A
Mini Project Report on

React js Based E commerce websites For Custom Clothing.

Submitted in partial fulfillment of the requirements
for the degree of
BACHELOR OF ENGINEERING
IN
Computer Science & Engineering
Artificial Intelligence & Machine Learning
by

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2024-2025

CERTIFICATE

This is to certify that the project entitled "**React js Based E commerce websites For Custom Clothing."** is a bonafide work of Samiksha Patil (24206010), Sahil Birje (24206011), Shreesh Nalawade (24206012), Aryan Buchake() submitted to the University of Mumbai in partial fulfillment of the requirement for the award of **Bachelor of Engineering** in **Computer Science & Engineering (Artificial Intelligence & Machine Learning).**

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Project Report Approval

This Mini project report entitled "**React js Based E commerce websites For Custom Clothing.**" by **Samiksha Patil, Sahil Birje, Shreesh Nalawade and Aryan Buchake** is approved for the degree of ***Bachelor of Engineering*** in ***Computer Science &Engineering***, (AI&ML) ***2024-25.***

External Examiner: _____

Internal Examiner: _____

Place: APSIT, Thane

Date:

Declaration

We declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will b e cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission not been taken when needed.

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ABSTRACT

This React.js-based e-commerce website is designed to offer a fast, interactive, and user-friendly shopping experience for clothing enthusiasts. With quick-loading pages and smooth navigation, users can easily explore a wide selection of apparel, ranging from casual wear to formal outfits. High-quality images and detailed product descriptions accompany each item, helping shoppers make informed choices. Additionally, customer reviews provide extra insights, further enhancing the decision-making process.

The site features intuitive search and filtering options, making it easy for users to find exactly what they're looking for. Secure payment methods ensure safe transactions, and the responsive design allows seamless access on both desktop and mobile devices. Personalized recommendations based on user preferences make discovering new clothing items simple and enjoyable.

Beyond shopping, the platform fosters a sense of community through a blog offering fashion tips and trend insights, creating an engaging and connected experience for users. Overall, this React.js-powered website aims to deliver an efficient and enjoyable online shopping experience, combining functionality with an appealing design for all clothing lovers.

Keywords: E-commerce, Fast,User-friendly, Customer reviews

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CHAPTER 1

INTRODUCTION

1. INTRODUCTION

Our eCommerce website, built using the MERN stack (MongoDB, Express.js, React.js, Node.js), offers a seamless and user-friendly platform for browsing products, managing a cart, and handling user authentication through streamlined login and registration pages. On the back-end, Express.js and Node.js power APIs for adding, updating, and displaying products, as well as managing cart items and user sessions. The admin panel allows administrators to manage the product catalog in real-time, ensuring efficient updates to the product listings. Additionally, an integrated AI tool provides personalized guidance, helping customers discover products tailored to their preferences, further enhancing the overall shopping experience.

Built with React.js, the website takes full advantage of React's component-based architecture, creating efficient, reusable, and scalable UI elements that deliver a modern and dynamic user experience. React.js enables fast, responsive interfaces, handling real-time updates such as product listings, shopping cart interactions, and user reviews. The React ecosystem also supports advanced features like state management with Redux, routing with React Router, and seamless integration with backend APIs for product data and user authentication. Furthermore, React.js facilitates integration with secure payment gateways like Stripe, ensuring a smooth and secure checkout process.

This approach makes React.js an ideal choice for building robust, maintainable, and high-performance eCommerce applications. Overall, React.js empowers developers to create scalable, high-performance websites that offer a smooth, intuitive, and engaging user experience, making it the perfect solution for modern online stores.

CHAPTER 2

LITERATURE SURVEY

2. LITERATURE SURVEY

2.1 Evolution of eCommerce Websites Using React.js

The introduction of React.js in 2013 revolutionized eCommerce website development by enabling the creation of dynamic and interactive user interfaces. Its component-based architecture and virtual DOM allowed for real-time updates without full-page reloads, addressing the inefficiencies of traditional server-side rendering technologies like PHP. As consumer demands for faster and more engaging shopping experiences grew, developers increasingly turned to React, facilitating features like real-time product updates and personalized recommendations. This transition established React as a leading framework in the modern eCommerce landscape.

