

LUXURY E-COMMERCE WEBSITE

A MINI-PROJECT REPORT

Submitted by

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In partial fulfillment of the award of the degree

of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING



**RAJALAKSHMI
ENGINEERING COLLEGE**
An AUTONOMOUS Institution
Affiliated to ANNA UNIVERSITY, Chennai

RAJALAKSHMI ENGINEERING COLLEGE

AUTONOMOUS, CHENNAI

NOV/DEC, 2024

BONAFIDE CERTIFICATE

Certified that this mini project “ **Luxury E-Commerce Website** ” is the bonafide work of “ **MADHAN SHANKAR G (2116220701149)**” who carried out the project work under my supervision.

SIGNATURE

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Submitted for the End Semester Practical examination to be held on _____

INTERNAL EXAMINER

EXTERNAL EXAMINER

ACKNOWLEDGEMENT

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I am greatly indebted to my respected and honourable principal **Dr. S.N. MURUGESAN** for his able support and guidance.

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I also extend my sincere and hearty thanks to my internal guide **Mrs. JANANEE V** for her valuable guidance and motivation during the completion of this project.

My sincere thanks to my family members, friends and other staff members of Computer Science and Engineering.

ABSTRACT

The Luxura e-commerce platform is a cutting-edge website tailored to the high-end fashion and luxury dress market, designed to offer an immersive and seamless shopping experience. Luxura showcases a curated selection of premium fashion items, providing users with detailed product information and personalized recommendations. The platform's intuitive navigation, modern design, and responsive interface ensure a smooth browsing experience across devices.

At the core of Luxura's frontend is a combination of HTML5, CSS3, JavaScript, React.js, and Bootstrap 4, ensuring a clean, mobile-responsive design with improved performance and usability. The site features integrated FontAwesome icons for user-friendly functionality, including easily recognizable shopping cart and dark mode toggle buttons. The platform offers both light and dark modes, enhancing user comfort and personalization, and it employs modular design principles, breaking the website into distinct components for the homepage, shop, product details, and dynamic cart.

One of Luxura's key features is its dynamic shopping cart, which allows users to add, update, and remove items in real-time. The cart calculates subtotal and total costs based on quantity and pricing adjustments, streamlining the checkout process. A secure backend system powered by Node.js and MongoDB ensures safe and efficient storage of cart and order data. The use of local storage provides a seamless user experience, even in scenarios where an account is not logged in, making it flexible and easy to use.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

The e-commerce market for luxury goods is a growing sector with an increasing demand for premium fashion and personalized shopping experiences. Luxura aims to bridge the gap between luxury fashion brands and tech-savvy consumers who value convenience, exclusivity, and a superior shopping experience. The Luxura platform is an e-commerce website dedicated to selling luxury dresses and high-end fashion items, designed to offer users an intuitive, engaging, and responsive interface. Built with HTML5, CSS3, JavaScript, React.js, and Bootstrap 4, the platform provides a seamless user experience across all devices. The website incorporates features like a **dark mode toggle**, making it easier for users to browse in different lighting conditions, and responsive design to ensure accessibility on mobile, tablet, and desktop devices.

Luxura's backend is developed using **MongoDB** for data storage, and **Express.js** and **Node.js** for efficient and scalable server-side operations. The integration of these technologies ensures secure and fast processing of user data and transactions, making it an ideal platform for luxury fashion enthusiasts.

1.2 SCOPE OF WORK

The scope of the Luxura project extends beyond simply providing a platform for browsing and purchasing luxury dresses. It offers users an interactive shopping experience with real-time updates, a dynamic shopping cart, and tailored suggestions based on user preferences. Luxura also includes an advanced **dark mode feature**,

which enhances the overall aesthetics and usability of the website. The platform is designed to be **fully responsive**, ensuring an optimal user experience on any device, from smartphones to desktops. The primary scope is to create an engaging, accessible, and efficient platform that caters to the high standards of luxury fashion consumers.

1.3 AIM AND OBJECTIVES OF THE PROJECT

The main aim of Luxura is to deliver an intuitive and visually appealing e-commerce platform for luxury dresses, ensuring users enjoy a seamless shopping experience with modern features like interactive components, responsive design, and personalized suggestions. The project also focuses on the integration of efficient backend technologies to handle user data securely and provide fast access to luxury fashion items.

OBJECTIVES:

1. **To create a responsive website** that adapts to various screen sizes and devices, ensuring smooth navigation and functionality.
2. **To implement a dark mode toggle feature** that enhances the user experience by allowing easy switch between light and dark themes.
3. To develop a **dynamic and interactive frontend** using HTML5, CSS3, JavaScript, React.js, and Bootstrap 4.
4. To establish secure and efficient backend operations using **Node.js** and **Express.js**, with **MongoDB** for data management.
5. To offer users an intuitive shopping experience with a **real-time shopping cart** and **personalized product suggestions**.

CHAPTER 2

SYSTEM SPECIFICATIONS

2.1 HARDWARE SPECIFICATIONS

To run the application smoothly, the following hardware is recommended:

- **Processor:** Intel Core i5 or higher (or equivalent AMD Ryzen processors).
- **RAM:** A minimum of 8 GB to handle model inference and web requests efficiently.
- **Storage:** 500 GB hard drive or SSD for storage of required application files and datasets.

