FASHIN

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<u>Introduction</u>

FashIn is a dynamic and user-friendly e-commerce web application designed to offer a seamless shopping experience for fashion and lifestyle products. Built using Spring Boot, FashIn provides a robust and scalable backend that ensures smooth functionality, and efficient data management. It allows customers to browse, search, and purchase a wide range of fashion items with ease. Key functionalities include user authentication, product catalogue management with vast categories option. The backend, powered by Spring Boot, is integrated with a database to manage users, products, and orders efficiently. Additionally, the application follows MVC architecture and utilizes Thymeleaf for dynamic content rendering.

Project Overview

This project aims to develop an e-commerce platform that is dedicated to selling fashion and lifestyle products. We have used SpringBoot as backend to develop our Web-Application. Our Application aims to provide user friendly platform for their shopping.

Buy fashion and lifestyle Products: dedicated market place for fashion lovers.

User Friendly Interface: Built with modern technologies HTML, CSS, Javascript, Java, SpringBoot and MySQL.

Advance search: easily browse products based on brand and category.

Tools for Development

Software Requirements: Frontend tools and technologies:
HTML
CSS
JAVASCRIPT

Backend tools and technologies: Java
SpringBoot

DataBase:
SQl

Hardware requirements: Processor Intel i3
Hard disk:40GB
Ram:512MB or more…

Why this tools

•**HTML**: Used to structure the content of web pages.

•**CSS**: Used to style and design the appearance of web pages.

•**JavaScript**: Used to add interactivity and dynamic behavior to web pages.

•**Java**: Used as a backend programming language to build server-side logic.

•**Spring Boot**: Used to quickly build and run Java-based backend applications.

•**SQL**: Used to store, manage, and retrieve data from databases.

•**Hibernate:** It is a efficient ORM Framework for seamless database Operation and Query Optimization.

•**Spring Security:** For Robust authentication and authorization to ensure data privacy.

Component Breakdown

- **User Management**

- **Product Management**

- **Category Management**

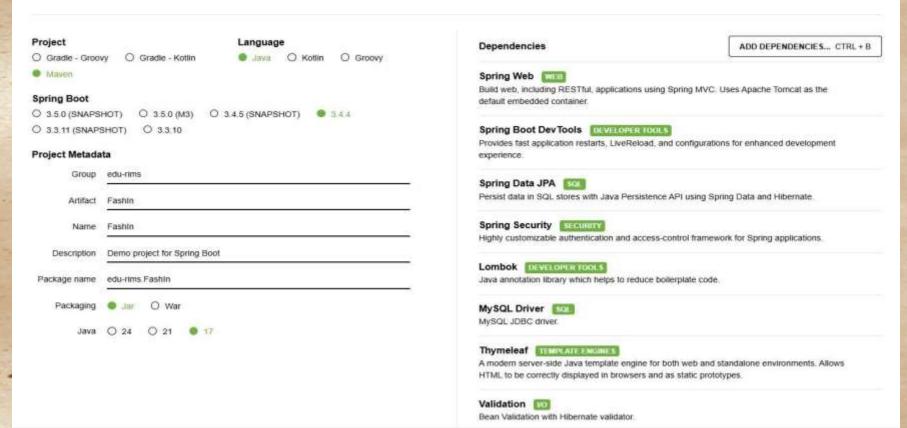- **Admin Dashboard**

Frontend Architecture

Frontend Architecture: HTML for Structure and CSS for Styling and JavaScript for interactivity.

API Integration: It connects with backend to fetch and display dynamic contents.

Responsive design: ensures compatibility across desktop and devices.

