
### III. Use Case Diagram

User Role



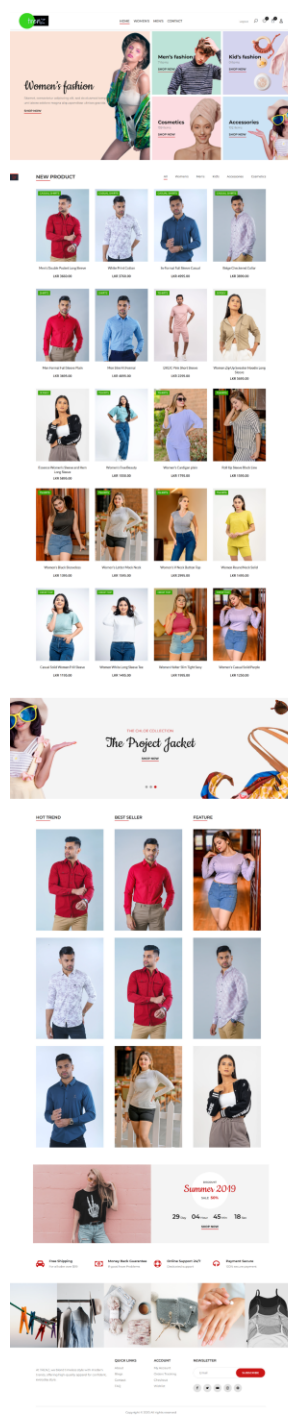
## IV. UI And Wireframes

### Wireframes

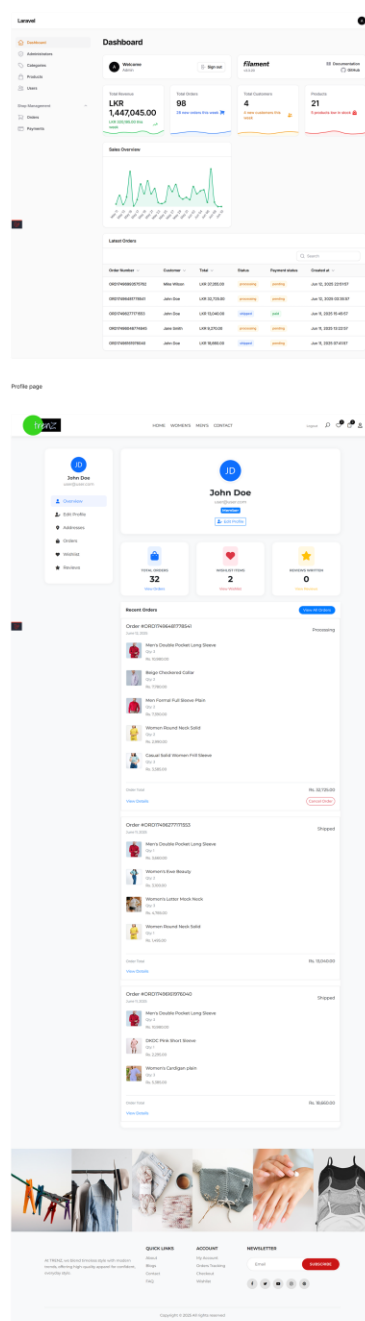


# UI Designs

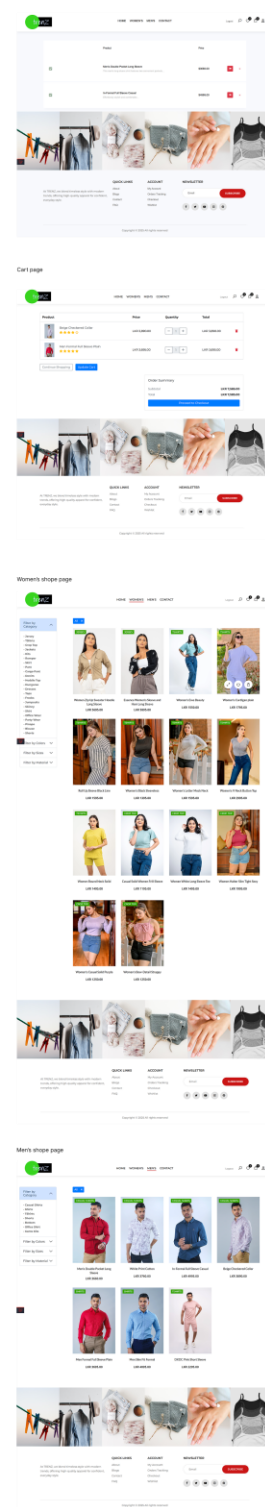
Home page