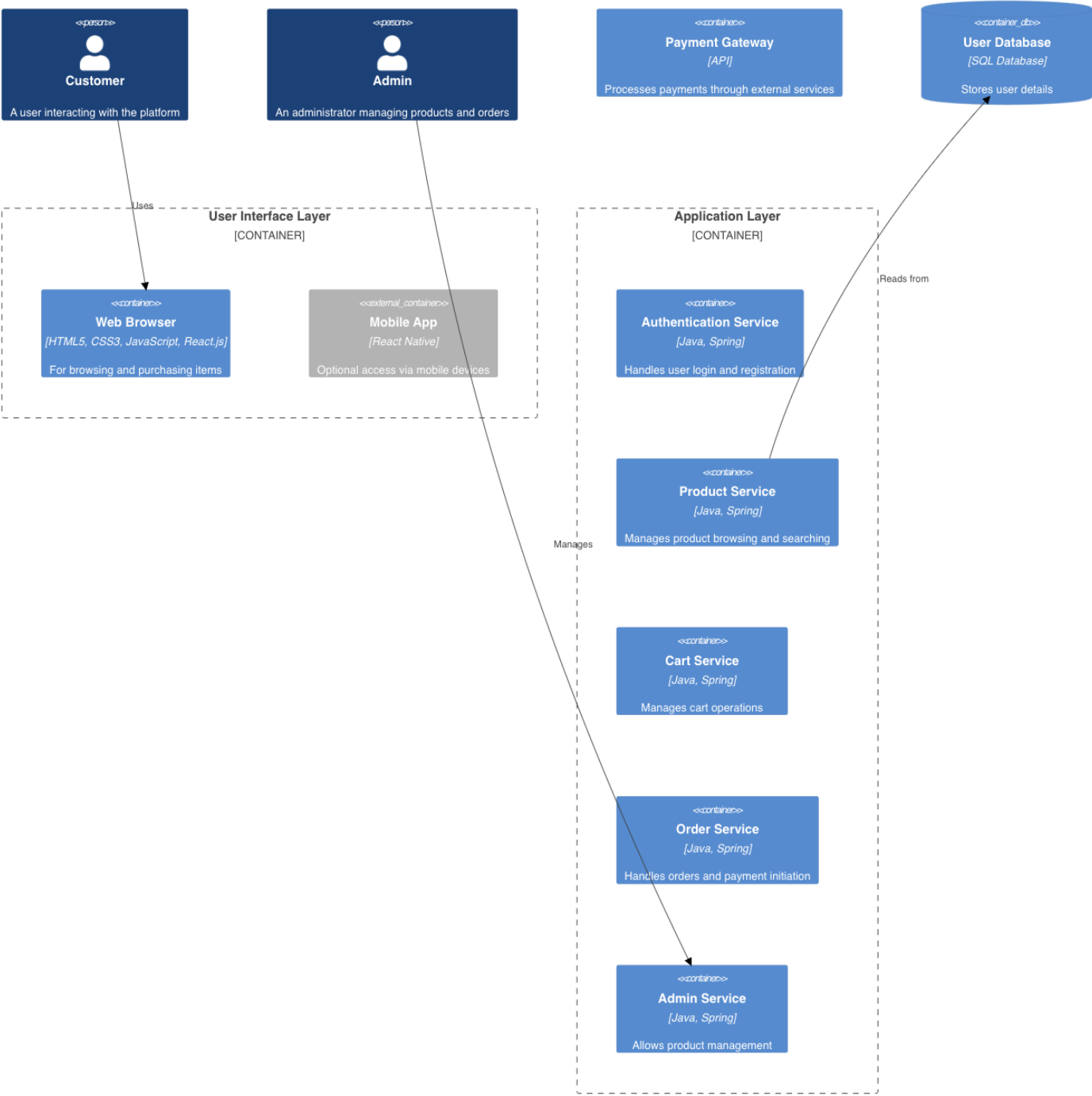
2.2 SOFTWARE SPECIFICATIONS

The project relies on a set of modern software tools and technologies to build, test, and deploy the system:

- **Front-End:** HTML, CSS, Bootstrap 4, JavaScript and React.js
- **Backend:** Node.js, Express.js
- **Database:** MongoDB (NoSQL database)

CHAPTER 3

ARCHITECTURE DIAGRAM



CHAPTER 4

MODULE DESCRIPTION

4.1 LANDING PAGE MODULE

The Landing Page is the user's gateway to the Luxura platform. It features an aesthetically pleasing and responsive design, with quick links to various sections of the website, such as the product catalog, shopping cart, and account management. The page highlights featured luxury dresses and provides users with an option to switch between light mode and dark mode for a customized browsing experience.

4.2 PRODUCT MODULE

This module is responsible for displaying luxury dresses and fashion items. It allows users to browse products, view detailed descriptions, and add items to their shopping cart. The responsive design ensures that the product listings are displayed perfectly across all devices. Users can also view product recommendations based on their previous purchases or browsing history.

4.3 SHOPPING CART MODULE

The Shopping Cart module allows users to view and manage items they wish to purchase. It offers real-time updates on the total price, product availability, and any ongoing promotions. The cart is interactive, allowing users to add or remove items and view the updated total immediately. This module ensures a smooth and hassle-free checkout process.

4.4 USER MANAGEMENT MODULE

This module handles user account creation, login, and profile management. Users can sign up or log in using their email or social media accounts. The module also manages user preferences, including saved addresses, payment methods, and purchase history. This module ensures that all personal data is securely stored in MongoDB, with efficient retrieval for a personalized shopping experience.

