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E-commerce Product Listing Website

"Discover, Compare, Shop Smart."

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2. Introduction

Purpose: The purpose of this roadmap is to guide the development of a basic Ecommerce Product Listing Website. The roadmap outlines the key steps involved in creating a responsive and user-friendly interface that allows customers to browse products by category, view prices, filter results, and access product details. It also serves as a learning project for mastering core web development concepts such as HTML/CSS layout design, dynamic JavaScript functionality, and UI responsiveness.

Scope: This roadmap covers the development of the frontend of an Ecommerce website, including

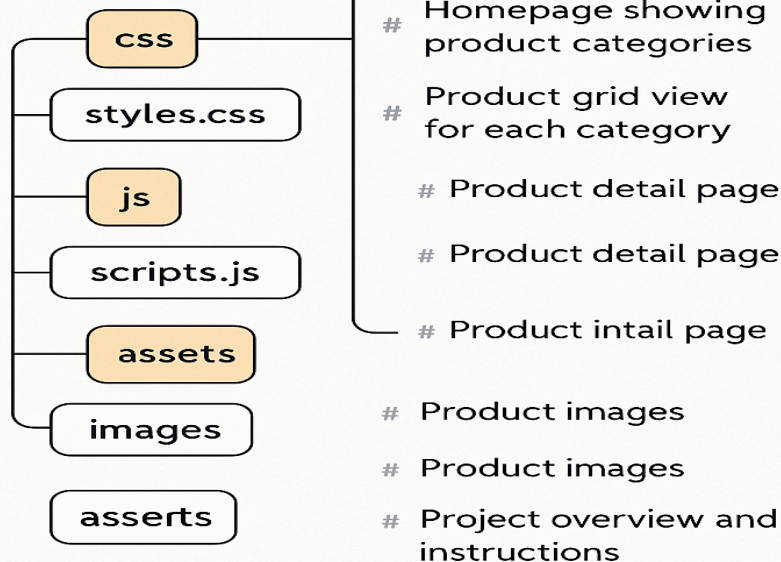
- Homepage with category listing
 - Product grid page with filter functionality
 - Optional product detail view
 - Responsive layout for various screen sizes
 - Static product data stored in JavaScript
 - Backend implementation (e.g., user authentication, cart persistence, payment gateway)
 - Database integration
 - Advanced features like reviews, search autocomplete, or admin panels
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Importance: This roadmap is significant as it aligns with the learning objectives of foundational web development and UI/UX principles. From an educational perspective, it strengthens skills in structuring projects, writing modular code, and creating clean, responsive designs. For organizations or learners aiming to build scalable ecommerce systems, this roadmap serves as the first building block toward a full-stack Ecommerce platform.

3. Project Structure: The project files are organized in a modular structure for clarity and maintainability

```
ecommerce-product-listing/
├─ index.html           # Homepage showing product categories
├─ category.html        # Product grid view for each category
├─ product.html (optional) # Product detail page
├─ css/
│   └─ styles.css       # Main CSS file for styling
├─ js/
│   └─ scripts.js       # JavaScript logic
├─ data/
│   └─ products.js      # Sample product data
├─ assets/
│   └─ images/          # Product images
│   └─ icons/           # Icons for UI elements
└─ README.md           # Project overview and instructions
```