2.2-LITERATURE REVIEW

[1] Bach Le "Developing An E-commerce Website With" 2022

The study covers essential aspects such as website architecture, design principles, and technology stacks required for developing a robust online platform. It also highlights key features like product management, shopping cart integration, and payment gateways that are crucial for creating a seamless user experience. By addressing both technical and user experience factors, the paper provides a comprehensive guide for developers aiming to create a competitive and scalable e-commerce site in the modern digital landscape.

[2]. Ritonummi, Saima" User experience on an ecommerce website : a case study"2020.

The study emphasizes the importance of a well-designed and user-friendly interface to enhance customer satisfaction and retention. By analyzing a specific e-commerce website, the research identifies key factors that influence UX, such as navigation ease, visual design, loading speed, and responsiveness. The paper also discusses how improving these elements can lead to increased user engagement, better conversion rates, and overall business success in the competitive e-commerce industry.

[3]. Dipina Damodaran, Shirin Salim, Surekha Marium Vargese "Performance Evaluation Of Mysql And Mongodb databases" Vol. 5, No. 2, April 2016

Aims to provide a comparative analysis of two popular databases: MySQL and MongoDB. The research focuses on evaluating their performance based on factors like query execution time, data insertion speed, and retrieval efficiency. MySQL, being a relational database, is structured around tables and follows SQL standards, while MongoDB, a NoSQL database, is document-based and stores data in a flexible, schema-less format. The study explores how each database performs under different workloads, offering valuable insights for developers and database administrators in selecting the right database for their specific needs.

CHAPTER 3

PROBLEM STATEMENT

3 Problem Statement

Many eCommerce websites struggle with slow loading times, outdated interfaces, and poor responsiveness, frustrating users and leading to lost sales. With consumers expecting real-time updates, fast navigation, and seamless interactions across devices, traditional web development approaches often fall short.

Additionally, integrating third-party services like payments and inventory management adds complexity, further affecting user experience. By leveraging React.js, businesses can create fast, responsive, and dynamic shopping platforms that meet modern consumer expectations and drive conversions.

CHAPTER 4

Experimental Setup

i. Experimental Setup

4.1 Hardware Setup

1. Processor (CPU)

A multi-core processor, such as Intel Core i5 or higher.

2. Memory (RAM)

At least 16 GB of RAM, with 32 GB preferred for more intensive tasks or larger projects.

3. Operating System

Windows 10/11, macOS, or a Linux distribution (such as Ubuntu).

4.2 Software Setup

1. Operating System

Windows 10/11, macOS, or a Linux distribution (e.g., Ubuntu).

2. Node.js and npm

Download and install [Node.js](https://nodejs.org/), which includes npm (Node Package Manager).

3. Code Editor/IDE

Visual Studio Code, Atom, or WebStorm.

