VISVESVARAYA TECHNOLOGICAL UNIVERSITY

Jnana Sangama, Belagavi - 590018

Internship Report
on

"FASHIONHUB"

Submitted in partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING
in
COMPUTER SCIENCE & ENGINEERING

by

U A AFIL
4MT21CS174

Internship Carried out
at
IHUB IT SOLUTIONS

Internal Guide
Mr. Shivaraj B G
Assistant Professor

External Guide
VIPIN K NITTOR
Founder

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING
(A Unit of Rajalaxmi Education Trust®, Mangalore)
Autonomous Institute affiliated to VTU, Belagavi, Approved by AICTE, New Delhi
Accredited by NAAC with A+ Grade & ISO 9001:2015 Certified Institution

2024-25

MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING

(A Unit of Rajalaxmi Education Trust ®, Mangalore)

Autonomous Institute Affiliated to V.T.U, Belagavi, Approved by AICTE, New Delhi

Accredited by NAAC with A+ Grade & ISO 9001:2015 Certified Institution

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

CERTIFICATE

This is to certify that the Internship entitled **FASHIONHUB: Ecommerce website** submitted by **U A AFIL (4MT21CS174)** is work done by him in partial fulfilment for the award of Bachelor of Engineering in Computer Science and Engineering of the **Visvesvaraya Technological University, Belagavi** during the year **2024-25**. Carried out under the supervision of **Mr. Shivaraj B G, Assistant Professor, Department of computer science & Engineering** during 18th February 2025 to 8th May 2025. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report and deposited in the departmental library. The Internship report has been approved as it satisfies the academic requirements prescribed for the said degree.

Mr. Shivaraj B G	**Dr. Ravinarayana B**
Internship Guide	**Head of the Department**

External Viva

External Viva	Name of the Examiners	Signature with Date
1.		
2.		

ACKNOWLEDGEMENT

First and foremost, we thank our parents for what we are and where we are today, without whose hard work and sacrifice we would not be here today.

We deem it a privilege to place on record the deep sense of gratitude to our supervisor **Mr. Shivaraj B G, Assistant Professor**, Computer Science and Engineering, who always stood behind us and supported in each and every step of the internship work.

We are grateful to **Dr. Ravinarayana B.**, Head of the Department, Computer Science and Engineering for their support and encouragement.

We would like to thank our Principal **Dr. Prashanth C M**, for encouraging us and giving us an opportunity to accomplish the internship work.

We also thank our management who helped us directly and indirectly with the completion of this work.

Our special thanks to faculty members and others for their constant help and support.

Above all, we extend our sincere gratitude to our parents and friends for their constant encouragement with moral support.

U A AFIL
(4MT21CS174)

ABSTRACT

The rise of digital commerce has created a growing need for intelligent, scalable, and user-centric online retail platforms. This project, titled **"FashionHub:E-commerce Web Application for Fashion Retail"**, was developed as a full-stack solution aimed at streamlining the online fashion shopping experience. Built using modern web technologies such as **React.js**, **Spring Boot**, and **MySQL**, the platform features robust user authentication, secure payment integration, and a clean, responsive user interface. FashionHub allows customers to seamlessly browse, search, and filter a wide range of fashion products, add items to their cart, and place orders using **Cash on Delivery (COD)** or **Razorpay** for online payments. The backend incorporates **JWT-based authentication** with **Spring Security**, enabling role-based access control for users and admins. Admins can manage product listings and view all order data, while users can track their own order history. The development process involved creating RESTful APIs, integrating Razorpay's SDK, and applying UI/UX best practices for a professional shopping experience. The project demonstrates how modern full-stack technologies and payment gateways can be integrated to build scalable e-commerce systems, serving as a foundation for real-world applications in the retail domain.

TABLE OF CONTENTS

Contents			Page No
ACKNOWLEDGEMENT			i
ABSTRACT			ii
TABLE OF CONTENTS			iii
LIST OF FIGURES			v
WEEKLY OVERVIEW OF INTERNSHIP ACTIVITIES			vi
Chapter no		**TITLE**	Page No
1		**INTRODUCTION**	1
	1.1	Problem Statement	1
	1.2	Objectives	2
2		**ORGANIZATION PROFILE**	3
	2.1	History	3
	2.2	Products and Services	3
3		**INTERNSHIP ACTIVITIES**	4
	3.1	Designated Department	4
	3.2	Overview of Assigned-Tasks	4
	3.3	Tools and Technologies	5
	3.4	Learning Outcomes	5
4		**WORK CARRIED OUT**	7
	4.1	Overview of the Project	7
	4.2	Design, Development and Testing Phases	7
		4.2.1 System Design	7
		4.2.2 Development Activities	7
		4.2.3 Testing and Evaluation	8
	4.3	Snapshots	8
5		**SKILLS DEVELOPED**	11
	5.1	Technical Skills	11
		5.1.1 Coding and Full Stack Development	11
		5.1.2 System Design and Integration	11
	5.2	Soft Skills	11
		5.2.1 Communication	11
		5.2.2 Teamwork and Collaboration	12
		5.2.3 Time Management	12
	5.3	Professional Ethics and Practices Learned	12