Backend Architecture
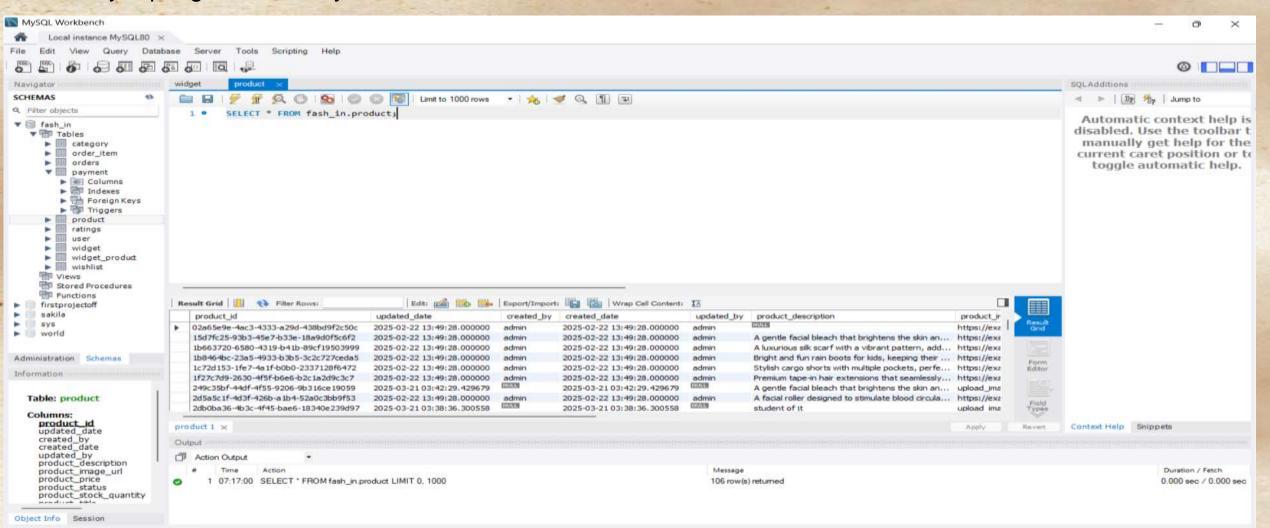

Layers:

Controller Layer: It handle http requests and response.

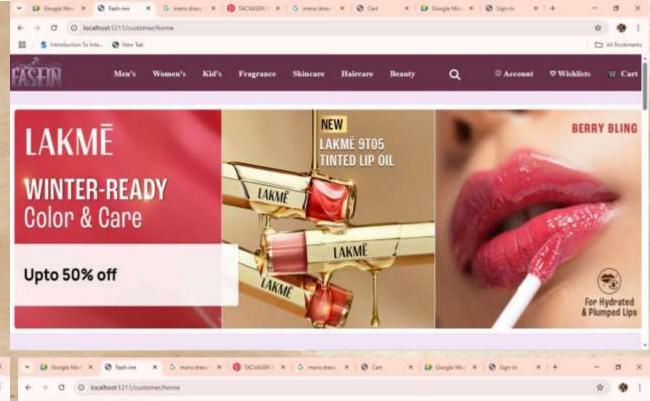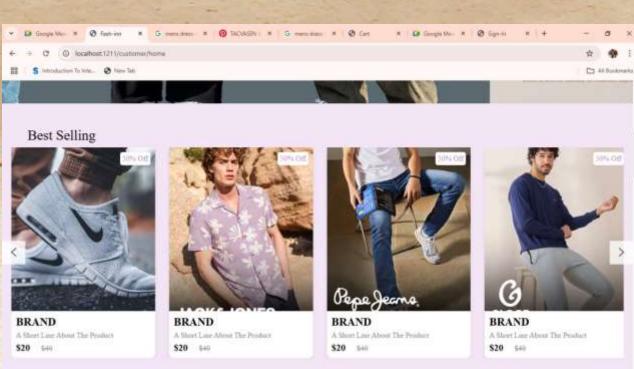**Repository Layer: Manages database operations using JPA/Hibernate.**

Database

MySQL for Storing data regarding customer, product and order.
It uses CRUD operation for data management.

Security: SpringBoot Security for authentication and role based control.

HomePage

PLP Page

Women's

CATEGORIES

◄ CATEGORIES AND ACCESSORIES
◄ TOPWEAR

PRICE

BRANDS ▼

OFFERS ▼

DISCOUNT ▼

SIZE ▼

COLOR ▼

FIT ▼

TYPE ▼

50% Off

50% Off

50% Off

50% Off

Add To Wishlist

Silk Scarf
49.99 $40

A Line Dress
2000.0 $40

Oversized Sunglasses
39.99 $40

Leather Handbag
129.99 $40

50% Off

50% Off

50% Off

50% Off

localhost:1211/customer/product/pdp?product=6d2c11f4-b506-4e72-bda4-cd68b2b25c07

Cart Page

FASH-IN

Search your Items ....