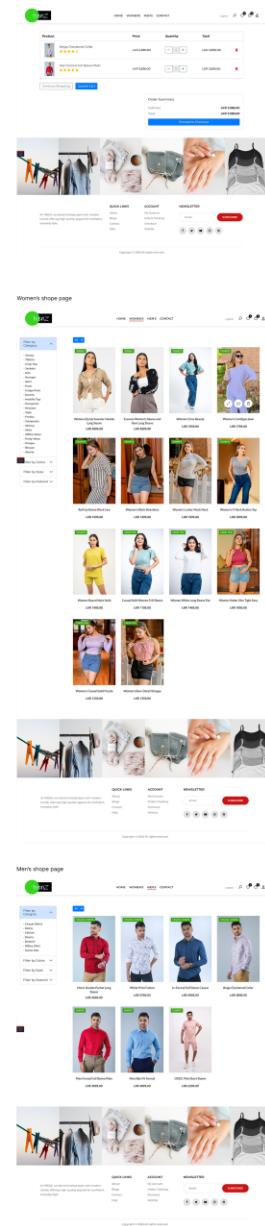
Admin dashboard



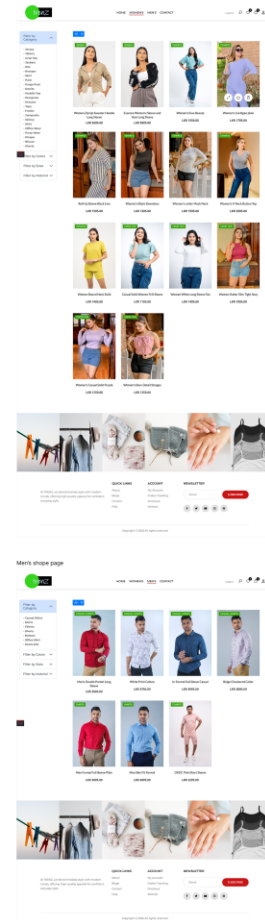
Wishlist page



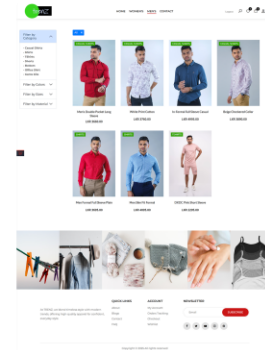
Cart page



Women's shop page



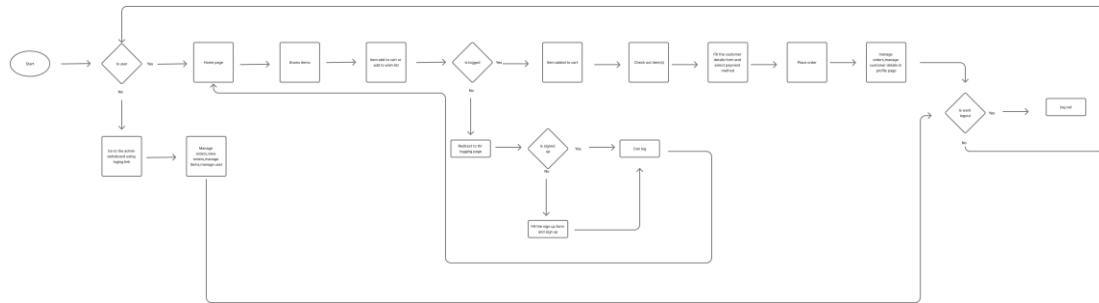
Mens shop page