6 CONCLUSION 13

6.1 Summary of the Experience 13

6.2 Future Scope 13

REFERENCES 14

LIST OF FIGURES

Figure No.	Figure Name	Page No.
Figure 4.1	Landing Page / Home Interface	8
Figure 4.2	Product Listing Page	9
Figure 4.3	Shopping Cart & Order Summary	9
Figure 4.4	Admin Dashboard – Add, Delete Product	10

WEEKLY OVERVIEW OF INTERNSHIP ACTIVITIES

	DATE	DAY	NAME OF THE TOPIC/MODULE COMPLETED
1st Week	17-2-2025	MONDAY	-
	18-2-2025	TUESDAY	Introduction to work and structure
	19-2-2025	WEDNESDAY	Setup of IntelliJ IDEA Community Edition
	20-2-2025	THURSDAY	Started with Infosys Springboard Courses on Java full Stack
	21-2-2025	FRIDAY	Java Fundamentals
	22-2-2025	SATURDAY	Holiday

	DATE	DAY	NAME OF THE TOPIC/MODULE COMPLETED
2nd Week	24-2-2025	MONDAY	Completed Capstone Project from Springboard
	25-2-2025	TUESDAY	Java Language Features
	26-2-2025	WEDNESDAY	Holiday
	27-2-2025	THURSDAY	Live Coding Session
	28-2-2025	FRIDAY	Spring Basics
	1-3-2025	SATURDAY	Holiday

	DATE	DAY	NAME OF THE TOPIC/MODULE COMPLETED
3rd Week	3-3-2025	MONDAY	Spring Basics
	4-3-2025	TUESDAY	Spring
	5-3-2025	WEDNESDAY	Spring Framework
	6-3-2025	THURSDAY	Spring Capstone Project
	7-3-2025	FRIDAY	Spring Capstone Project
	8-3-2025	SATURDAY	Holiday

	DATE	DAY	NAME OF THE TOPIC/MODULE COMPLETED
4th Week	10-3-2025	MONDAY	Introduction to Spring Boot and Spring Data JPA
	11-3-2025	TUESDAY	Learned regarding Repositories
	12-3-2025	WEDNESDAY	Custom query methods using naming conventions
	13-3-2025	THURSDAY	MINI Project Customer Management API CRUD operations
	14-3-2025	FRIDAY	Understanding of RESTful API Structure
	15-3-2025	SATURDAY	Holiday

5th Week	DATE	DAY	NAME OF THE TOPIC/MODULE COMPLETED
	17-3-2025	MONDAY	Exception handling
	18-3-2025	TUESDAY	Setup Basic Authentication for API
	19-3-2025	WEDNESDAY	Introduced to Entity Relationship in JPA
	20-3-2025	THURSDAY	Entity Relationship task
	21-3-2025	FRIDAY	Revised Entity mapping example
	22-3-2025	SATURDAY	Holiday

6th Week	DATE	DAY	NAME OF THE TOPIC/MODULE COMPLETED
	24-3-2025	MONDAY	HTML Basics
	25-3-2025	TUESDAY	CSS Basics
	26-3-2025	WEDNESDAY	JavaScript Basics
	27-3-2025	THURSDAY	JavaScript
	28-3-2025	FRIDAY	JavaScript
	29-3-2025	SATURDAY	Holiday

7th Week	DATE	DAY	NAME OF THE TOPIC/MODULE COMPLETED
	31-3-2025	MONDAY	-
	1-4-2025	TUESDAY	-
	2-4-2025	WEDNESDAY	React JS Basics
	3-4-2025	THURSDAY	React
	4-4-2025	FRIDAY	React
	5-4-2025	SATURDAY	Holiday

8th Week	DATE	DAY	NAME OF THE TOPIC/MODULE COMPLETED
	7-4-2025	MONDAY	React
	8-4-2025	TUESDAY	React
	9-4-2025	WEDNESDAY	Ideation of Project
	10-4-2025	THURSDAY	Documentation/Diagram-user stories, use case diagram
	11-4-2025	FRIDAY	Activity Diagram
	12-4-2025	SATURDAY	Holiday