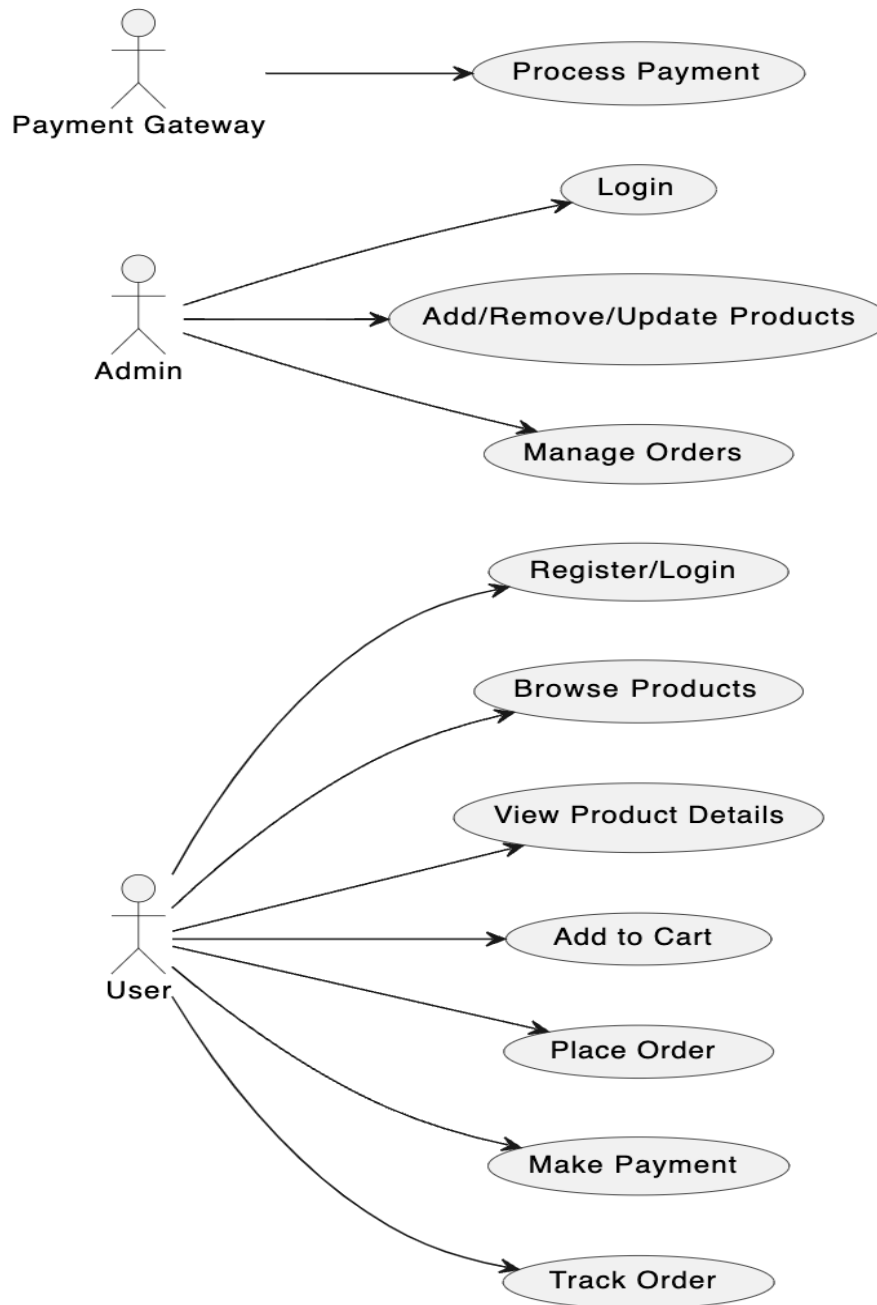
4.5 DATABASE MODULE

The Database Module is responsible for managing all backend data storage operations. The product catalog, user details, and transaction histories are stored in MongoDB. This ensures that the platform is scalable and can handle a growing number of users and product listings. The module supports real-time data retrieval, ensuring that users have the latest product information.