4. Database Management (Optional)

MongoDB

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CHAPTER 5

Proposed System & Implementation

Proposed system & Implementation

5.1 Block diagram of proposed system

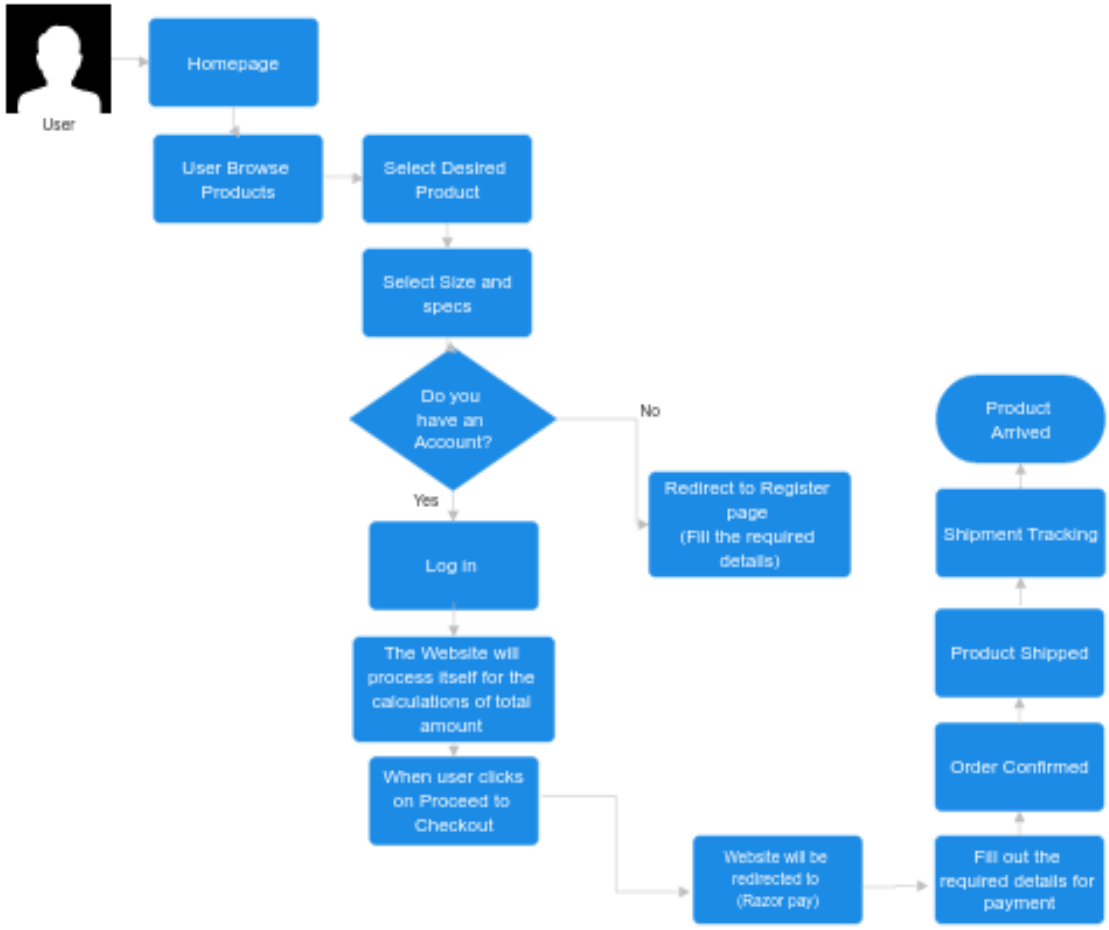

Figure 5.1.1: Block diagram of the proposed system

5.2 Chatbot Implementation

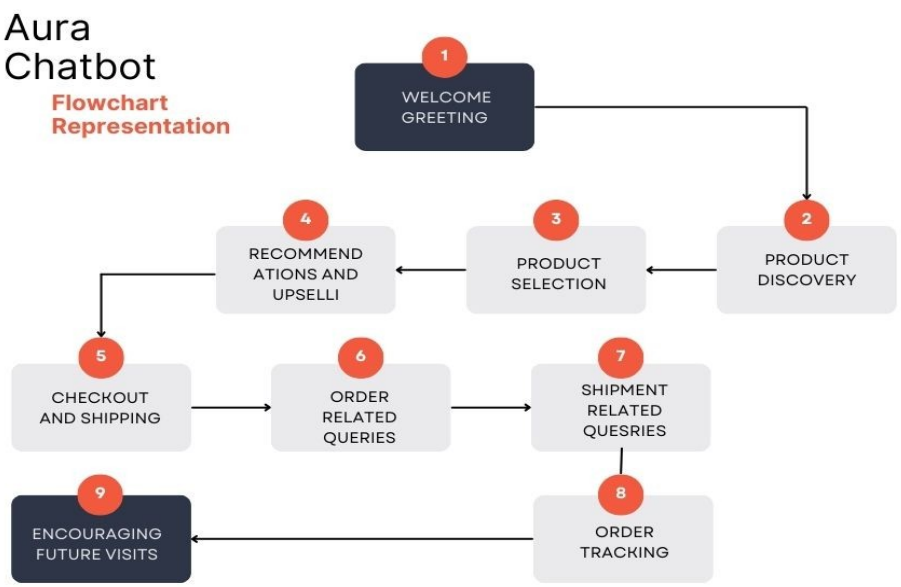

Figure 5.2.1: Chatbot of proposed system

5.3 Implementations:

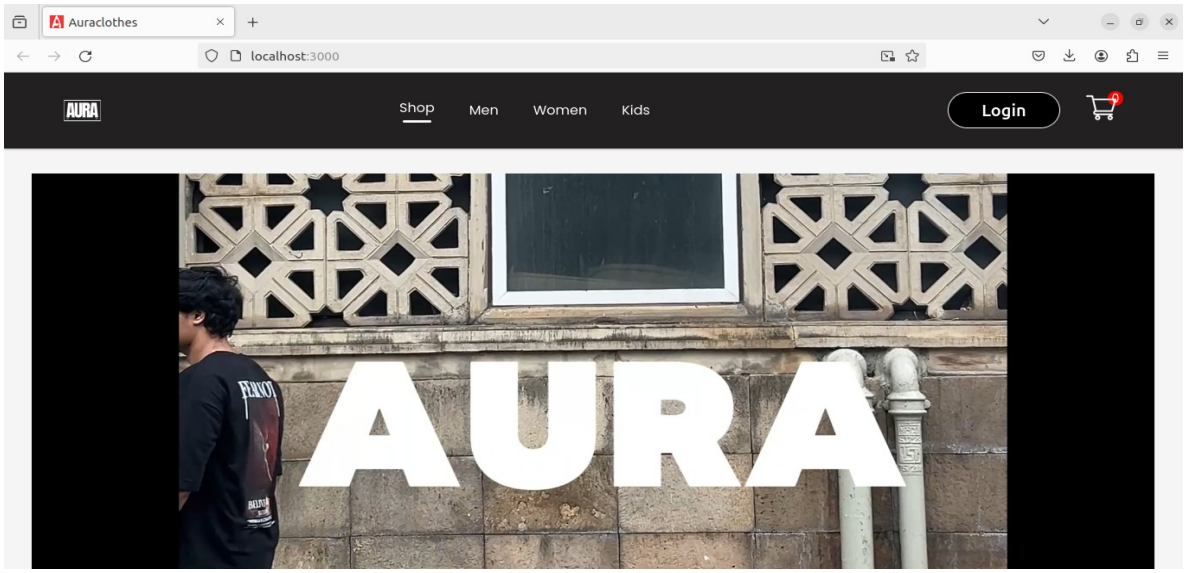

Figure 5.3.1: Implementation of Hero Page

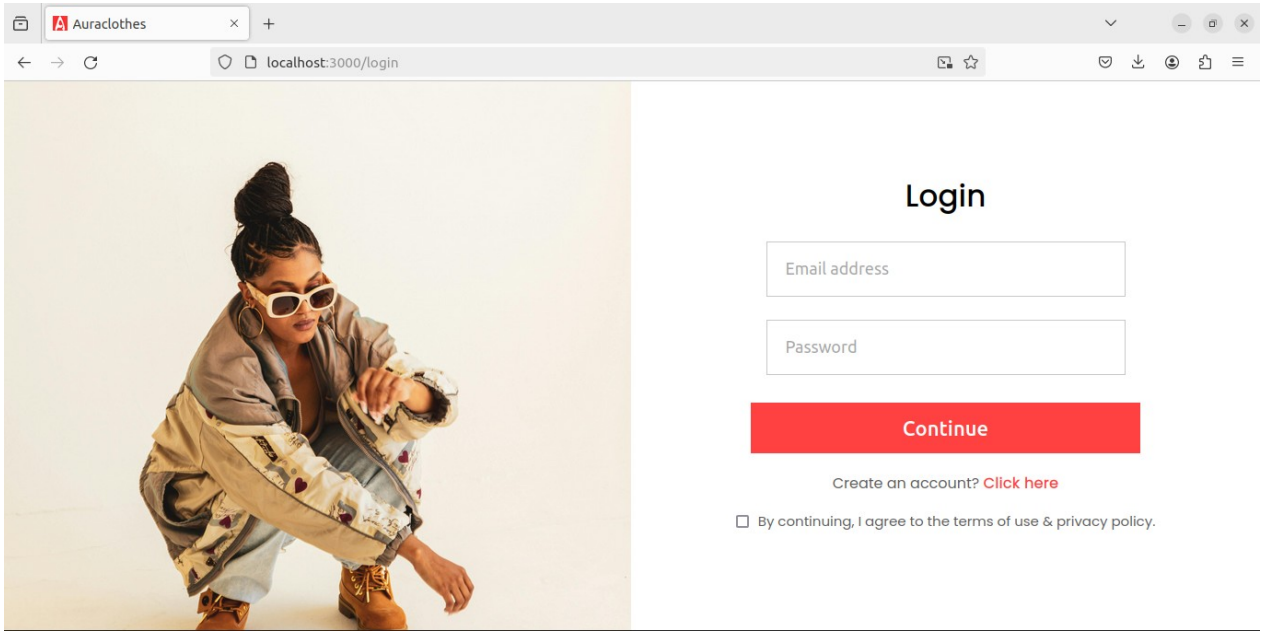