	DATE	DAY	NAME OF THE TOPIC/MODULE COMPLETED
9th Week	14-4-2025	MONDAY	Data flow diagram, class diagram
	15-4-2025	TUESDAY	ER diagram, project process
	16-4-2025	WEDNESDAY	Database Schema
	17-4-2025	THURSDAY	Implementation of required crud api
	18-4-2025	FRIDAY	Working on project
	19-4-2025	SATURDAY	Holiday

	DATE	DAY	NAME OF THE TOPIC/MODULE COMPLETED
10th Week	21-4-2025	MONDAY	-
	22-4-2025	TUESDAY	Project Setup and Configuration
	23-4-2025	WEDNESDAY	User authentication and role management
	24-4-2025	THURSDAY	Product management
	25-4-2025	FRIDAY	Shopping Cart and order placement
	26-4-2025	SATURDAY	Holiday

	DATE	DAY	NAME OF THE TOPIC/MODULE COMPLETED
11th Week	28-4-2025	MONDAY	Order Management and history
	29-4-2025	TUESDAY	Payment gateway setup
	30-4-2025	WEDNESDAY	Role management
	1-5-2025	THURSDAY	Product management work
	2-5-2025	FRIDAY	Resolved cart management issues
	3-5-2025	SATURDAY	Holiday

	DATE	DAY	NAME OF THE TOPIC/MODULE COMPLETED
12th Week	5-5-2025	MONDAY	Order management improvements
	6-5-2025	TUESDAY	Frontend work
	7-5-2025	WEDNESDAY	Styling frontend
	8-5-2025	THURSDAY	
	9-5-2025	FRIDAY	
	10-5-2025	SATURDAY	Holiday

	DATE	DAY	NAME OF THE TOPIC/MODULE COMPLETED
13th Week	12-5-2025	MONDAY	
	13-5-2025	TUESDAY	
	14-5-2025	WEDNESDAY	
	15-5-2025	THURSDAY	
	16-5-2025	FRIDAY	
	17-5-2025	SATURDAY	Holiday

	DATE	DAY	NAME OF THE TOPIC/MODULE COMPLETED
14th Week	19-5-2025	MONDAY	
	20-5-2025	TUESDAY	
	21-5-2025	WEDNESDAY	
	22-5-2025	THURSDAY	
	23-5-2025	FRIDAY	
	24-5-2025	SATURDAY	Holiday

CHAPTER 1

INTRODUCTION

As part of my academic program, I undertook a three-month internship under **IHUB IT SOLUTIONS**, which offers real-world project exposure. During this period, I contributed to a project titled **"FashionHub"** a full-stack e-commerce web application tailored for the fashion retail industry. The project was undertaken with the goal of building a scalable and user-friendly online shopping platform that provides both customers and administrators with seamless experience. FashionHub is built using **React.js** for the frontend and **Spring Boot with MySQL** for the backend, implementing a RESTful architecture and JWT-based secure authentication system. Throughout the project, I focused on developing real-world functionalities such as **product browsing, filtering, cart management, order placement**, and **payment integration** using **Razorpay** and **Cash on Delivery (COD)**. Admin users can manage inventory, add new products, and view order history, while regular users can register, log in, browse items, and track their orders. The platform also includes a **role-based access control system**, enabling differentiated access and functionality based on user type. This project allowed me to integrate front-end design with robust backend APIs, handle image uploads, and implement secure session management — providing a well-rounded understanding of full-stack development. The experience helped bridge theoretical knowledge with practical implementation and enhanced my skills in software engineering, user experience design, and modern web development.

1.1 Problem Statement

Despite the growing demand for online fashion retail, many small to mid-sized businesses struggle to offer a seamless and secure shopping experience due to limited access to technical infrastructure and development resources. Traditional e-commerce platforms often lack customization, security, and role-based management, making it difficult to serve both customers and administrators effectively. This creates a need for a flexible, scalable, and user-friendly solution that supports core e-commerce functionalities while being easy to maintain and expand. The FashionHub project addresses this gap by providing a full-stack web application with product listing, secure authentication, cart functionality, payment integration, and admin-level control. By combining modern front-end and backend technologies, the system aims to reduce barriers for digital retail adoption, enhance customer satisfaction, and empower store owners with better operational control.