ecommerce-product-listing



4. Technical Stack:

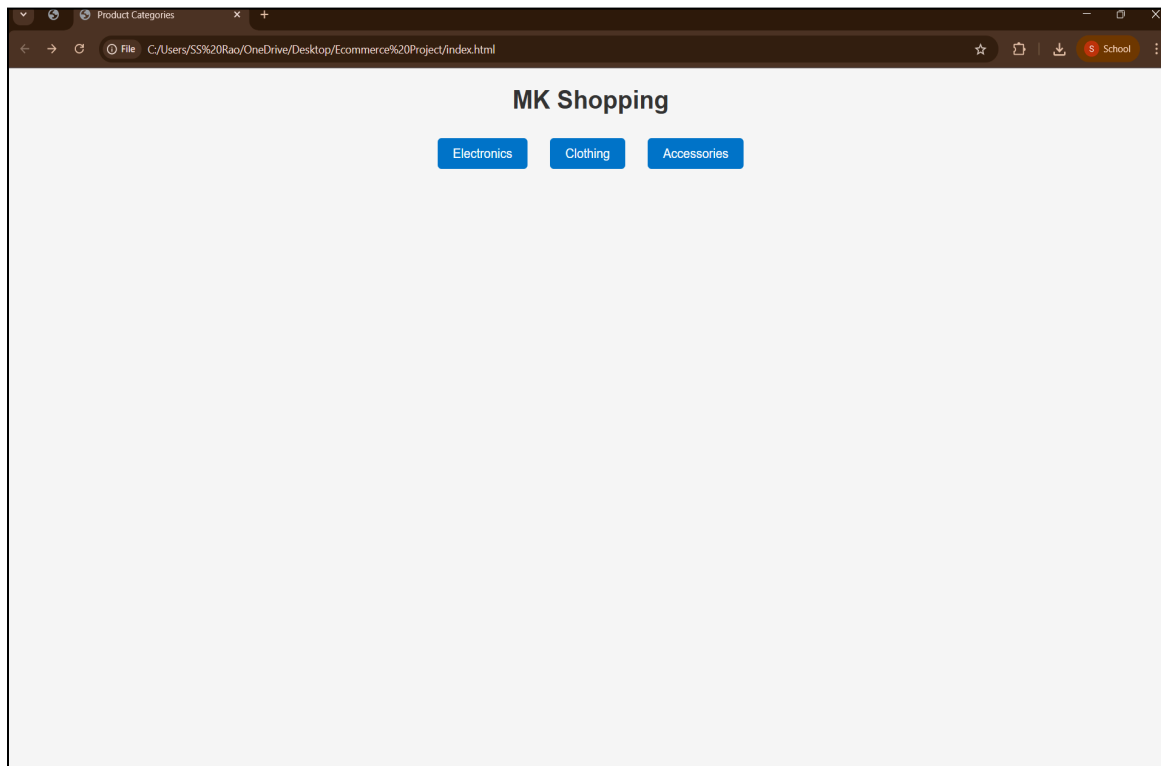
- **Frontend:** HTML5, CSS3, JavaScript (Vanilla JS)
 - **Design:** Responsive design using media queries
 - **Version Control:** Git and GitHub
 - **Deployment Platform:** GitHub
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5. Features and Functionalities

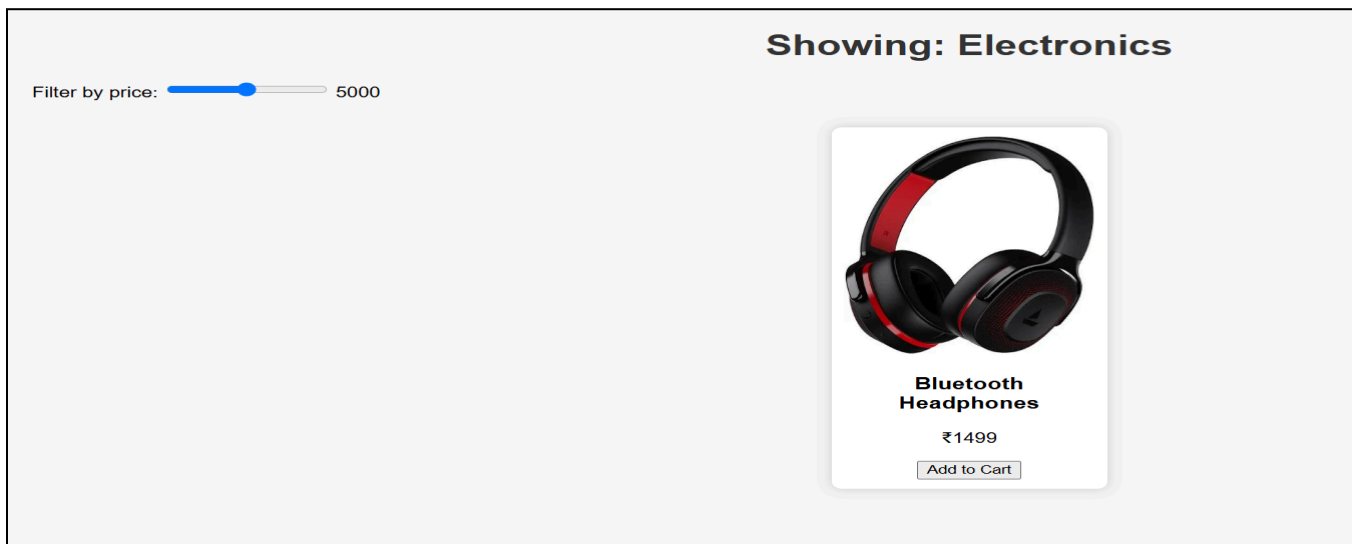
- **Product Categories:** Homepage lists available categories like electronics, clothing, and accessories.
 - **Product Listing:** On selecting a category, a grid of products is displayed with name, image, and price.
 - **Filtering Feature:** Users can filter products dynamically based on price ranges.
 - **Product Detail Page (Optional):** Clicking on a product opens a detailed view with description and full image.
 - **Responsive UI:** The layout adapts gracefully to all screen sizes from desktop to mobile.
 - **User Interface:** Clean and consistent styling with emphasis on readability and usability.
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6. Screenshots and Visuals:

a.Homepage with Product Categories



b.Page Displaying Product Grid



Showing: Clothing

Filter by price: 5000



Cotton T-Shirt

₹499

[Add to Cart](#)