CHAPTER 5

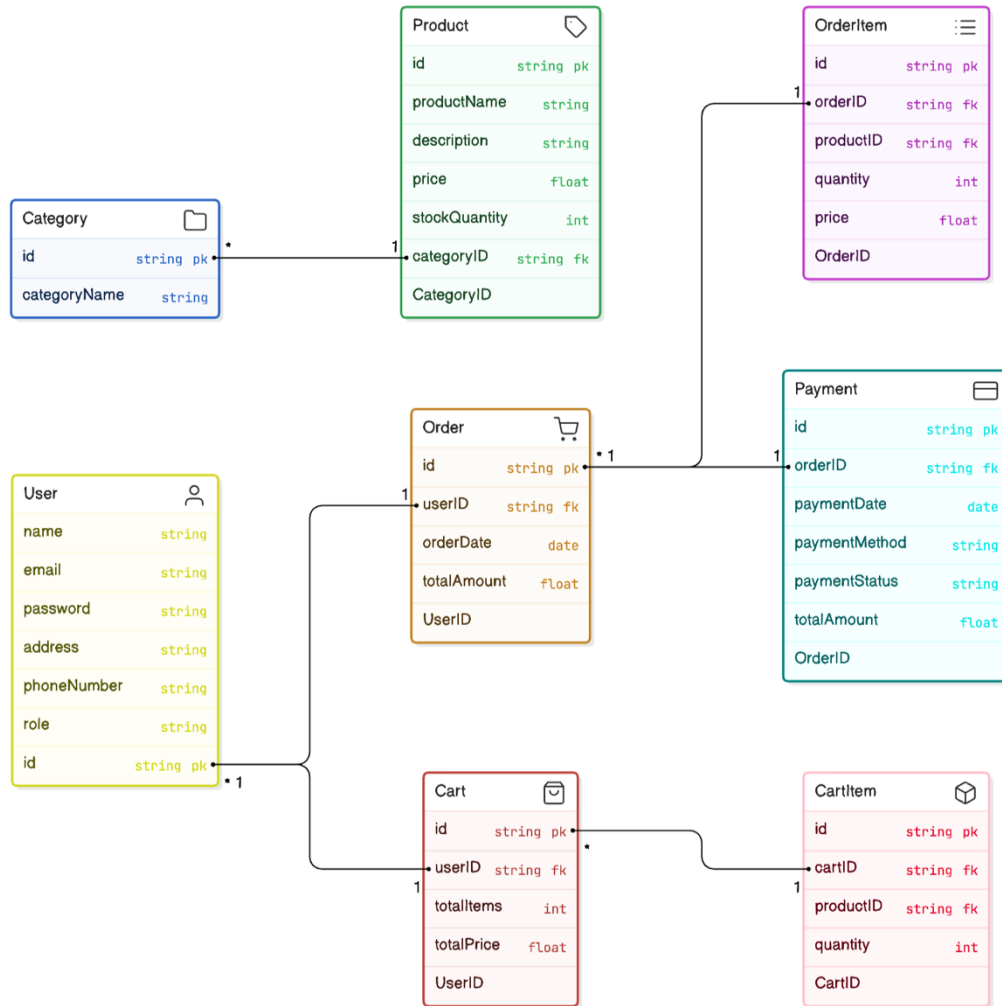
SYSTEM DESIGN

5.1 USE CASE DIAGRAM



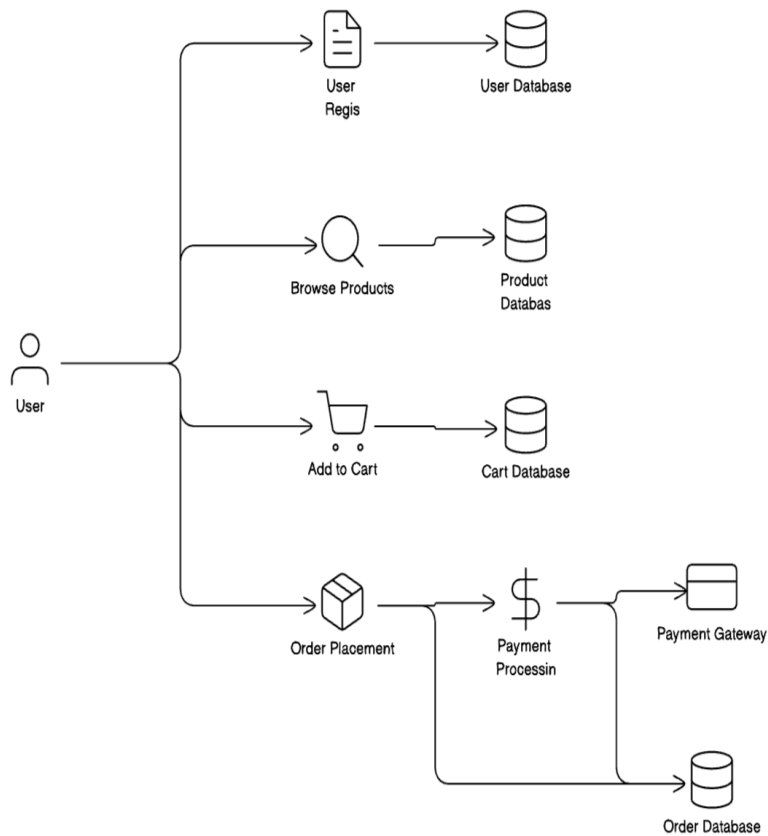
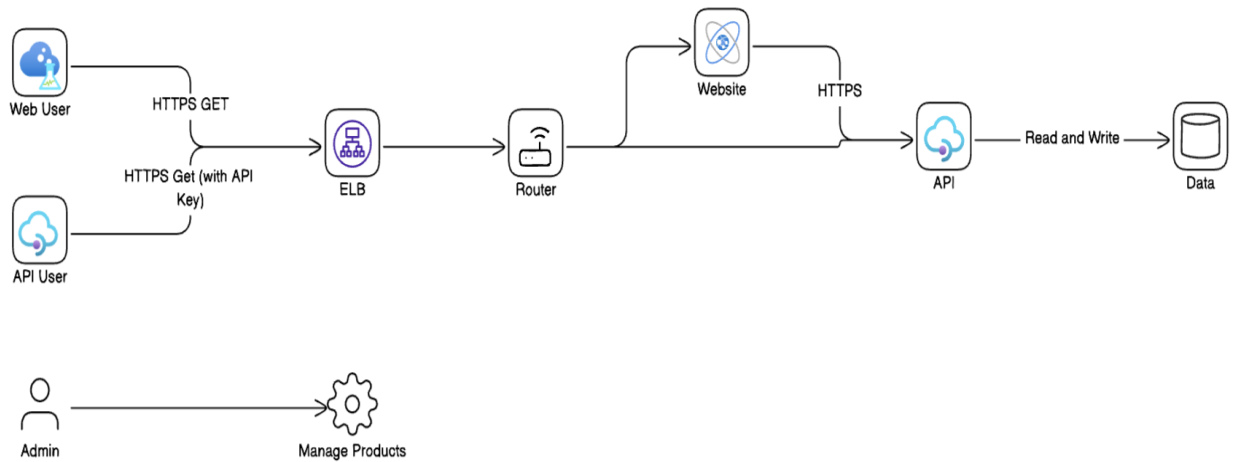
5.2 ER DIAGRAM