1.2 Objectives

The key objectives of the internship and the FashionHub project were as follows:

- To explore the implementation of full-stack web development in building a real-world fashion e-commerce platform.
- To understand and apply frontend technologies such as React.js and Tailwind/Bootstrap for designing responsive and interactive user interfaces.
- To design and structure backend services using Spring Boot, REST APIs, and JWT-based authentication for secure data handling.
- To implement core e-commerce functionalities including product browsing, cart management, order placement, and payment options like Razorpay and Cash on Delivery.
- To integrate role-based access control, enabling differentiated experiences for users and administrators.
- To handle common development challenges such as image upload handling, token-based authorization, and cross-origin resource sharing (CORS).
- To enhance professional skills through collaborative development, timely delivery, detailed documentation, and hands-on exposure to end-to-end deployment practices.

CHAPTER 2
ORGANIZATION PROFILE

2.1 History

Ihub IT Solution is a software company delivering high quality, cost effective, reliable result-oriented web and e-commerce solutions. The company has successfully executed diverse IT projects for demanding, tech-savvy clients worldwide, delivering tailored web solutions that enhance efficiency, drive competitive advantage, and benefit end users

2.2 Products and Services

- Application Development & Maintenance
- Artificial Intelligence & Machine Learning Solutions
- Cloud and Infrastructure Services
- Enterprise Systems Integration
- Custom Software Development
- Android Application

CHAPTER 3

INTERNSHIP ACTIVITIES

3.1 Designated Department

During the internship, I worked under the Web Application Development and Software Engineering Department of the project initiative. This department focuses on creating robust, scalable, and user-friendly digital platforms that address real-world business needs through modern web technologies. The FashionHub project was aligned with full-stack e-commerce development, combining front-end design, backend services, secure authentication, and database integration to deliver a complete fashion shopping experience.

3.2 Overview of Assigned-Tasks

The core project titled **"FashionHub: Full-Stack E-commerce Website for Fashion Retail"** involved developing a complete online shopping platform using modern web technologies. My internship tasks were divided into structured phases, each focusing on a crucial component of full-stack development:

- **Phase 1: Requirement Analysis & Design Planning**
  I analyzed the essential features of an e-commerce fashion site by studying real-world applications. Key design aspects such as product display, shopping cart, user roles (admin/user), and secure authentication were identified. Wireframes and UI layout sketches were created to guide development.

- **Phase 2: Frontend Development (React + Vite + Bootstrap)**
  I built responsive user interfaces using React.js with Vite for fast builds. Bootstrap and Tailwind CSS were used for a polished design. Features included dynamic product listing, search and filtering, and an interactive cart system with quantity adjustment and image display.

- **Phase 3: Backend Development (Spring Boot + MySQL)**
  Using Spring Boot, I developed RESTful APIs for product management, user registration/login, and order handling. JWT-based authentication was integrated for security, and role-based access was enforced for admin/user panels. MySQL Workbench was used for database schema and relationship mapping.

- **Phase 4: Testing & Optimization**

  The web application was tested for functionality, UI responsiveness, and backend API integration. Real-time validation of login, registration, cart updates, and order placement (including Razorpay payments) was performed. Edge cases like unauthorized access, role validation, and empty cart flows were handled and optimized for better user experience.

- **Phase 5: Documentation & Reporting**

  I documented the project workflow, challenges encountered, and final outcomes in a structured report format. This helped in building professional communication and technical writing skills.

3.3 Tools and Technologies

The following tools and technologies were used throughout the internship:

- **Frontend:** React.js, Vite, Bootstrap, Tailwind CSS
- **Backend:** Java, Spring Boot, Spring Security, Spring Data JPA
- **Database:** MySQL Workbench
- **Authentication:** JWT-based authentication and role-based authorization
- **Payment Integration:** Razorpay API
- **Development Tools:** Postman, Visual Studio Code, IntelliJ IDEA
- **Version Control:** Git & GitHub

3.4 Learning Outcomes

Throughout this full-stack development project, I gained practical exposure to building secure, scalable, and user-friendly web applications. Key learnings include:

- **Technical Proficiency:** Strengthened skills in React, Java, REST APIs, database design, and secure user authentication.
- **System Design:** Gained experience designing user flows, backend architecture, and integrating frontend with APIs.
- **Problem Solving:** Learned to debug cross-stack issues, handle real-world scenarios like cart syncing and order history retrieval.

- **Team & Communication Skills:** Practiced structured documentation, requirement understanding, and clear communication in a project-based setting.

- **Industry Relevance:** Understood how e-commerce platforms operate and how to simulate enterprise-level workflows using open-source technologies.