Showing: Accessories

Filter by price: 5000

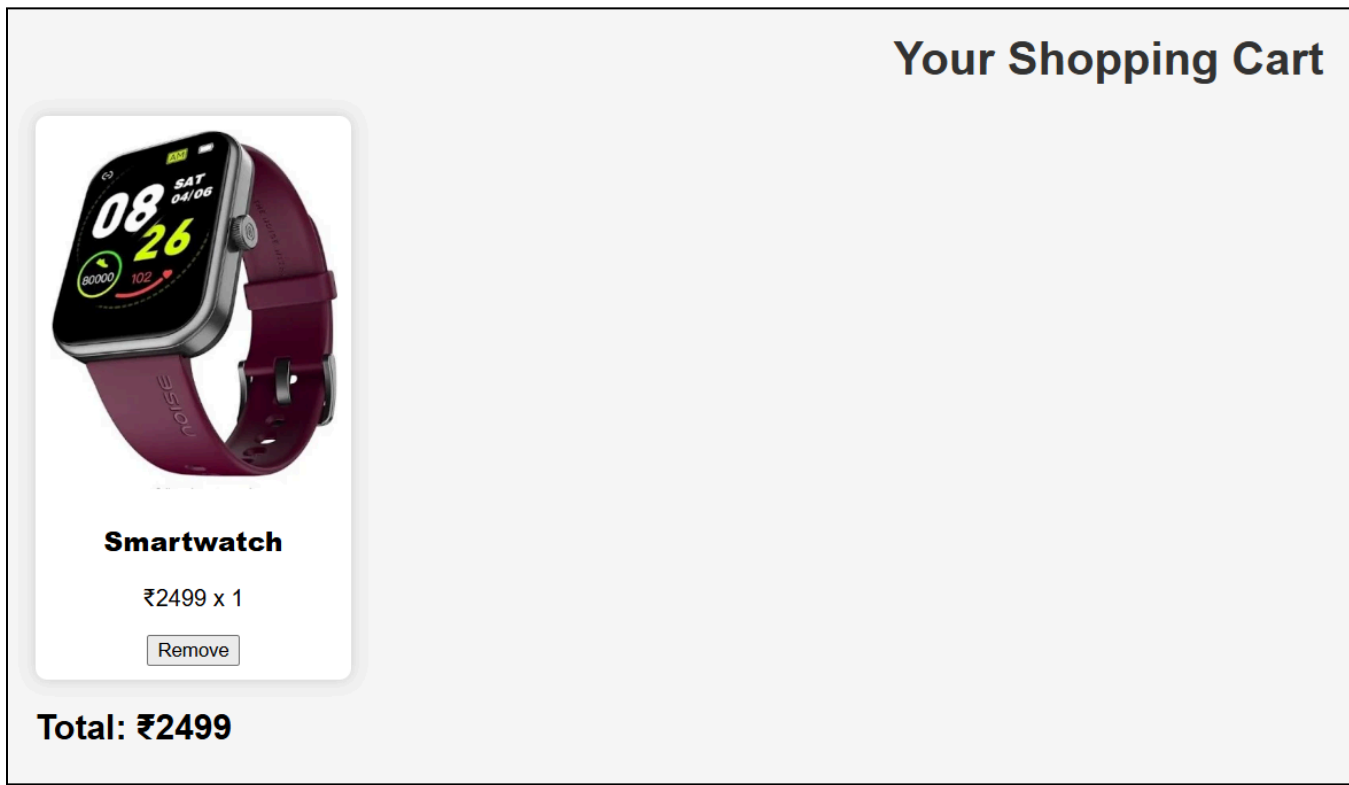


Smartwatch

₹2499

[Add to Cart](#)

c.Add to Cart:



8. Challenges Faced

- Ensuring mobile responsiveness without using frameworks like Bootstrap.
- Writing dynamic filtering logic purely in Vanilla JavaScript.
- Organizing the UI to ensure consistency across different screen sizes.

Solutions:

Used custom media queries, modular JS functions, and thorough browser testing. Images were optimized for faster loading using reduced resolution formats and compression.

9. Conclusion

This project successfully demonstrates the fundamental components of an ecommerce frontend. It highlights skills in HTML structuring, CSS styling, JavaScript interactivity, and responsive design. The project lays a foundation for integrating backend support in the future for cart management, authentication, and payment features. The learning outcome includes better understanding of DOM manipulation, event handling, and user-centric UI design.