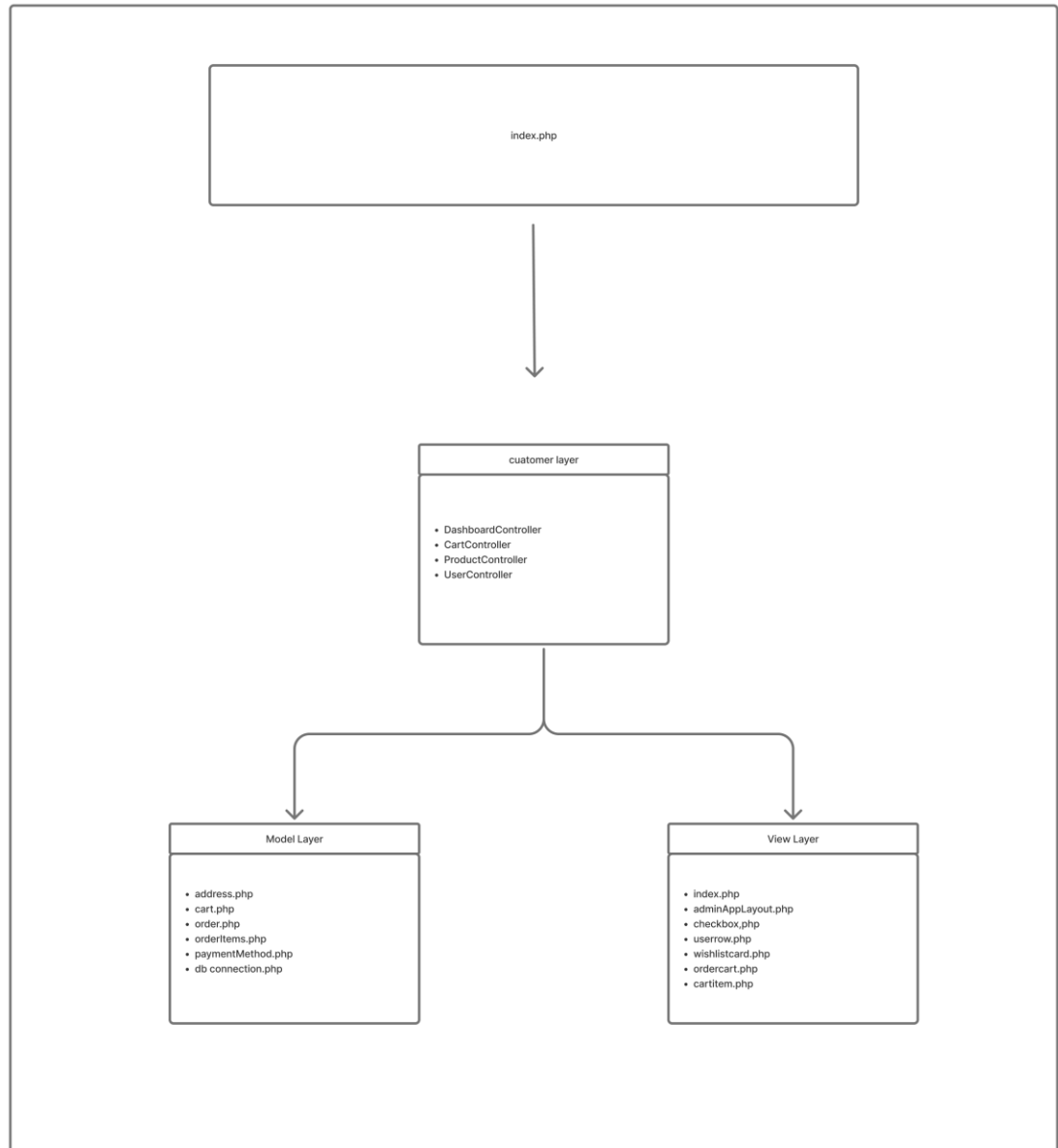
## V. Technology Stack

- **HTML, CSS, Bootstrap, JavaScript** for dynamic frontend
- **Laravel** for backend services
- **MYSQL** for relational data storage
- **Figma** for UI prototyping