Figure 5.3.2: Implementation of User Registration

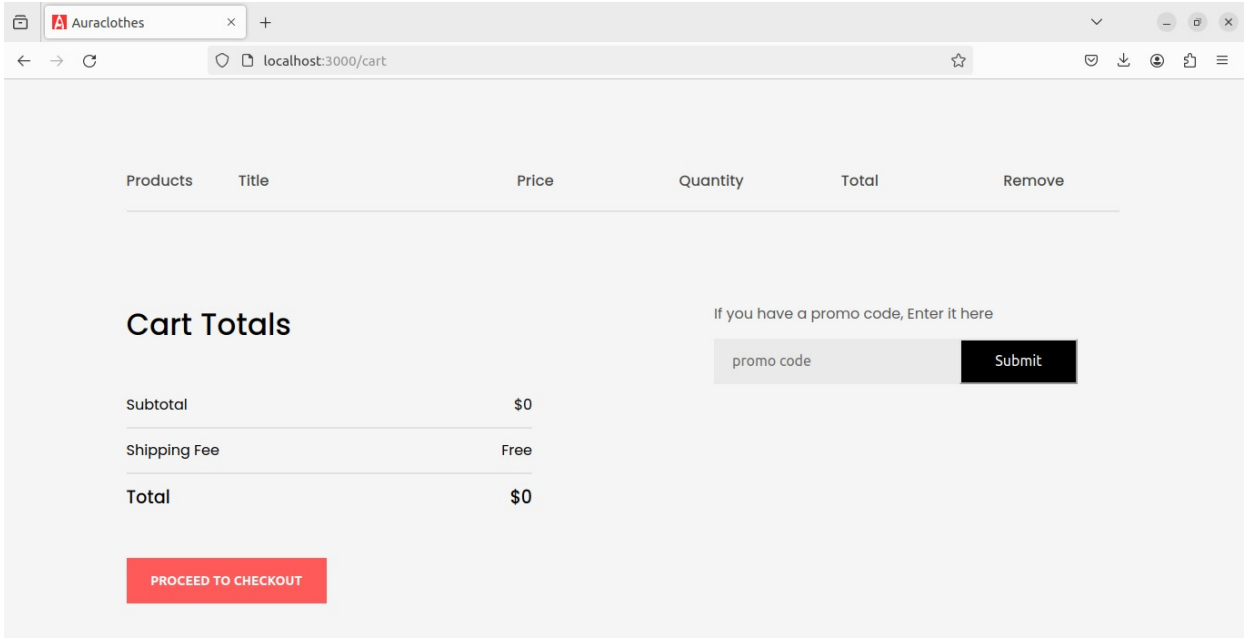

Figure 5.3.3: Implementation of Cart Page

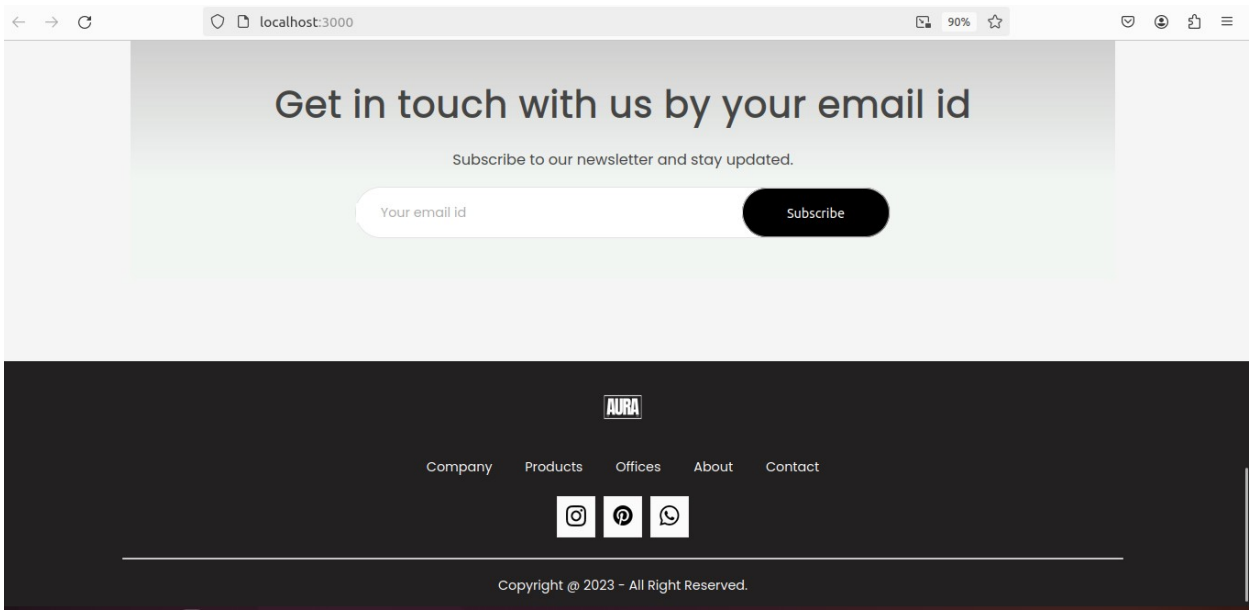

Figure 5.3.3: Implementation of Page

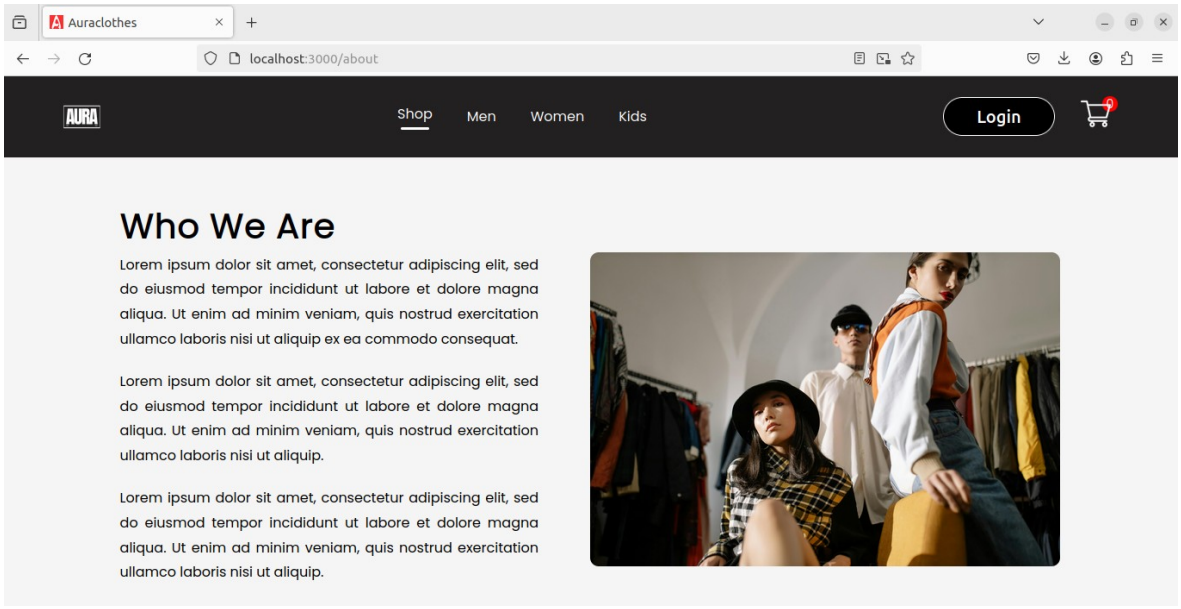

Figure 5.3.4: Implementation of About Page

5.4: Advantages:

1. Offers real-time tracking of order status.
2. Graph about product quality and fit.
3. Integrates multiple payment options for customer convenience.
4. Fast and Responsive User Interface

CHAPTER 6

CONCLUTION

Conclusion

E-commerce websites for clothing brands have transformed the retail industry by offering convenience, variety, and the ability to shop from anywhere. Key factors like user experience, mobile optimization, and social media integration are essential for attracting and retaining customers. Personalized shopping experiences, such as product recommendations, also play a crucial role in enhancing customer satisfaction. However, brands must navigate challenges like intense competition, high return rates, and the increasing demand for sustainability, all of which impact their profitability and customer loyalty.

Looking ahead, clothing brands that prioritize innovation and adapt to changing consumer preferences are likely to thrive in the competitive online market. Technologies such as augmented reality (AR) for virtual try-ons and AI-driven personalization promise to further enhance the online shopping experience. By embracing these innovations and addressing challenges, brands can continue to leverage e-commerce as a vital channel for growth and customer engagement, ensuring their relevance in the evolving retail landscape.

References

Research paper

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