

COLLEGE CODE : 9623

**COLLEGE NAME : Amrita College of Engineering and
Technology**

DEPARTMENT : Computer Science and Engineering
STUDENT NM-ID: 9309BED1229D1E1AEC842B4AE35533F3

ROLL NO : 962323104048

DATE : 15/10/2025

Completed the project named as

Phase 5: PROJECT DEMONSTRATION AND DOCUMENTATION

NAME : Product Catalog With Filters

SUBMITTED BY,

NAME : KANNAN K

MOBILE NO : 9994359062

■ Phase 5 — Project Demonstration & Documentation

■ 1. Final Demo Walkthrough

This demo showcases the entire working of the Product Catalog with Filters application.

Demo Highlights:

- Landing page displays all products.
- Users can search products by name or keyword.
- Filters: Category, Price Range, Brand, Rating.
- Sorting: Price (Low→High, High→Low), Rating.
- Clear Filters resets all.
- Responsive layout.
- Error handling for 'No Products Found'.

■ 2. Project Report

Objective: Build a dynamic catalog with multi-filter and search capabilities.

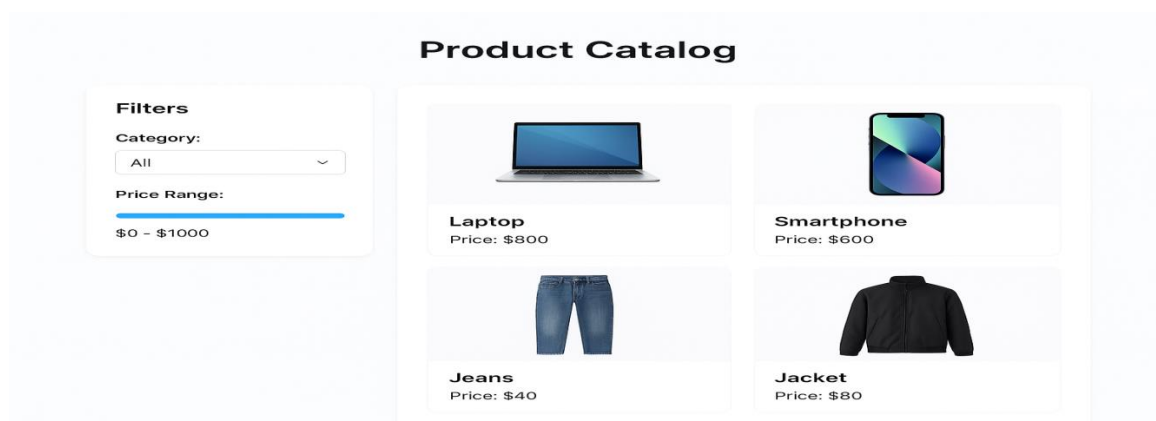
Key Features:

Dynamic filtering, real-time search, sorting, responsive UI, REST API integration, error handling.

Tech Stack: React.js, Tailwind CSS, Node.js, Express.js, MongoDB / JSON Server

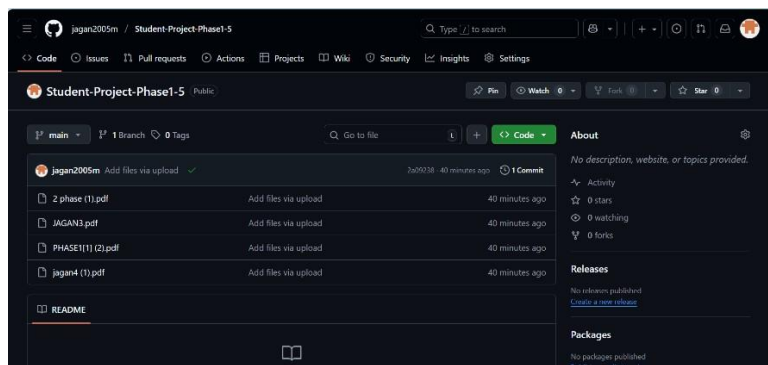
■ ■ 3. Screenshots / API Documentation

Given below Included screenshots of homepage, filters in action, search results, backend console, and GitHub repository.



Filters

Category: All Price Range: \$0 - \$1000



Product Catalog


Filters

Category:


Fashion

Price Range:

\$0 - \$100



Jeans
Price: \$40



Jacket
Price: \$80

Endpoint	Method	Description
/api/products	GET	Fetch all products
/api/products?category=	GET	Filter products by category
/api/products?price_gte=&price_lte=	GET	Filter products by price range
/api/products?search=	GET	Search products by keyword
/api/products?sort=	GET	Sort products by price/rating

■ ■ 4. Challenges & Solutions

Challenge	Solution
Combining multiple filters	Used query parameters with conditional logic
State management	Implemented global state using React Hooks
No results scenario	Added conditional rendering with alert message
Frontend-backend sync	Used useEffect dependencies to trigger updates
Deployment issues	Used Vercel (frontend) and Render (backend)

■ 5. GitHub README & Setup Guide

README should include:

- Overview
- Tech Stack
- Features
- Folder Structure
- Setup Instructions:

```
git clone <repo-url> cd frontend && npm install cd ../backend && npm install npm run dev npm start
```

- Deployed Links (Frontend + Backend)
- Screenshots

■ 6. GITHUB LINK

■ GitHub Link : <https://github.com/kannan062/product-catlog-with-filters>

■ Repository Link : <https://product-catlog-with-filters.vercel.app/>