

SmartShop – Web Design and Programming Final Project

Name: Ibrahim Hamdy Mohamed
Student ID: 22040102158

GitHub Repository Link:
<https://github.com/Ibrahim1478/SmartShop-Web-Project.git>

Project Overview

SmartShop is a simple e-commerce web application built using React and Material UI on the frontend, and Spring Boot on the backend. The home page displays featured products by fetching them from the backend service through RESTful APIs.

Technologies Used

Frontend: React, React Router, Axios, Material UI (MUI)
Backend: Spring Boot (REST), Spring Data JPA
Database: H2 (in-memory) with SQL export file
Build Tools: npm (frontend), Maven (backend)

Key Features

- Home page displays featured products fetched from the backend.
- Products page supports searching by name, category, or description.
- Product details page displays a single product by ID.
- Clean and responsive UI using Material UI components.

How to Run the Project

Backend: Open SourceCode/backend in IntelliJ as a Maven project and run SmartShopApplication.
Frontend: Open SourceCode/frontend, run npm install then npm start.

Evaluation Table

Criterion	Implemented	Evidence
Research & learning effort	Yes	React + MUI + Spring Boot integration
Home page lists backend products	Yes	GET /api/products/featured
Using React efficiently	Yes	Components, hooks, routing
Using Material UI efficiently	Yes	AppBar, Grid, Card, Button
Applying web design principles	Yes	Consistent layout and UI feedback

Date: January 07, 2026

Signature: _____