To your Current Saved address >

Change address

Price Details

Select Delivery Address: Home - 123 Main Street

Price: $19.99

Men Regular Fit Checkered Spread Collar Casual Shirt by Sun Feb 23 | ~~$40~~ **Free**

Fits: Regular | Size: XL

Discount:

Delivery Charges:

~~$1766~~ $**$19.99**   **63% off 2 Offers available !!**

Total Amount: $39.98

-   2   +

Select Payment Method: Cash on Delivery

Place Order

PDP Page

blazer

good quality blazer
Select Size

| S | M | L | XL |

❤ Add to Wishlist   🛒 Add to Bag

Select Delivery Location

Apply

Customer Reviews

★★★★☆

Product Page in Admin DashBoard

Google Mee ✕ | 🌐 Fash-inn ✕ | G mens dress ✕ | 📌 TACVASEN ✕ | G mens dress ✕ | 🌐 Document ✕ | Google Mee ✕ | 🌐 Sign-In ✕ | +

← → C | ⓘ localhost:1211/admin/product | ☆ 👤 ⋮

⊞ | S Introduction To Inte... 🌐 New Tab | 🗀 All Bookmarks

⊘ Dashboard

🛒 Orders

🗂 Products

🏷 Category

🏷 Widget

⚙ Settings

⟶ Logout

| Total Orders: 120 | Revenue: $15,000 | Products: 350 | Users: 500 |

Manage Products

Add Product

Product Title	Product Description	Images	Price	Stock	Product Status	Action
High-Top Sneakers	Trendy high-top sneakers with a modern design and great support.		657.0	0	ACTIVE	Edit Delete
Whitening Facial Bleach	A gentle facial bleach that brightens the skin and helps in reducing dark spots and pigmentation.		300.0	0	ACTIVE	Edit Delete
	A luxurious silk scarf with a vibrant pattern					

Database Table

Future Enhancement

Integration with social media market Place: Allow Product Sharing and selling through platform like Instagram and facebook.

Voice Search Integration: Enhance Search Functionality with voice commands for easier product discovery.

Payment Gateway Integration: add support for online payments.

Problem Statement

Responsive UI and Frontend Integration

Frontend not rendering correctly across different devices.

Issues integrating Thymeleaf templates or consuming REST APIs (if using React/Angular).

Delays or errors in loading dynamic content (like product listings or filters).

Cart and Order Handling Logic

Managing cart session per user.

Handling product availability during checkout.

Generating unique order IDs and order confirmation logic.

Search and Filtering Performance

Slow response when filtering large datasets.

Search results not matching keywords accurately.

Pagination and sorting logic errors.

Solution

Use model attributes with Thymeleaf (model.addAttribute()) for server-side rendering.
 For REST + React: Fetch data via fetch() or axios, and ensure CORS is enabled (@CrossOrigin).
 Use loading spinners and error handlers in UI for better user experience.

Use session attributes or token-based user ID to manage carts.
On checkout, use a transactional service (@Transactional) to:
Decrease stock quantity
Save order details Validate product availability before confirming the order.

Use Spring Data JPA custom queries with @Query or query methods like findByTitleContainingAndCategory().
Use pagination with Pageable to load data in chunks.
Add filter options in the frontend and pass them as query parameters.

Spring Security

Common Features of Spring Security

Feature	Description
Authentication	Validates user identity (login)
Authorization	Gives access to resources based on roles (e.g., ROLE_ADMIN, ROLE_USER)
Password Encoding	Uses BCrypt for encrypting passwords
Session Management	Handles user sessions securely
Security Filters	Filters every request and applies security rules

Contributors

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Conclusion

The *FashIn* Web Application* successfully delivers a seamless and user- friendly platform for fashion enthusiasts. By offering an intuitive interface, well- organized product categories, and a visually appealing design, the application enhances the online shopping and lifestyle experience. With features such as user profiles, fashion blogs, trend updates, and a responsive shopping module, the platform ensures easy navigation and engagement. The efficient order management further improves customer satisfaction. Moving forward, continuous improvements based on user feedback, expansion of product offerings, and enhanced marketing strategies will help the platform grow and attract a wider audience. This project lays a strong foundation for future developments in the digital fashion and lifestyle industry.

Thank You