Luxura E-commerce Platform ERD



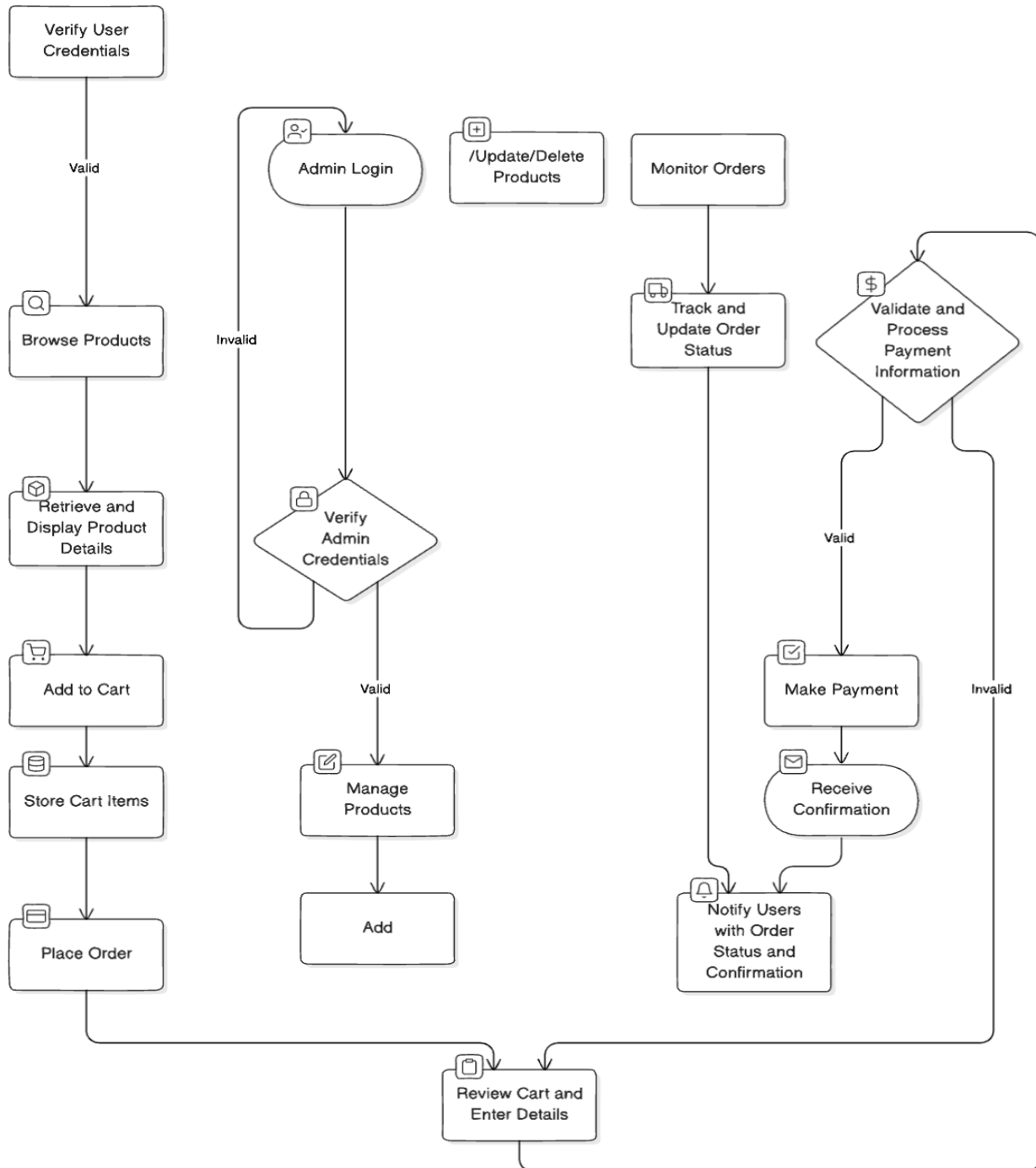
5.3 DATA FLOW DIAGRAM

Luxura E-commerce Platform DFD



5.4 ACTIVITY DIAGRAM

Luxura Product Interaction Flowchart



CHAPTER 6

SAMPLE CODING

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>e-commerce website</title>

  <link rel="stylesheet"
href="https://pro.fontawesome.com/releases/v5.10.0/css/all.css"/>
  <link rel="stylesheet" href="style.css">

</head>
<body>

  <section id="header">
    <a href="#"></a>
    <div>
      <ul id="navbar">
        <li><a class="active" href="index.html">Home</a></li>
        <li><a href="shop.html">Shop</a></li>
        <li><a href="about.html">About</a></li>
        <li id="lg-bag"><a href="cart.html"><i class="far fa-shopping-
bag"></i></a></li>
        <a href="#" id="close"><i class="far fa-times"></i></a>
        <li><a href="#" class="dark-mode-toggle"><i class="fas fa-
adjust"></i></a></li>
      </ul>
    </div>
    <div id="mobile">
      <a href="cart.html"><i class="far fa-shopping-bag"></i></a>
      <i id="bar" class="fas fa-outdent"></i>
    </div>
```


</section>

<section id="hero">

<h4 id="nochange">Define Your Fashion!</h4>

<h2>Super saver deals</h2>

<h1>On all products</h1>

<p>Save more with bonuses & up to 69% off!</p>

<button>Shop Now!</button>

</section>

<section id="feature" class="section-p1">

<div class="fe-box">

<h6>Free Shipping</h6>

</div>

<div class="fe-box">

<h6>Online Order</h6>

</div>

<div class="fe-box">

<h6>Save Money</h6>

</div>

<div class="fe-box">

<h6>Promotions</h6>

</div>

<div class="fe-box">

<h6>Happy Sell</h6>

</div>

<div class="fe-box">

<h6>24/7 Support</h6>

</div>

</section>

<section id="product1" class="section-p1">

<h2>Best Sellers</h2>

<p>Festival Collection. Trendy Design.</p>


```

        <i class="fas fa-star"></i>
        <i class="fas fa-star"></i>
        <i class="fas fa-star"></i>
        <i class="fas fa-star"></i>
    </div>
    <h4>₹3,999</h4>
</div>
<a href="#"><i class="fas fa-shopping-cart cart"></i></a>
</div>
<div class="pro" onclick="window.location.href='singleProduct4.html';">
    
    <div class="des">
        <span>adidas</span>
        <h5>Lymio Styled T-Shirts</h5>
        <div class="star">
            <i class="fas fa-star"></i>
            <i class="fas fa-star"></i>
            <i class="fas fa-star"></i>
            <i class="fas fa-star"></i>
            <i class="fas fa-star"></i>
        </div>
        <h4>₹2,999</h4>
    </div>
    <a href="#"><i class="fas fa-shopping-cart cart"></i></a>
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        </div>
        <h4>₹3,499</h4>
    </div>
    <a href="#"><i class="fas fa-shopping-cart cart"></i></a>

```

```

</div>
<div class="pro">
  
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    <div class="star">
      <i class="fas fa-star"></i>

```

```
        <i class="fas fa-star"></i>
        <i class="fas fa-star"></i>
        <i class="fas fa-star"></i>
        <i class="fas fa-star"></i>
    </div>
    <h4>₹3,499</h4>
</div>
<a href="#"><i class="fas fa-shopping-cart cart"></i></a>
</div>
</div>
</section>
```

```
<section id="product1" class="section-p1">
    <h2>New Arrivals</h2>
    <p>Summer Collection New Modern Design</p>
    <div class="pro-container">
        <div class="pro">
            
            <div class="des">
                <span>adidas</span>
                <h5>Lymio Styled T-Shirts</h5>
                <div class="star">
                    <i class="fas fa-star"></i>
                    <i class="fas fa-star"></i>
                    <i class="fas fa-star"></i>
                    <i class="fas fa-star"></i>
                    <i class="fas fa-star"></i>
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                <h4>₹3,999</h4>
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</section>
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            <i class="fas fa-star"></i>
        </div>
        <h4>₹2,999</h4>
    </div>
    <a href="#"><i class="fas fa-shopping-cart cart"></i></a>
</div>
</div>
</section>
<section id="banner3">
    <div class="banner-box">
        <h2>FESTIVAL SALE</h2>
        <h3>Monsoon Collection -50% OFF</h3>
    </div>
    <div class="banner-box">
        <h2>WINTER COLLECTION</h2>
        <h3>Winter 2024</h3>
    </div>
    <div class="banner-box">
        <h2>ACCESSORIES</h2>
        <h3>Fashionable Prints</h3>
    </div>
</section>
```



