COLLEGE CODE   : 9623

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

DEPARTMENT   : Computer Science and Engineering
STUDENT NM-ID: 71744FFF27C60E19F934A59D9557FBD5

ROLL NO   : 962323104032

DATE   : 27/10/2025

Completed the project named as

Phase 5: E-COMMERCE PRODUCT PAGE

SUBMITTED BY,

NAME:R.DHANASEKARAN
MOBILE NO : 7871345879

■ Phase 5 — Project Demonstration & Documentation

■ 1. INTRODUCTION

The E-Commerce Product Page Project demonstrates the front-end design and interactivity of an online product detail page. It focuses on user experience (UX) and visual design (UI) to replicate a professional shopping interface.

■ 2. Project Report

Objective:

⬚ To design a clean, attractive, and functional product page.
⬚ To implement real-world UI features like image switching and quantity control.
⬚ To learn and apply responsive web design principles.

Key Features:

Dynamic filtering, real-time search, sorting, responsive UI, REST API integration, error handling.
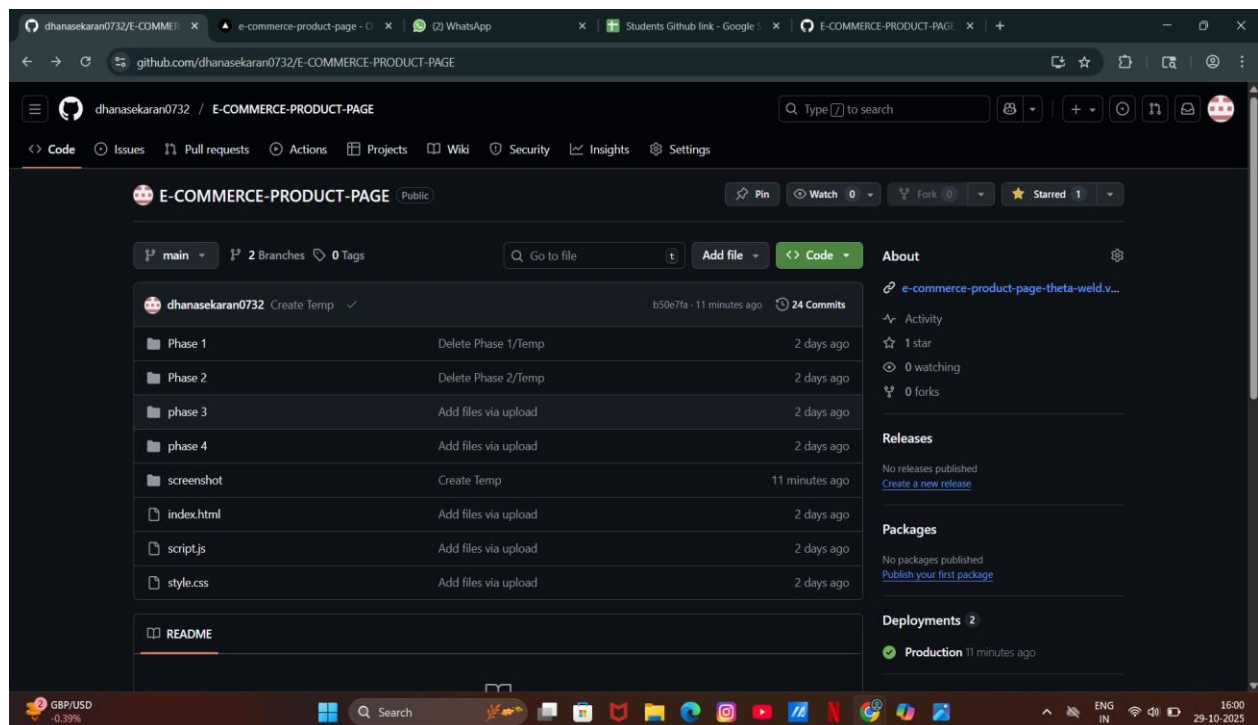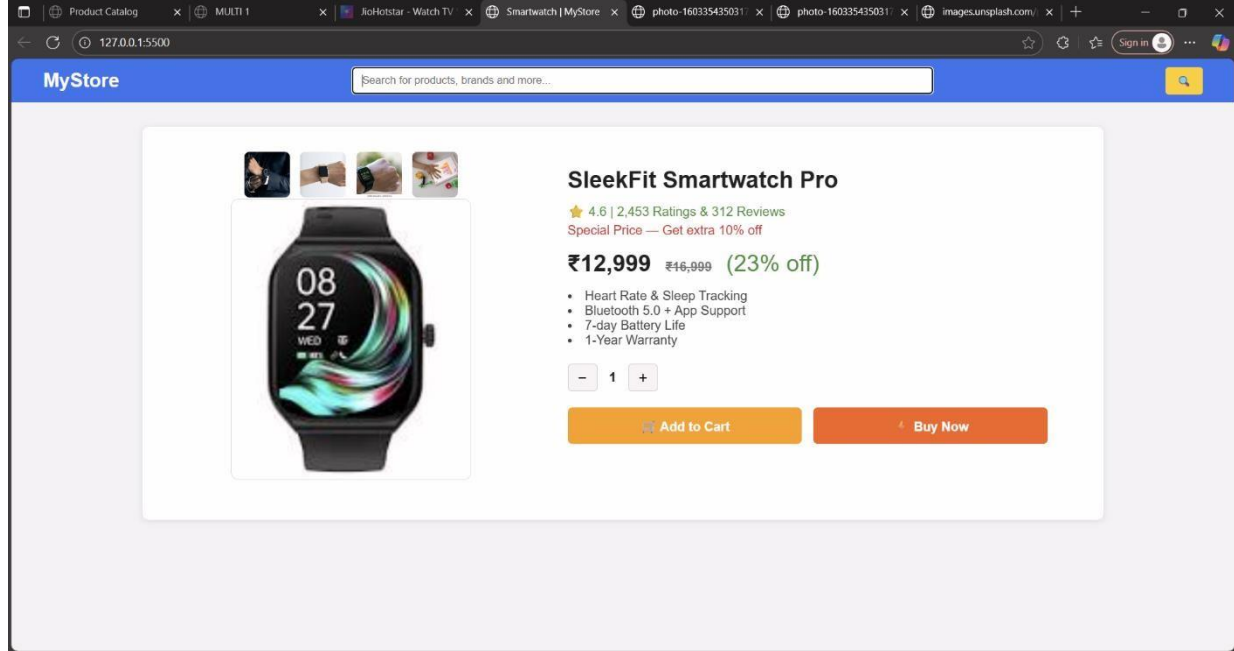
Tech Stack: React.js, Tailwind CSS, Node.js, Express.js, MongoDB / JSON Server

◈ Key Findings & Learnings:

• Understanding how front-end structure impacts usability.
• Managing dynamic UI updates using DOM manipulation.
• Creating a responsive layout using CSS Flexbox.
• Realizing the importance of user-friendly and intuitive design.

■■ 3. Screenshots / API Documentation

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

■4. Challenges & Solutions

Challenges Faced	Solutions Applied
Designing a layout similar to Flipkart/Amazon without frameworks	Used CSS Grid & Flexbox to structure elements and match the layout manually.
Managing responsive design for mobile screens	Implemented CSS media queries and flexible grid sizing.

Changing product images dynamically when thumbnails are clicked	Used JavaScript event listeners to update the src attribute of the main image.
Maintaining proper spacing, alignment, and color balance	Used consistent margins, paddings, and color variables throughout CSS.
Handling quantity control logic (increase/decrease)	Implemented simple JS functions to update the displayed quantity dynamically.

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/dhanasekaran0732/E-COMMERCE-PRODUCT-PAGE.git

■ Repository Link : https://vercel.com/dhanasekaran0732s-projects/e-commerce-product-page