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DATE:06/10/2025

Completed the project named as Phase__5

TECHNOLOGY PROJECT NAME : PRODUCT CATALOG WITH FILTERS

SUBMITTED BY,

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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
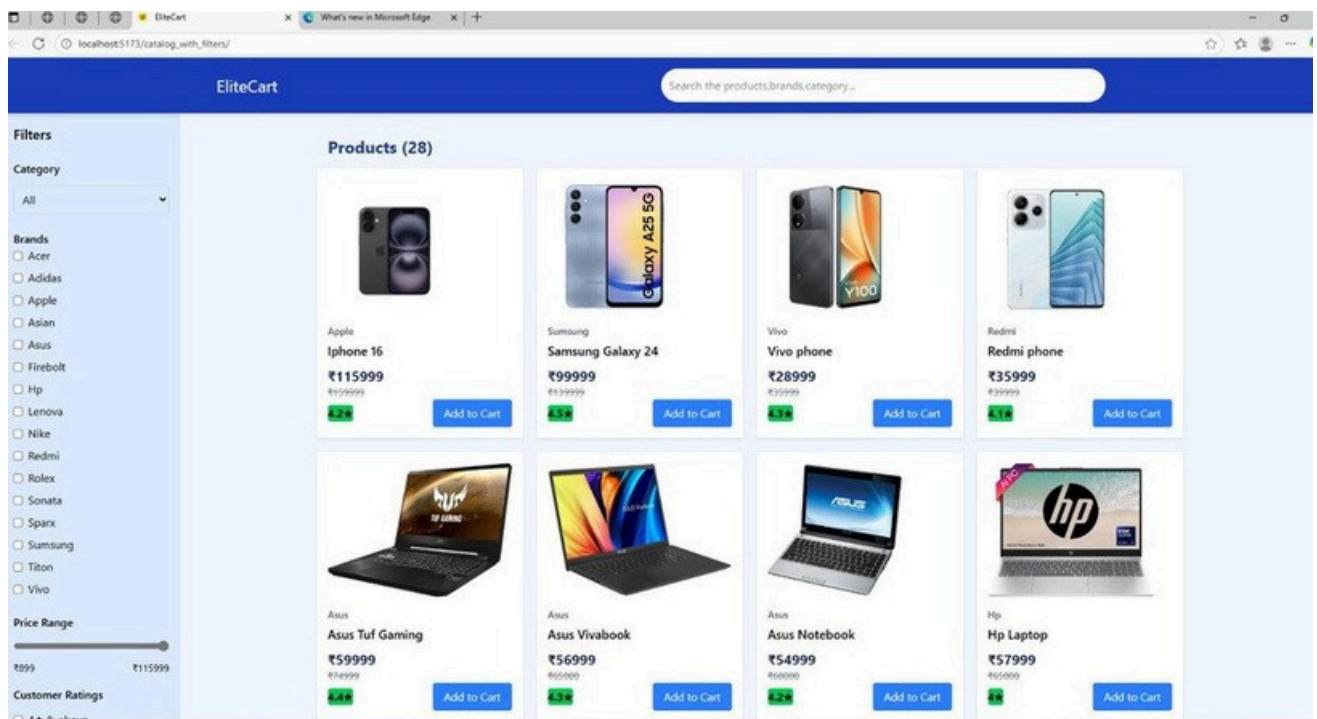- HDaotsatibnags: eG: iMthounbg oDB

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.
- RFieltaelr-sti mfoer csaetaergcohr yfu, npcritcioen raalnitgye., rating, and availability.
- 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
GET	/api/products?category=electronics	Filter products by category
POST	/api/products	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	Used Tailwind CSS responsive utilities
Data not updating on filter change	Used React state hooks and dependency tracking in useEffect

GitHub README & Setup Guide

Final Submission

- GitHub Repo: Github Repo Link
- Live Deployment: Project Deploy Link:
- Documentation: (README): Included in repository