CHAPTER 4

WORK CARRIED OUT

4.1 Overview of the Project

The project I undertook during my internship, titled **"FashionHub: Full-Stack E-Commerce Platform for Fashion Retail"**, aimed at building a secure, role-based, full-stack web application that enables users to browse products, manage carts, place orders, and perform online payments. The platform supports two user roles—**Admin** and **Customer**—with custom functionalities like product management, order tracking, Razorpay payment integration, and secure JWT-based authentication. The main objective was to simulate a real-world fashion retail experience with an intuitive UI and robust backend.

4.2 Design, Development and Testing Phases

The project was carried out in multiple well-defined phases:

4.2.1 System Design

The application was designed with a layered architecture consisting of:

- **Frontend (React.js)** for user interface and interactions
- **Backend (Spring Boot)** for RESTful services and business logic
- **MySQL** for persistent data storage
- **JWT and Role-based security** for authentication and authorization
- **Razorpay** for handling secure online payments

4.2.2 Development Activities

- **Frontend Development:** Product listing, search filters, product details, cart, login/register, and order history components built using React, Tailwind CSS, and Bootstrap.
- **Backend APIs:** Java Spring Boot APIs for user management, product CRUD, cart operations, and order placement with security enforced using JWT and Spring Security.
- **Admin Panel:** Admins can log in, add/delete products, and view all customer orders with protected routes.
- **Payment Integration:** Implemented Razorpay for online transactions and added a Cash on Delivery (COD) option for offline payment.

4.2.3 Testing and Evaluation

- **UI Testing:** All UI components were tested across different screen sizes to ensure responsiveness.
- **Functionality Testing:** Verified token-based access, order placement, cart update logic, and role restrictions for admin/user routes.
- **API Testing:** REST endpoints were tested using Postman to validate all input/output formats and error handling.
- **Security & Validation:** Checked token expiration, unauthorized access prevention, and input sanitization.

4.3 Snapshots

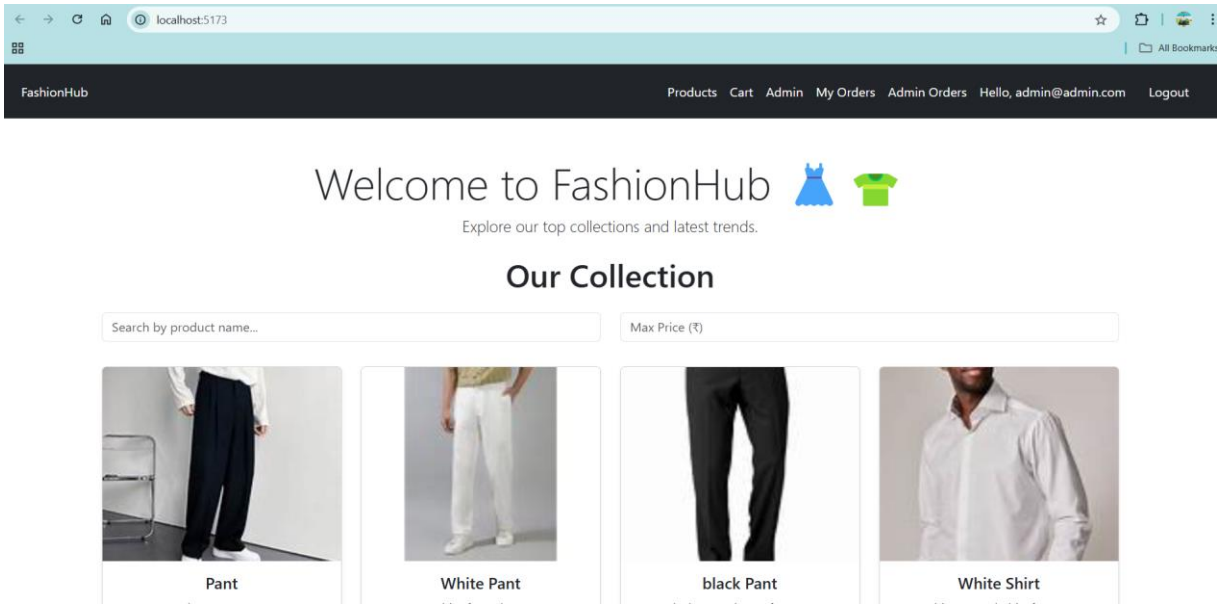

Figure 4.1: Landing Page / Home Interface

The landing page of the **FashionHub** platform acts as the primary entry point for users. It features a minimalist and user-friendly layout showcasing featured fashion products and navigation options to browse categories, view the cart, or log in. The clean design ensures a pleasant browsing experience for both first-time users and returning customers, simulating the look and feel of modern e-commerce sites.

