

PROJECT REPORT

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GitHub: <https://github.com/missfavour97/Ecommerce>

ECOMMERCE USING REACT, SPRING BOOT AND MATERIAL UI

INTRODUCTION:

ChicBags & UrbanShoes is a full-stack e-commerce web application. The project represents an online fashion store specializing in bags and shoes. The goal of the application is to demonstrate the use of modern web technologies, database integration, REST-based APIs, and responsive user interface design.

The system is composed of a backend developed with Spring Boot and a frontend built using React and Material UI. The backend exposes REST APIs that provide product data, while the frontend consumes these APIs to display products dynamically. The application allows users to browse products, view product details, filter by category, and manage a simple client-side shopping cart. The project follows a clean and modular architecture, separating frontend, backend, and database resources into distinct folders to ensure maintainability and scalability.

TECHNOLOGIES USED

Backend Technologies (Spring Boot);

- Spring Web – Handles HTTP requests and responses
- Spring Data JPA – Manages database access and object-relational mapping
- PostgreSQL Driver – Ensures future database scalability
- Validation – Enforces data integrity and reliability
- Lombok – Reduces boilerplate code by automatically generating common methods such as getters and setters.

Frontend Technologies.

- React – Component-based frontend framework
- Material UI – UI component library for responsive design
- Axios – Used for the HTTP communication with the backend
- React Router – Handles pages routing and navigation

IMPLEMENTED FEATURES;

- Spring Boot Backend
- React Frontend
- Product listing for bags and shoes
- Product filtering by category
- Product details page
- Client-side shopping cart
- RESTful API integration
- Responsive user interface using Material UI

- SQL-based data storage
- GitHub version control

DISTINCT FEATURES OF THE PROJECT

- Use of a client-side shopping cart implemented with React Context
- Category-based product filtering for bags and shoes
- RESTful API communication between frontend and backend
- Material UI-based responsive design
- SQL database integration with object–relational mapping using Spring Data JPA

SUMMARY

This project demonstrates my ability to design and implement a complete full-stack e-commerce application using Spring Boot and React. By developing RESTful APIs, integrating an SQL database, and implementing a client-side shopping cart, I showcased a solid understanding of backend–frontend communication, scalable architecture, and modern responsive UI development.