```
<section id="newsletter" class="section-p1 section-m1">
  <div class="newstext">
    <h4>Sign Up For Newsletter</h4>
    <p>Get E-mail updates about our latest shop and <span>special
offers.</span></p>
  </div>
  <div class="form">
    <input type="text" placeholder="Your email address">
    <button class="normal">Sign Up</button>
  </div>
</section>
```

```
<footer class="section-p1">
  <div class="col">
    
    <h4>Contact</h4>
    <p><strong>Address:</strong> Chennai, India - 600101</p>
    <p><strong>Email:</strong>support@luxara.com</p>
    <p><strong>Houxrs:</strong> 10:00 - 18:00, Mon - Sat</p>
    <div class="follow">
      <h4>Follow us</h4>
      <div class="icon">
        <i class="fab fa-facebook-f"></i>
        <i class="fab fa-twitter"></i>
        <i class="fab fa-instagram"></i>
        <i class="fab fa-pinterest-p"></i>
        <i class="fab fa-youtube"></i>
      </div>
    </div>
  </div>
  <div class="col">
    <h4>About</h4>
    <a href="#">About us</a>
    <a href="#">Delivery Information</a>
    <a href="#">Privacy Policy</a>
    <a href="#">Terms & Conditions</a>
    <a href="#">Contact Us</a>
  </div>
```

```

<div class="col">
  <h4>My Account</h4>
  <a href="#">Sign In</a>
  <a href="#">View Cart</a>
  <a href="#">My Wishlist</a>
  <a href="#">Track My Order</a>
  <a href="#">Help</a>
</div>
<div class="col install">
  <h4>Install App</h4>
  <p>From App Store or Google Play</p>
  <div class="row">
    
    
  </div>
  <p>Secured Payment Gateway</p>
  
</div>
<div class="copyright">
  <p>Created By Madhan Shankar G | All Rights Reserved | 2024</p>
</div>
</footer>
<script src="script.js"></script>
<button class="back-to-top">↑</button>
<script src="script.js"></script>
</body>
</html>

```

```
//server.js
```

```

const express = require('express');
const mongoose = require('mongoose');
const cors = require('cors'); // Allow cross-origin requests
const Cart = require('./models/Cart'); // Import the Cart model
const app = express();

```

```
// Middleware to parse JSON
```

```

app.use(express.json());
app.use(cors()); // Enable CORS

// MongoDB Atlas Connection
const mongoURI =
'mongodb+srv://madhanshankarg:RqDeXYQFb4e87Ngk@cluster0.vojqf.mongodb
.net/luxura?retryWrites=true&w=majority';

mongoose.connect(mongoURI, { useNewUrlParser: true, useUnifiedTopology: true
})
  .then(() => console.log('Connected to MongoDB Atlas'))
  .catch((error) => console.error('MongoDB connection error:', error));

// API Routes
app.post('/api/cart', (req, res) => {
  const { cart } = req.body;

  Cart.insertMany(cart)
    .then(() => res.json({ success: true, message: 'Cart saved to MongoDB' }))
    .catch(error => res.status(500).json({ success: false, message: 'Failed to save
cart', error }));
});

// Default route
app.get('/', (req, res) => {
  res.send('Luxura Backend is Running');
});

// Start the server
const PORT = 5002;
app.listen(PORT, () => console.log(`Server is running on port ${PORT}`));

//cart.js

const mongoose = require('mongoose');