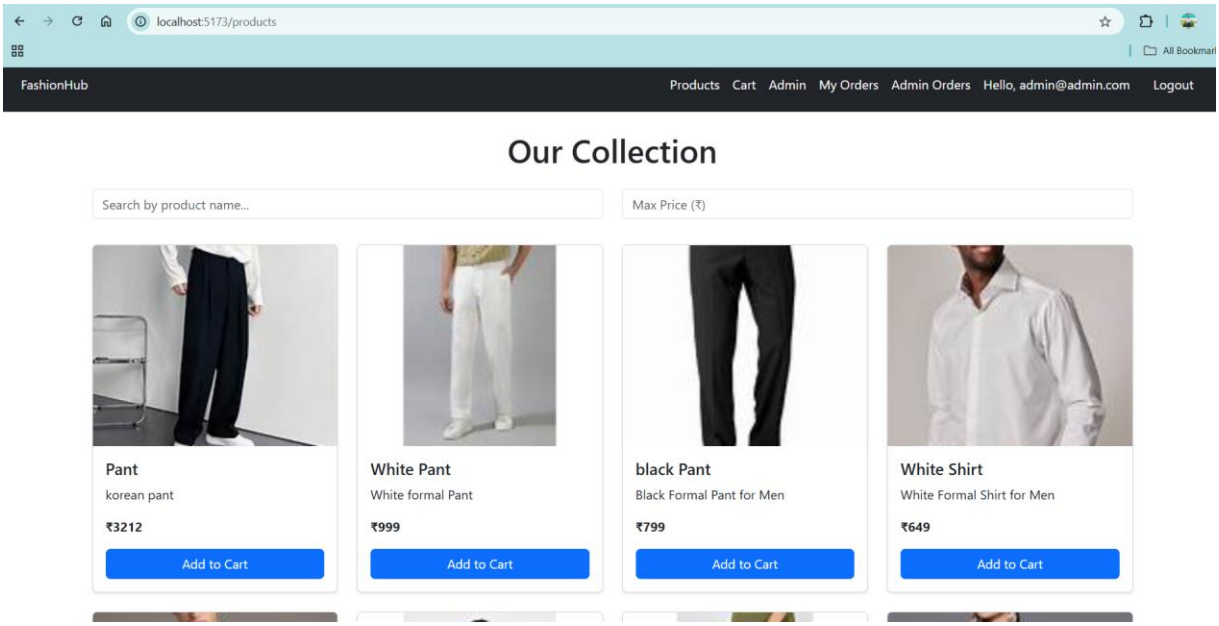

Figure 4.2: Product Listing Page

This screen displays a responsive product grid containing all available fashion items. Each product card includes a standard-size image, name, price, and an "Add to Cart" button. Users can filter products using search or price and view detailed information by clicking on individual products. The design prioritizes image clarity and consistent dimensions to replicate a real-world online shopping experience.