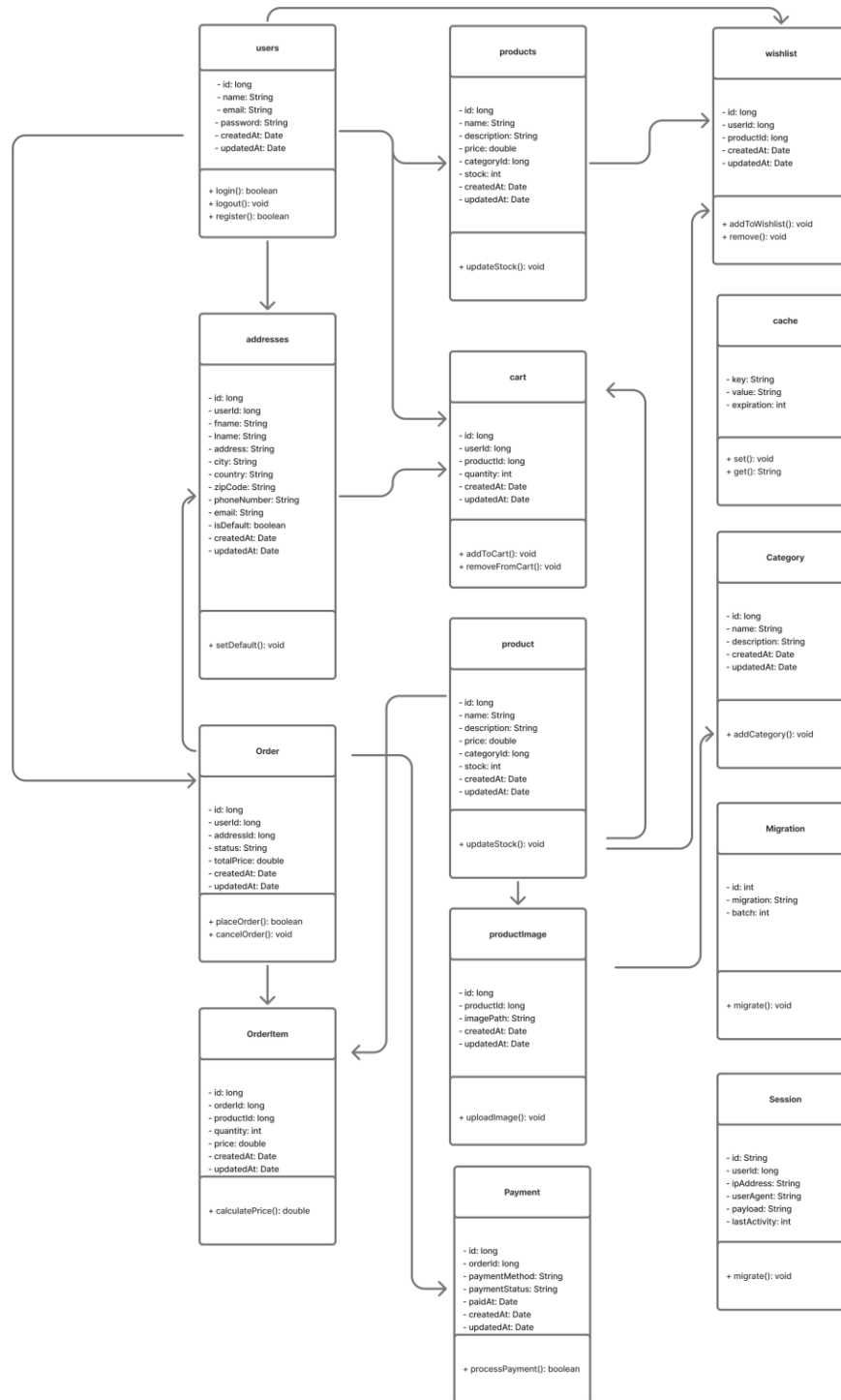
## VI. Flow Chart



## VII. MVC Architecture

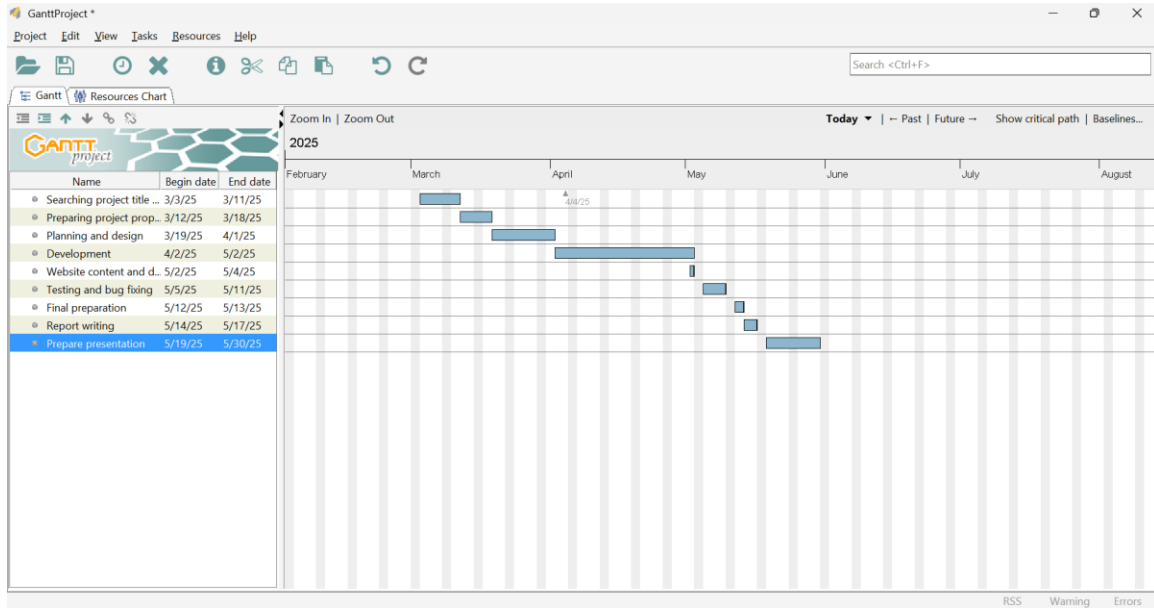


## VIII. Class Diagram





## IX. Gantt Chart



## SECTION 3: IMPLEMENTATION

### Frontend Features

The frontend was developed using HTML, CSS ,Bootstrap JavaScript, and optionally for a dynamic user experience. The main goal was to provide a responsive and intuitive user interface that supports smooth shopping, browsing, and checkout.

### Key Features

- **Home Page:** Displays latest collections, banners, featured categories.
- **Product Listing Page:** Filters for size, category, color, price.

- **Product Details Page:** Includes images, description, size options, and “Add to Cart” button.
- **Shopping Cart:** Users can update quantities, remove items, and proceed to checkout.
- **User Authentication:** Registration and login system for customers.
- **Order History:** Logged-in users can view past orders and their status.
- **Responsive Design:** Ensures usability across desktops, tablets, and mobile devices.

## Backend Functionality

The backend was implemented using PHP with Lavel .It handles business logic, order processing, and user management.

### *Key Features*

- **User Module:** Handles user registration, login, and profile management.
- **Product Module:** Admin can add, edit, or delete products with images and descriptions.
- **Cart & Checkout Module:** Manages shopping cart sessions, order summary, and order submission.
- **Order Management:** Tracks order statuses (Pending, Processing, Shipped, Delivered).
- **Admin Dashboard:** Allows the admin to manage inventory, orders, categories, and users.

## Database Highlights

The database was designed using **phpMyAdmin** and follows principles of **normalization** to reduce redundancy and maintain data integrity. Each table is structured to store atomic data, support relational links through foreign keys, and enable scalability for future development.

### *Key Tables*

- **users** Stores customer details such as name, email, and password.
- **products** Product catalog with names, prices, descriptions, and images.
- **categories** Groups products by category (e.g., Men, Women, Kids).
