



**COLLEGE CODE : 9530**

**COLLEGE NAME : ST.Mother Theresa Engineering College**

**NM-ID ROLL NO :7E218C3BFA487AFB48C4D7838988A650**

**DATE : 29/09/2025**

**Completed the project named phase 4**

**PROJECT NAME : PRODUCT CATALOG WITH FILTERS**

**SUBMITTED BY,**

**NAME : R.Nithish kumar**

**MOBILE NO: 8015958116**

## Phase 4 – Enhancements & Deployment (Week 9)

### ◆ 1. Additional Features

Add animations (Framer Motion, AOS).

Add a dark/light mode toggle.

Add a search bar for projects or products.

Add responsive navbar (hamburger menu for mobile).

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### ◆ 2. UI/UX Improvements

Apply IBM Carbon Design System or Tailwind custom theme for consistency.

Improve spacing, typography, and colors.

Make the layout mobile-first responsive.

Add hover effects and smooth transitions.

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### ◆ 3. API Enhancements

For Portfolio Website → Integrate a contact form with EmailJS / Formspree.

For Product Catalog → Replace static JSON with API or backend data.

Add sorting/filtering improvements (multi-filters).

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### ◆ 4. Performance & Security Checks

Optimize images (WebP/Next-Gen formats).

Minify CSS/JS, use lazy loading for images.

Secure API calls (if backend is used).

Test Lighthouse score for performance, accessibility, and SEO.

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#### ♦ 5. Testing of Enhancements

Cross-browser testing (Chrome, Edge, Safari, Firefox).

Device testing (desktop, tablet, mobile).

Verify form validation and error handling.

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#### ♦ 6. Deployment (Final Step)

Choose a platform:

Netlify → Easy CI/CD, form handling.

Vercel → Perfect for React/Next.js.

GitHub Pages → Simple static hosting.

IBM Cloud (optional if you want IBM ecosystem).

Configure custom domain (optional).

Share live project link in resume/LinkedIn.