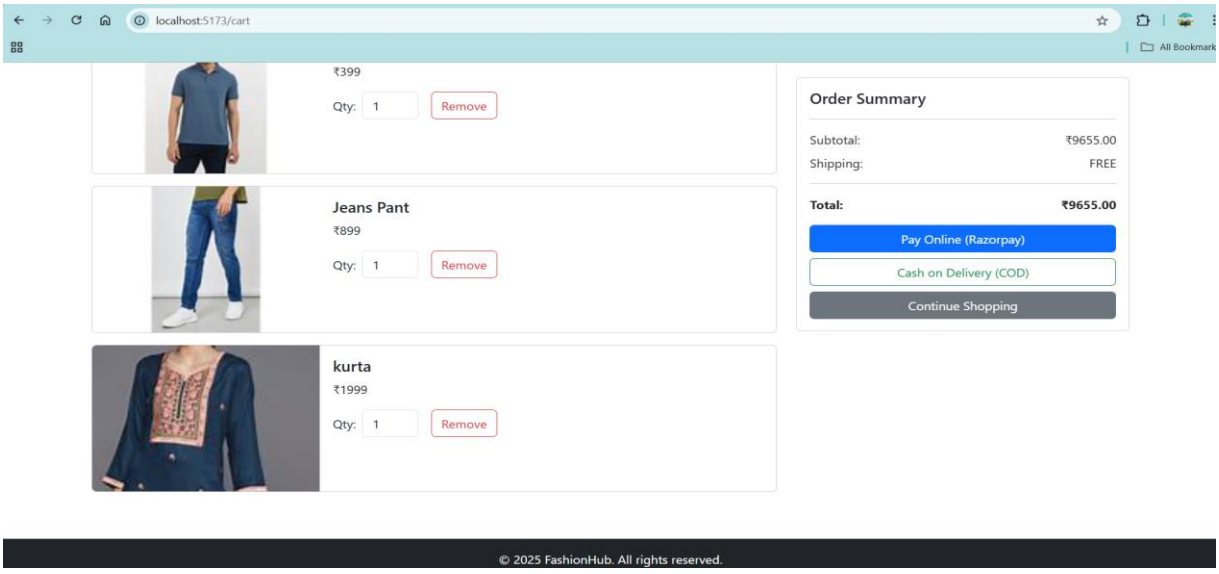

Figure 4.3: Shopping Cart & Order Summary

Once users add products to the cart, this page summarizes selected items, quantity options, and pricing. It also offers two order options: **Cash on Delivery (COD)** and **Pay Online (Razorpay)**. The right-hand panel provides a detailed order summary including subtotal and shipping info. The layout is intuitive and optimized for mobile and desktop views.

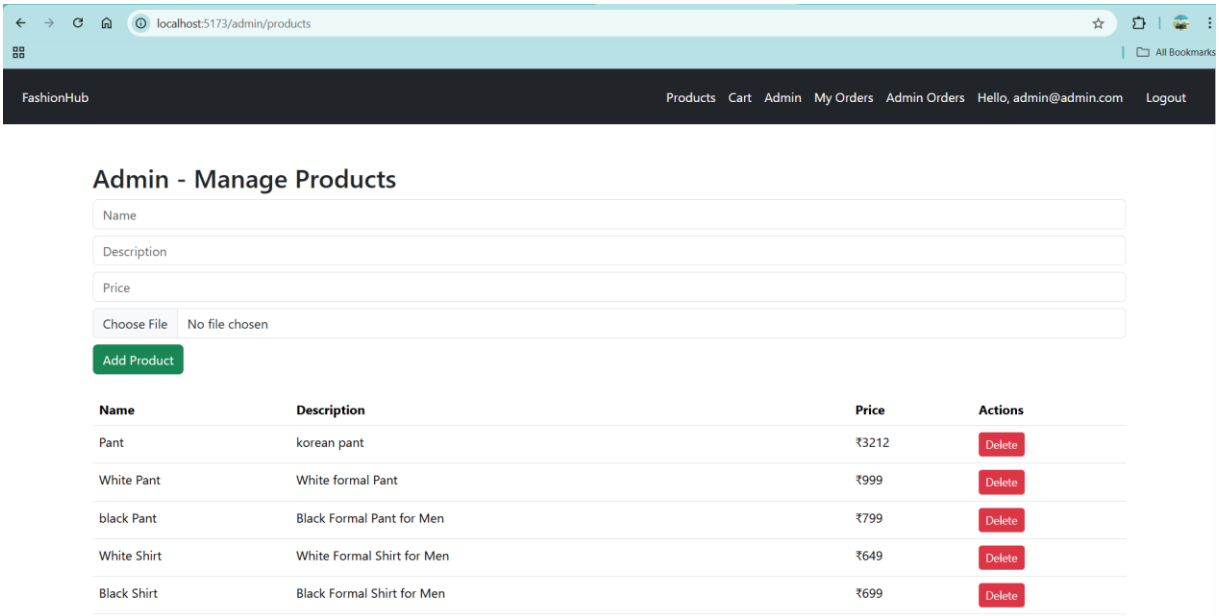

Figure 4.4: Admin Dashboard – Add,Delete Product

Admins have access to a secure dashboard where they can add new products by entering details such as name, description, price, and uploading an image. This interface helps manage inventory and keeps the product catalog updated in real time.

CHAPTER 5

SKILLS DEVELOPED

5.1 Technical Skills

5.1.1 Coding & Full Stack Development

During the internship, I significantly enhanced my skills in **Java-based backend development** and **React.js frontend design**. I worked with Spring Boot to build RESTful APIs and integrated it with a MySQL database for storing users, products, and orders. On the front-end, I used React.js, Bootstrap, and Tailwind CSS to create a responsive and user-friendly interface. I also implemented JWT-based authentication, role-based access control, and secure routing for different user roles (admin/user).

