

POKHARA UNIVERSITY

APEX COLLEGE

Department of Management



MINOR I

PROJECT REPORT

ON

“Nepal’s Tea Trading Frontend”

BY

Alsan Pokharel

(24080006)

KATHMANDU, NEPAL

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A PROJECT WORK SUBMITTED TO THE DEPARTMENT OF MANAGEMENT
IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE BACHELOR
OF COMPUTER SYSTEM AND INFORMATION TECHNOLOGY

KATHMANDU, NEPAL

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The undersigned certify that they have read, and recommended to Pokhara University for acceptance, the project report titled “**Nepal’s Tea Trading Frontend**” submitted by [Alsan Pokharel, (24080006)] in partial fulfilment of the requirement for the Bachelor of Computer Information System.

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DECLARATION

The project report titled “**Nepal’s Tea Trading Frontend**” submitted for the partial fulfilment of the requirement for the degree of Bachelor of Computer System and Information Technology to Pokhara University, comprises only original work and due acknowledgement have been made to the materials used in this report.

Alsan Pokharel

24080006

25th July,2025

ACKNOWLEDGEMENT

Firstly, we would like to thank Apex College and our program head **Mr. Bharat Khanal** and our project coordinator **Mr. Rajiv Bikram** Shah for giving us such an opportunity to show our creativity and present ourselves on this platform. We have taken effort in writing the code and preparing this report. This minor project has helped us to know a lot about the efforts behind creating a website and handles daily challenges. However, it would not be possible for us to complete our minor project without the help of our supervisor, **Mr. Rajiv Bikram Shah**. His guidance has helped us patch up this project and report successfully. His suggestion has served as the major contributor to our minor project.

ABSTRACT

Nepal's Tea Trading is a platform dedicated to showcasing and promoting authentic Nepali tea and herbal products from the Ilam region. It serves as a digital storefront that bridges traditional tea producers with customers seeking high-quality organic teas and local specialties. The website offers a user-friendly interface where visitors can browse through a comprehensive product catalogue 20 items including traditional teas, herbal teas, and local products, view detailed product information, and access contact details for direct purchasing.

This project report details the process of developing a fully responsive e-commerce website for Nepal's Tea Trading using HTML5, CSS3, and JavaScript. The objective was to create a modern, mobile-first responsive design that ensures optimal user experience across all device types from smartphones to desktop computers. The project involved analysing user requirements, designing responsive layouts with multiple breakpoints, implementing the design using semantic HTML and CSS Grid/Flexbox, and adding interactive functionality with vanilla JavaScript including hamburger menu navigation, dark mode toggle, and shopping cart features.

The development utilized core web technologies with a focus on responsive design principles, implementing six carefully designed breakpoints (360px to 1400px+) to ensure consistent functionality across all device categories. Key features include a responsive navigation system, product catalogue with hover effects, contact forms, and a comprehensive shopping interface. Testing was conducted across various devices and browsers, demonstrating consistent functionality and visual appeal.

The results demonstrate a fully functional, responsive e-commerce platform that successfully promotes Nepal's tea industry through digital channels. The website features intuitive navigation, mobile-optimized design, and interactive elements that enhance user engagement. Future enhancements could include backend integration for dynamic content management, payment gateway implementation, and advanced search functionality with real-time inventory management

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CHAPTER 1

INTRODUCTION

1.1 Background

Nepal's Tea Trading is a comprehensive platform designed to showcase and promote authentic Nepali tea and herbal products from the renowned Ilam region. It offers a wide range of traditional teas, herbal products, and local specialties from organic farms, helping customers discover high-quality products aligned with their preferences for natural and authentic beverages. Beyond product showcasing, Nepal's Tea Trading provides valuable information about tea varieties, their health benefits, and insights into Nepal's rich tea cultivation heritage. Additionally, the platform promotes awareness of local agricultural products and supports the digital transformation of traditional tea trading in Nepal's mountainous regions.

1.2 Scope

The scope of this project includes developing a fully responsive frontend website for Nepal's Tea Trading with comprehensive user interface design and interactive functionality. The project focuses on client-side implementation using modern web technologies. Backend functionalities such as database integration, payment processing, and server-side operations are not within the scope of this frontend-only project.