- **cart\_items** Temporarily stores cart data before checkout.
- **orders** Stores finalized orders placed by customers.
- **order\_items** Contains details of each product in an order.
- **admin\_users** Stores login credentials for admin access.

## **SECTION 4: RESULTS AND DISCUSSION**

### **Achievements**

- Fully functional ordering process
- Real-time status tracking
- Admin control panel

### **User Experience**

- Easy navigation
- Fast load times
- Responsive design

### **Challenges**

- Managing relational database complexity
- Ensuring responsive UI

### **Solutions**

- Modular code structure
- SQL joins and views for reports

## SECTION 5: CONCLUSION

The clothing e-commerce website developed in this project successfully demonstrates the capabilities of a modern, user-friendly online shopping platform. It includes essential features such as product browsing, filtering, detailed product views, shopping cart management, customer authentication, and order tracking. An intuitive admin panel enables efficient product and order management, making the system suitable for both customers and store owners.

This project showcases how web technologies can streamline the online retail experience and provide a scalable solution for small to medium clothing businesses. The implementation of responsive design ensures accessibility across devices, enhancing user engagement and satisfaction.

Although the current version does not include advanced features such as integrated **online payments, real-time inventory synchronization, or a dedicated mobile app**, the system has been designed with scalability in mind. These features can be added in future iterations to further improve usability and commercial viability.

Overall, this project lays a strong foundation for a fully functional clothing e-commerce solution and contributes to the growing demand for digital retail platforms.

## SECTION 6: REFERENCES

- Laravel Documentation: [Laravel Official Documentation](#)
- PHP Official Documentation: [PHP Documentation](#)
- MySQL Documentation: [MySQL Official Documentation](#)
- GitHub Version Control: [Best Practices GitHub Git Guide](#)

## SECTION 7: APPENDIES

### Source Code Repository

Explore on [GitHub](#)

**Thank You**