const cartSchema = new mongoose.Schema({
  name: String,
  price: Number,

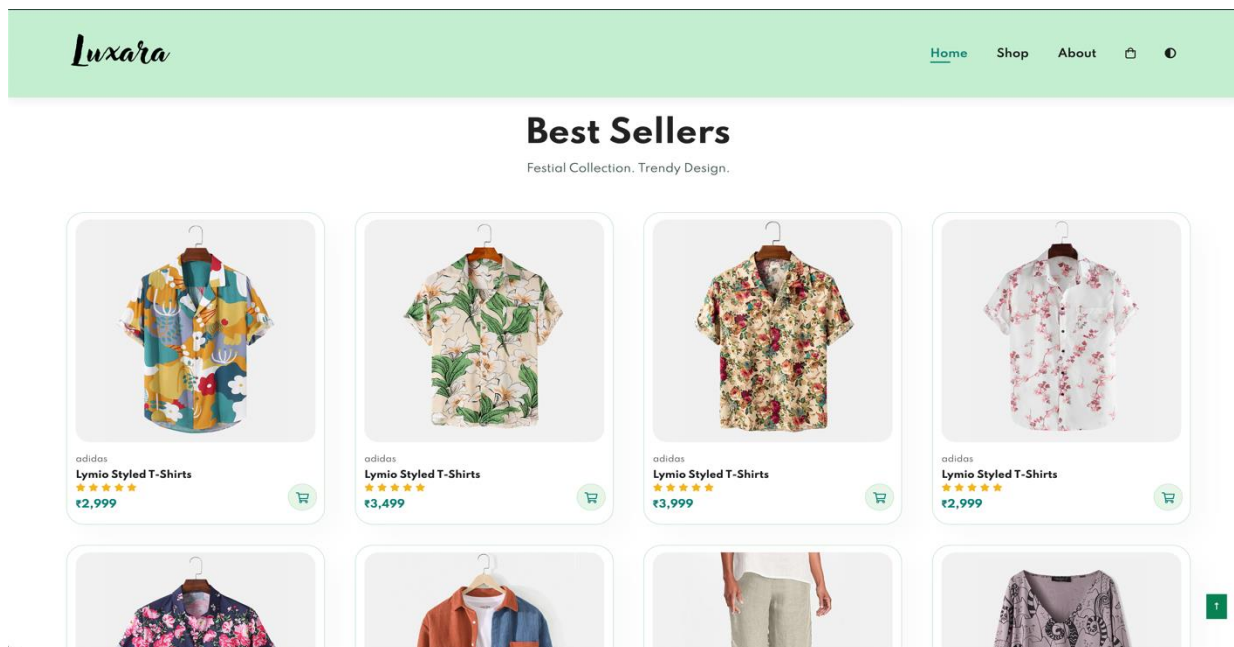
```

```
    size: String,  
    quantity: Number,  
  });
```

```
module.exports = mongoose.model('Cart', cartSchema);
```

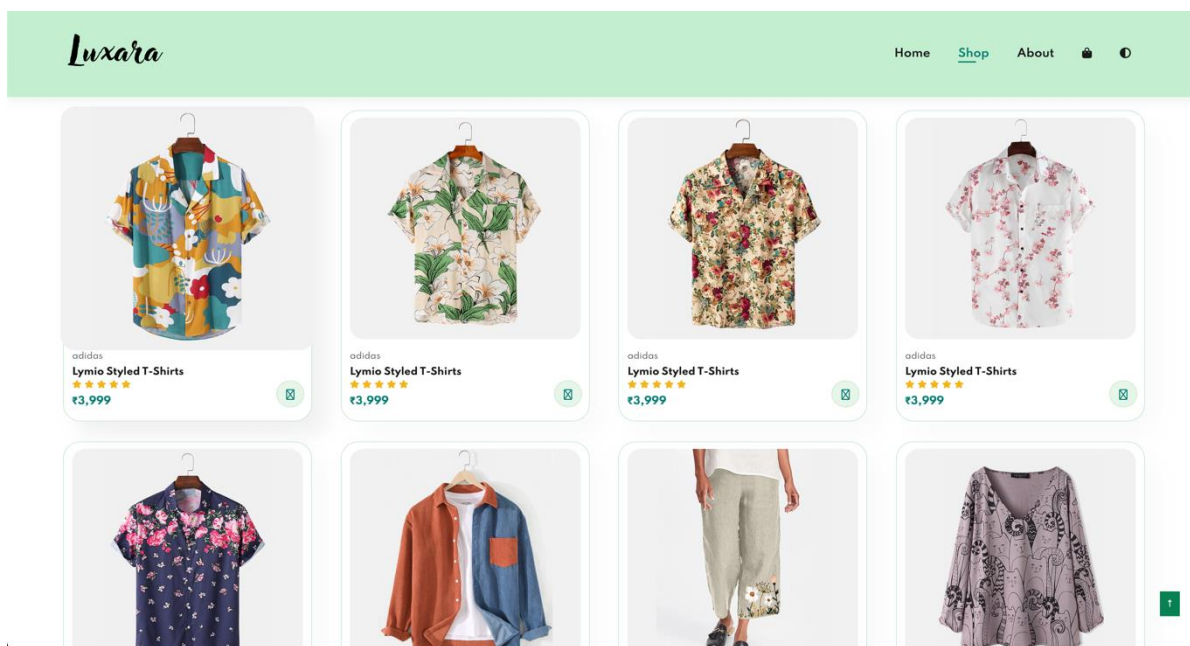
CHAPTER 7

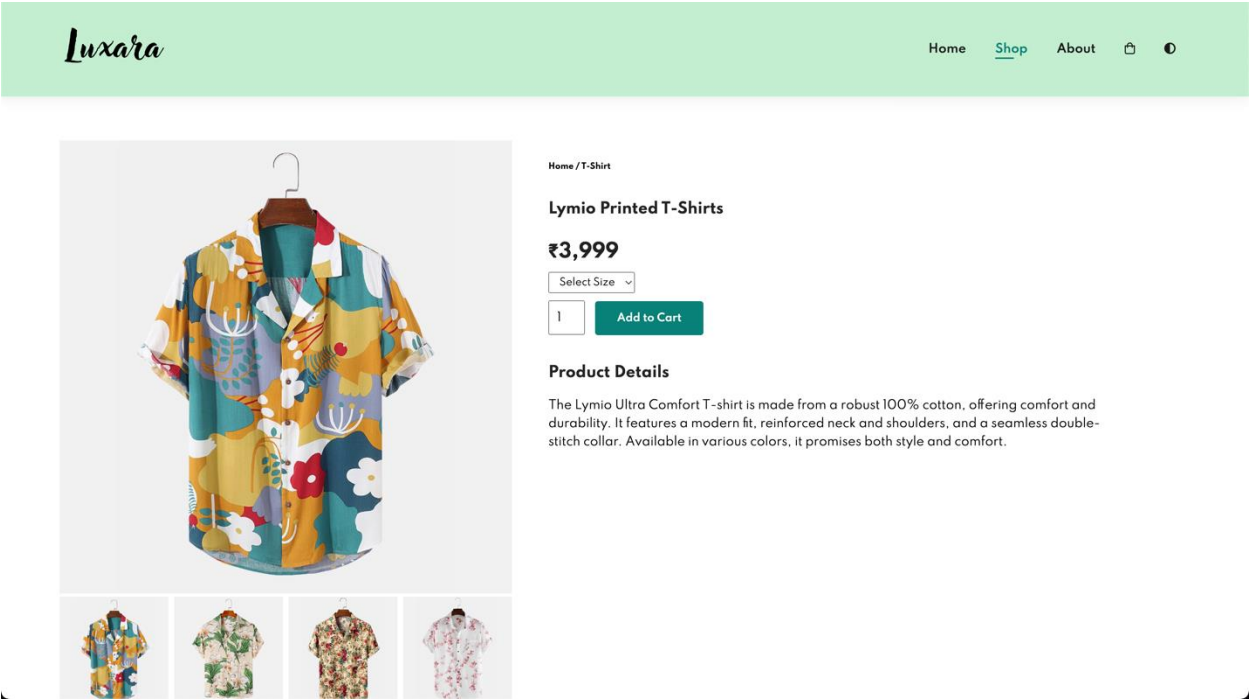
SCREENSHOTS



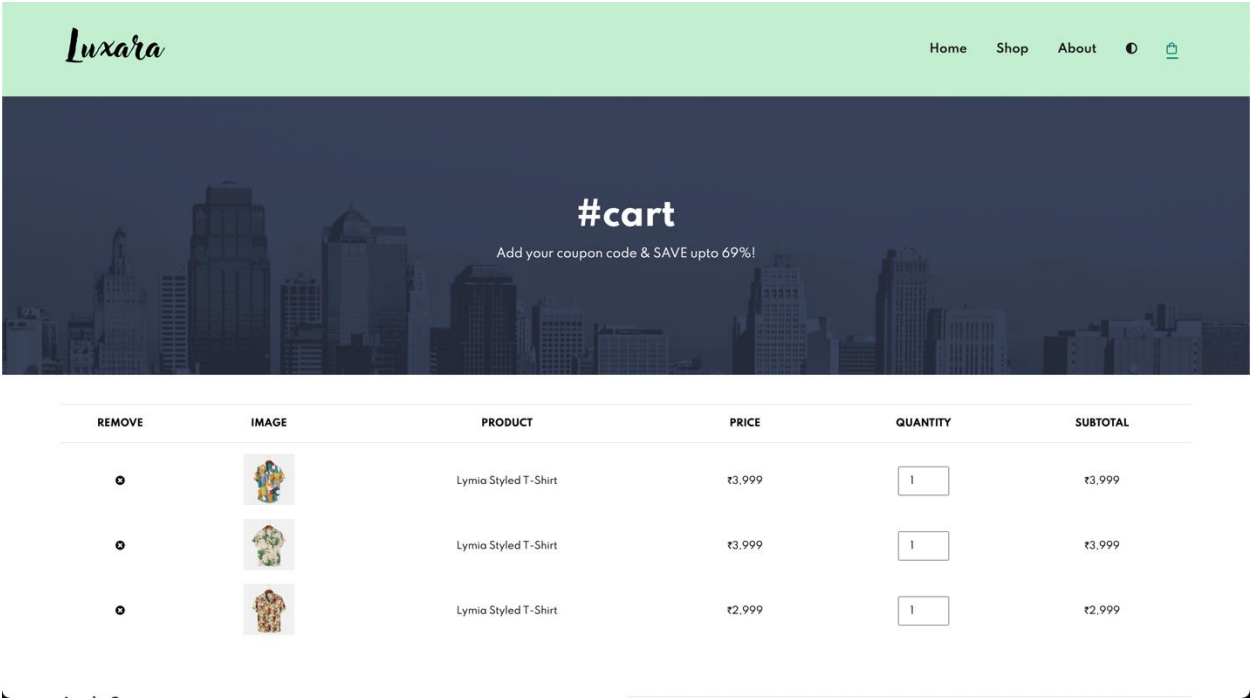
7.1 HOME PAGE

7.2 SHOPPING PAGE

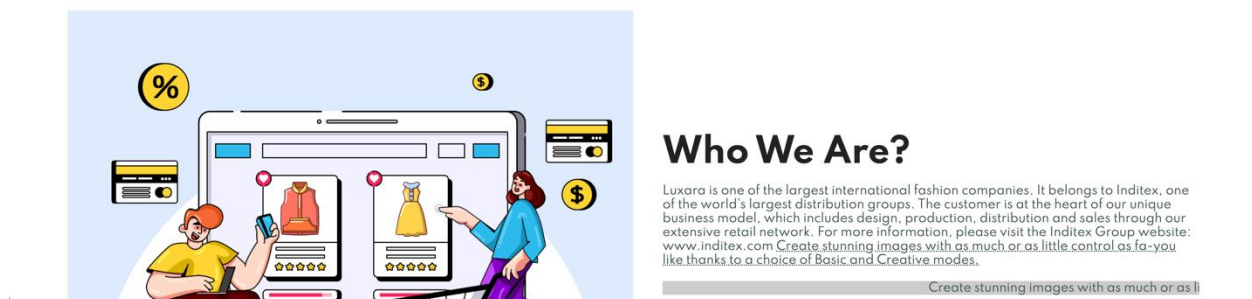
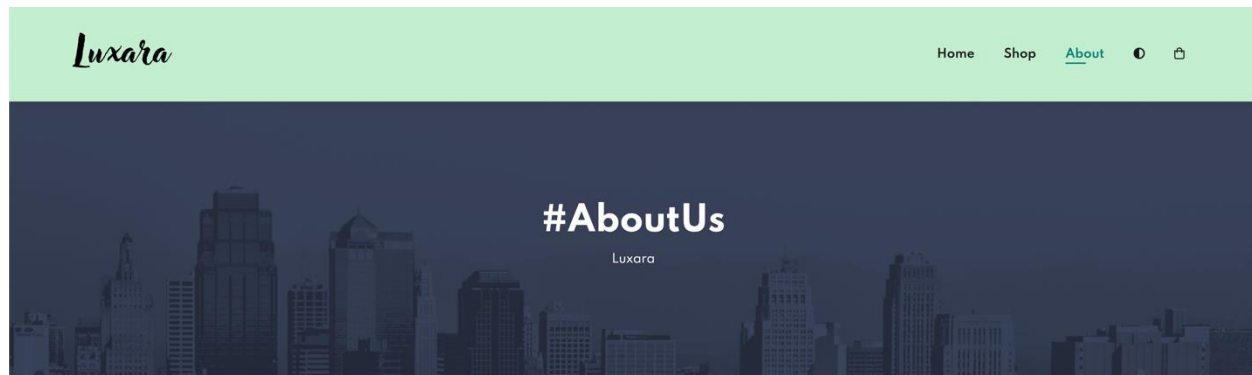




7.3 PRODUCT PAGE



7.4 CART PAGE



7.5 ABOUT US PAGE

CHAPTER 8

CONCLUSION

In conclusion, **Luxura** has successfully established itself as a dynamic and responsive platform for luxury fashion, offering an elevated shopping experience. The integration of a **dark mode toggle**, **interactive features**, and **responsive design** enhances user engagement, making the platform adaptable to different user preferences and devices.

Using a modern tech stack, including **MongoDB** for database management, and **HTML**, **CSS**, **JavaScript**, **Node.js**, and **Express.js** for web functionality, Luxura offers smooth navigation, quick response times, and scalability. These technologies provide a strong foundation for Luxura to expand its features and scale its offerings in the future.

By focusing on both user experience and robust backend functionality, Luxura stands as a comprehensive e-commerce solution that meets the demands of today's luxury fashion market.

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