

**A
MAJOR PROJECT**

ON

E-SHOP

(A responsive E-commerce website)

Submitted

By

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6th SEM

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CANDIDATE DECLARATION

I hereby declare that the major project work being presented in the report entitled “E-SHOP” submitted in the department of computer science, **FACULTY OF TECHNOLOGY**, *Guru Nanak Dev Institute, Rohini, Delhi* is the authentic work carried out by me under the guidance of **Mr. Jatin Verma**, Professor, Department of computer science, Guru Nanak Dev Institute, Rohini, Delhi.

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Synopsis

1. TITLE OF THE PROJECT:

E-Shop – A Fully Responsive E-Commerce Website

2. OBJECTIVE OF THE PROJECT:

The primary objective of the **E-Shop** project is to design and develop a fully responsive, front-end e-commerce website that delivers a modern, user-friendly online shopping experience. It focuses on creating a clean and attractive user interface while utilizing mobile-first design principles, making it suitable for use on a wide range of devices including desktops, and smartphones.

The project aims to improve front-end development skills and prepare a strong foundation for integrating future functionalities like backend support, database management, secure payment gateways, user authentication, and inventory control. It also highlights the efficient use of modern web development technologies like HTML5, CSS3, Bootstrap 5, and JavaScript.

3. LANGUAGE AND SOFTWARE TOOL USED:

Frontend Languages:

- **HTML5:** To structure the content and layout of the web pages.
- **CSS3:** To style and design the visual appearance of the website.
- **JavaScript:** To enable interactivity, dynamic updates, and logic handling.

- **Framework/Library:**

- **Bootstrap 5:** For responsive, grid-based layout and reusable UI components like navbars, modals, buttons, and forms.

- **Development Tools:**

- **Visual Studio Code:** Code editor used for writing and managing source code.

- **Chrome Developer Tools:** For testing and debugging HTML, CSS, and JavaScript across different devices.
- **Git & GitHub:** For version control and project repository management.

4. KEY FEATURES OF THE PROJECT:

- **Responsive Design:**
Built using Bootstrap 5 to ensure that the layout and components adjust automatically to various screen sizes and devices.
- **Product Listing Page:**
Displays a collection of products in a structured grid layout, each with an image, title, price, and a button to view more or add to cart.
- **Product Details View:**
A separate page for each product that shows detailed information, including a description, specifications, and larger images.
- **Cart Functionality:**
Users can add or remove products to/from the cart. The cart dynamically updates using JavaScript to reflect total items and total cost.
- **Checkout Page:**
Users fill out a form with their personal and shipping details to place an order. Form validation is implemented using JavaScript.
- **Order Confirmation Page:**
Displays an order summary and confirmation message after the checkout process is complete.
- **Navigation Bar & Search Feature:**
A top navigation bar links to all main sections of the site, including Home, Products, About, Contact, and Cart. A functional search bar helps users find products quickly.
- **Interactive UI Elements:**
Modals, carousels, and dropdown menus are used to enhance user interaction and improve overall usability.

- **Custom Styling:**

CSS is used alongside Bootstrap to add unique visual elements and refine the website's aesthetics beyond the default framework styles.

5. FUNCTIONAL OVERVIEW:

- **Homepage** (`index.html`) – Welcomes users with a brief introduction, banners, and featured products.
- **Product Page** (`products.html`) – Displays all available products in a grid layout with category filtering.
- **Product View Page** (`product-view.html`) – Shows detailed information about a selected product.
- **Cart Page** (`cart.html`) – Lists all selected products with prices, quantity adjustments, and remove options.
- **Checkout Page** (`checkout.html`) – Users provide shipping and payment info. Includes form validation.
- **Order Confirmation Page** (`order-confirmation.html`) – Displays a summary of the placed order with confirmation.
- **Other Pages:**
 - **About Us** (`about.html`) – Information about the website or store.
 - **Contact Page** (`contact.html`) – A contact form with company details.
 - **Search Page** (`search.html`) – Allows users to search for specific products.

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6. BENEFITS:

- Provides a real-world understanding of how front-end e-commerce sites are designed and function.
- Improves practical skills in responsive design, UI development, and client-side scripting.
- Can serve as a professional portfolio project or as a base for commercial development.
- Easily expandable into a full-stack application with backend and database support.
- Encourages clean coding practices and modular design with HTML components and reusable styles.

7. FUTURE SCOPE OF THIS PROJECT:

The current version is front-end focused, but the project has great potential for expansion. Possible future enhancements include:

- ◆ **Backend Integration:** Using Node.js, PHP, or Django to manage dynamic data, handle sessions, and interact with a database.
- ◆ **User Authentication:** Sign-up and login functionality with personalized dashboards and order history.
- ◆ **Database Management:** Use of MySQL or MongoDB to store product data, user information, and orders.
- ◆ **Payment Gateway Integration:** Integration of online payment systems like PayPal, Razorpay, or Stripe.
- ◆ **Admin Panel:** An admin dashboard to manage products, track orders, and monitor site analytics.
- ◆ **Mobile Application:** Developing a companion mobile app for Android/iOS to improve accessibility.
- ◆ **AI Integration:** Features like personalized recommendations, chatbot support, and product review analysis.

HARDWARE REQUIREMENTS:

Operating System: Windows / macOS / Linux

Processor: Intel Core i3 or higher

RAM: Minimum 2 GB

Storage: 100 MB (for project files)

SOFTWARE REQUIREMENT:

- Web Browser (Chrome, Firefox, etc.)
- Visual Studio Code
- Bootstrap 5 CDN
- Git (optional for version control)
- Live Server extension (optional for testing)

CONCLUSION:

The **E-Shop** project is a complete front-end prototype of an e-commerce website, demonstrating core online shopping features in a responsive and interactive format. By combining modern technologies like HTML, CSS, JavaScript, and Bootstrap, it provides an engaging user experience across all devices. This project not only helps understand the principles of UI/UX in web design but also sets the stage for building full-fledged commercial e-commerce platforms through future backend integration and feature upgrades.