**Project Proposal**

**Project Title:** E-commerce Product Page

**Team Name:** CodeFusion

**Team Roles & Responsibilities**

* Team Member 1: Krishu – Oversees the project, assigns tasks, and ensures timely completion.
* UI/UX Designer: Saloni – Designs the layout, wireframes, and ensures user-friendly navigation.
* Front-End Developer: Krishu– Implements the structure using HTML, CSS, and JavaScript.
* Tester: Kemika– Identifies and reports bugs, ensures smooth user experience.

**Date:** March 24th, 2025

**Introduction**

This project aims to develop a responsive E-Commerce Product Page that showcases products with essential details such as images, descriptions, prices, and an "Add to Cart" button. The purpose of this project is to create a visually appealing and user-friendly product display that mimics real-world e-commerce platforms.

An engaging product page is crucial for online shopping as it influences purchasing decisions. This project will help users experience a structured and interactive interface while providing a practical front-end development experience for the team.

## **Project Objectives**

By the end of the two-week development period, the team aims to:

* Design and implement a fully functional product page with a professional UI/UX.
* Ensure the page is responsive and works well on different devices.
* Implement basic interactivity using JavaScript (e.g., image carousel, quantity selector).
* Complete testing to ensure smooth functionality.

## **Scope of the Project**

The project will focus only on front-end development, without backend or database integration. Key features include:

* A visually appealing layout displaying product images, descriptions, and pricing.
* Responsive design for mobile, tablet, and desktop compatibility.
* Interactive features like an image slider and product quantity selection.
* A structured and organized codebase using Bootstrap for layout and styling.

Constraints:

* No backend functionality (e.g., cart persistence or payment integration).
* Limited to HTML, CSS, JavaScript, and Bootstrap.

**Technology Stack**

* Languages: HTML, CSS, JavaScript
* Frameworks/Libraries: Bootstrap for styling and layout
* Tools:
  + Code Editor: Visual Studio Code
  + Version Control: GitHub for collaboration
  + Browser DevTools: For debugging and responsiveness testing

## **Implementation Plan & Timeline**

### Week 1: Project Setup & UI/UX Planning

* Define project requirements and finalize the product page layout.
* Create wireframes and design mockups.
* Set up the development environment (VS Code, GitHub repository, Bootstrap framework).
* Start building the basic HTML structure of the product page.

### Week 2: Front-End Development & Basic Styling

* Implement the main HTML structure, including the product image, description, and pricing sections.
* Apply CSS and Bootstrap to ensure a responsive design.
* Test and adjust layout for different screen sizes (mobile, tablet, and desktop).
* Ensure proper alignment, font choices, and color schemes.

### Week 3: JavaScript Interactivity & Enhancements

* Add JavaScript-based interactive features:
  + Image carousel for multiple product views.
  + Quantity selector with dynamic price updates.
  + “Add to Cart” button (front-end only, without backend storage).
* Implement smooth transitions and animations using CSS & Bootstrap.
* Conduct internal testing to ensure all interactive elements work as expected.

### Week 4: Testing, Debugging, and Performance Optimization

* Perform cross-browser compatibility testing (Chrome, Firefox, Edge, Safari).
* Identify and fix any UI/UX bugs or inconsistencies.
* Optimize page loading speed by compressing images and minifying CSS/JavaScript files.
* Conduct user testing (ask team members or peers for feedback).
* Make improvements based on feedback and refine the user experience.

### Week 5: Final Review, Documentation, and Presentation

* Prepare final documentation, including project objectives, technology stack, and key features.
* Finalize project details and ensure everything is working correctly.
* Create a short demo or presentation to showcase the project.
* Submit and deploy the project on GitHub Pages or another hosting platform (if required).

## **Expected Outcome**

The final product will be a responsive and interactive e-commerce product page that allows users to view product details and interact with features like image sliders and quantity selection.

Success criteria:

* Fully functional and visually appealing UI
* Smooth responsiveness across devices
* Proper implementation of JavaScript features

## **Conclusion**

This project will serve as a strong foundation for future e-commerce development by focusing on user experience, responsive design, and front-end interactivity. The structured approach ensures that the team gains hands-on experience in HTML, CSS, JavaScript, and Bootstrap, reinforcing essential front-end development skills.

By successfully implementing a visually appealing and functional product page, this project provides a real-world application of front-end technologies commonly used in modern e-commerce platforms. Users will be able to interact with key product details, navigate the interface smoothly, and experience dynamic elements such as image carousels and quantity selectors.