COLLEGE CODE : 9504

COLLEGE NAME :DR G U POPE COLLEGE OF ENGINEERING

DEPARTMENT : CSE

STUDENT NM-ID: C8335C0370F23F0830C4C2424E639EEF

ROLL NO : 9504231004021

DATE:06/10/2025

Completed the project named as Phase__5

TECHNOLOGY PROJECT NAME : PRODUCT CATALOG WITH FILTERS

SUBMITTED BY,

 NAME: MADHU BHARATH

  MOBILE NO:9585115135

Project Title: Product Catalog with Filters

Final Demo Walkthrough

Overview:

The "Product Catalog with Filters" project is a web application that allows users to browse a list of products and filter them based on specific criteria such as category, price, rating, or availability.

Demo Steps:

1. Open the deployed link .
2. View all products on the homepage.
3. Use the filter panel to select categories (e.g., Mobile,Laptop,Watch,Shoes).
4. Adjust the price range slider to narrow down products.
5. Use the search bar to find specific products.
6. Click on a product card to view more details.
7. Observe that the product list updates dynamically without page reloads.

Tech Stack :

- Frontend: React.js, Tailwind CSS
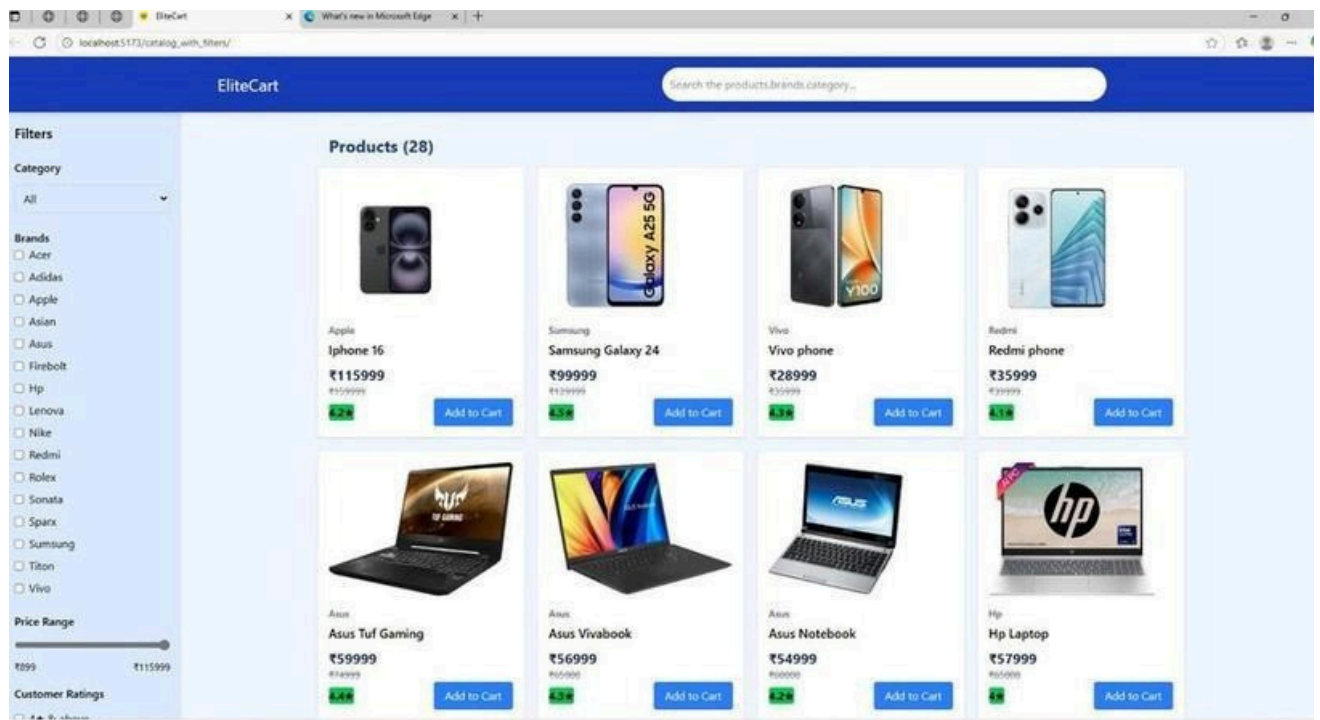- Database: MongoDBHosting: Github

Project Report

Objective:

To develop an interactive product catalog web application with dynamic filtering, sorting, and search capabilities that enhance user experience and usability.

Key Features:

- Responsive UI displaying products in grid layout.

- Filters for category, price range, rating, and availability.Real-time search functionality.
- Product details modal/page.
- API integration for fetching product data.
- Deployed live for public access.

Screenshots / API Documentation Screenshots:

API Documentation Example (if applicable):

Method Endpoint   Description

        GET   /api/products Fetch all products

  GET /api/products/:id   Fetch product by ID

                /api/products?

 GET   category=electronics Filter products by category /api/products

| POST | Add a new product (Admin only) |

Challenges & Solutions

Challenge	Solution
Integrating multiple filters dynamically	Used query parameters and state management (React useState)
Slow API response due to filtering	Implemented server-side filtering and pagination
Responsive layout issues on mobile	
Data not updating on filter utilities change	Used Tailwind CSS responsive
	Used React state hooks and dependency tracking in useEffect

GitHub README & Setup Guide

Final Submission

- GitHub Repo: [Github Repo Link](#)
- Live Deployed: [Project Deploy Link:](#)
- Documentation: (README): Included in repository