Key Technologies Learned:

- **Backend:** Java, Spring Boot, Spring Data JPA, MySQL, Hibernate
- **Frontend:** React.js, Vite, Bootstrap, Tailwind CSS
- **Authentication & Security:** JWT, Spring Security
- **API Tools:** Postman
- **Version Control:** Git, GitHub

5.1.2 System Design and Integration

Beyond individual coding tasks, I developed a solid understanding of full-stack architecture and modular development. I worked on integrating frontend and backend systems seamlessly using Axios for API calls, handling CORS issues, and ensuring secure and efficient data flow between layers. I also built features like **shopping cart**, **Razorpay integration**, **COD checkout**, and **admin dashboards**.

5.2 Soft Skills

5.2.1 Communication

Throughout the project, I regularly documented my progress and discussed feature requirements with mentors and peers. I improved my ability to explain backend logic and frontend UI behavior clearly, especially while handling debugging and feature reviews.

5.2.2 Teamwork and Collaboration

Although many tasks were individual, I frequently collaborated on feature planning and bug tracking. I received and applied feedback for UI improvements and security enhancements. This taught me the value of constructive feedback and collaborative development.

5.2.3 Time Management

Balancing various stages of the project, including research, coding, model training, and documentation, helped me enhance my time management skills. I learned how to prioritize tasks effectively, set realistic deadlines, and maintain productivity under tight schedules.

5.3 Professional Ethics and Practices Learned

Working on a real-world application taught me several best practices that go beyond code quality:

- **User Data Protection:** Ensured secure handling of user credentials and JWT tokens during authentication.
- **Reliable Functionality:** Built admin-only features with proper access checks to prevent unauthorized use.
- **Scalability:** Designed components like cart and orders to be extensible for future enhancements (e.g., coupons, wishlist).
- **UX Responsiveness:** Emphasized clean UI/UX across devices using Bootstrap grids and consistent image rendering.

This experience gave me a realistic view of working on scalable, secure, and user-focused web applications, preparing me for future full-stack development roles.

CHAPTER 6

CONCLUSION

6.1 Summary of the Experience

The internship under which I developed the **"FashionHub: Full-Stack E-Commerce Web Application"** was an immensely valuable learning journey that allowed me to apply classroom concepts in a real-world setting. Over the course of several weeks, I gained end-to-end experience in designing, developing, and deploying a fully functional online shopping platform. I worked extensively with **Java Spring Boot** for backend services, **React.js** for frontend interfaces, and integrated **secure authentication**, **product management**, **shopping cart**, and **online payments** using **Razorpay**.The project deepened my understanding of full-stack development workflows, RESTful APIs, and role-based access controls. Beyond technical proficiency, it enhanced my skills in **UI/UX design**, **collaborative problem-solving**, **code versioning**, and **project documentation**—skills essential in a modern software engineering environment.

6.2 Future Scope

The FashionHub has strong potential to be expanded into a scalable and production-grade e-commerce solution. While the current version offers user registration, product browsing, cart, and order placement with multiple payment modes, several future improvements can enhance both the platform's usability and commercial viability:

- **Product Image Hosting & Optimization:** Store and serve images via cloud storage (e.g., AWS S3) to improve reliability and loading speed.
- **Admin Analytics Dashboard:** Provide sales reports, inventory tracking, and user insights for better management decisions.
- **Search and Recommendation Engine:** Implement personalized product recommendations and filters using AI.
- **Responsive Mobile App:** Extend the platform's reach via React Native or Flutter to serve mobile-first users.

Coupon System & Ratings: Add promo codes, reviews, and ratings to improve customer engagement and feedback.

REFERENCES

[1]. Johnson, A., & Sharma, P. (2020). *Full Stack Web Development with Spring Boot and React.* Packt Publishing.

[2]. Mojica, M. (2021). *React Projects: Build modern web applications using React 18.* Packt Publishing.

[3]. Walls, C. (2022). *Spring in Action (6th Edition).* Manning Publications.

[4]. Richardson, L. (2018). *RESTful Web APIs: Services for a Changing World.* O'Reilly Media.

[5]. Razorpay Documentation. (2024). Retrieved from https://razorpay.com/docs/

[6]. Spring Boot Documentation. (2025). Retrieved from https://docs.spring.io/spring-boot/docs/current/reference/html/

[7]. ReactJS Official Documentation. (2025). Retrieved from https://react.dev/

[8]. Bootstrap Documentation. (2025). Retrievedfrom https://getbootstrap.com/docs/5.3/getting-started/introduction/

[9]. JSON Web Tokens (JWT) Introduction. (2025). Retrieved from https://jwt.io/introduction

[10]. Infosys Springboard Resources and Internal Project Guidelines (2025).