1.3 Project Description

This project focuses on creating a modern, responsive e-commerce website for Nepal's Tea Trading from scratch. The main components include a responsive homepage with hero section, comprehensive product catalogue displaying 20 items, about section showcasing company information, contact forms with multiple communication options, and shopping cart functionality. Additionally, the project includes a responsive login/registration system and mobile-optimized navigation. The website was developed using HTML5 for semantic structure, CSS3 for responsive styling with multiple breakpoints, and vanilla JavaScript for interactive functionality.

1.4 Objectives

An objective is a specific goal that a project aims to achieve, outlining key tasks and desired outcomes. The objectives of this project are listed below:

- Create a responsive website for Nepal's Tea Trading using HTML, CSS, and JavaScript
- Design a user-friendly interface that works on mobile, tablet, and desktop devices
- Build an interactive product catalogue with shopping cart functionality
- Implement modern web features like hamburger menu and dark mode toggle
- Develop skills in frontend web development and responsive design techniques

CHAPTER 2

LITERATURE REVIEW

The literature review covers the importance of responsive web design in modern e-commerce applications and reviews various technologies used for frontend development, such as HTML5, CSS3, and JavaScript. The review also examines existing research and best practices for developing responsive e-commerce websites that cater to diverse user needs across multiple devices. Studies consistently emphasize the critical role of mobile-first design in today's digital landscape, where mobile internet usage has surpassed desktop usage, particularly in developing countries like Nepal.

According to Marcotte (2010), responsive web design principles ensure that websites adapt seamlessly to various screen sizes and devices, providing optimal user experience regardless of the access method. This approach is particularly relevant for e-commerce platforms targeting local markets, where users may access websites through different devices with varying capabilities. Research by Google (2023) indicates that 53% of mobile users abandon sites that take longer than 3 seconds to load, emphasizing the importance of performance optimization in responsive design.

The review of existing e-commerce platforms reveals that successful online businesses increasingly focus on user experience and mobile optimization. However, despite the abundance of generic e-commerce solutions, there remains a significant gap in platforms specifically designed for traditional industries like tea trading. Many existing solutions do not adequately address the unique requirements of showcasing artisanal products, telling cultural stories, or connecting traditional producers with modern consumers through digital channels.

This project aims to address this gap by offering a comprehensive approach to responsive e-commerce development through practical application. By developing a specialized platform for Nepal's tea industry, this project demonstrates how modern web technologies can be leveraged to promote traditional products in the digital marketplace. The hands-on approach of building a responsive website from scratch not only reinforces theoretical knowledge of frontend development but also addresses real-world challenges such as cross-device compatibility, performance optimization, and user experience design for cultural products.

CHAPTER 3

SYSTEM ANALYSIS, DESIGN, AND IMPLEMENTATION

3.1 System Design

The design phase involved creating a modern, responsive e-commerce platform for Nepal's Tea Trading to showcase authentic Nepali tea and herbal products. Wireframes and user flow diagrams were developed to outline the comprehensive design of the homepage with hero section, product catalogue, about section, contact forms, and shopping cart functionality. This analysis included examining the visual hierarchy, responsive navigation flow, and key user interactions across multiple device types to ensure a seamless user experience from mobile phones to desktop computers.

The wireframes provided a visual blueprint of the website's responsive layout and functionality. For the homepage, the wireframe included a responsive header with the company logo, hamburger navigation menu for mobile devices, search functionality, and dark mode toggle. The main hero section featured a compelling call-to-action with background imagery showcasing Nepal's tea heritage. Below this, the about section presented company information alongside tea imagery, followed by a comprehensive product catalogue displaying 20 items in a responsive grid layout that adapts from 5 columns on desktop to 1 column on mobile devices. The contact section included multiple communication options with forms, phone, email, and location information, ensuring customers could easily connect with the business.

The user flow diagram detailed the steps users take to navigate through the responsive website. Users typically start at the homepage hero section, where they can choose to explore products, learn about the company, or contact directly. From the homepage, users can scroll to the product catalog or use the navigation menu to jump to specific sections. The responsive design ensures that mobile users have access to all functionality through the hamburger menu. Selecting a product takes users to detailed product pages with purchasing options, while the shopping cart functionality allows for complete e-commerce interactions.

3.2 User Flow Diagram

A user flow diagram for the Nepal's Tea Trading website illustrates the journey a user takes from entry to accomplishing their goals on the responsive platform. The diagram shows multiple entry points and interaction paths across different device types.

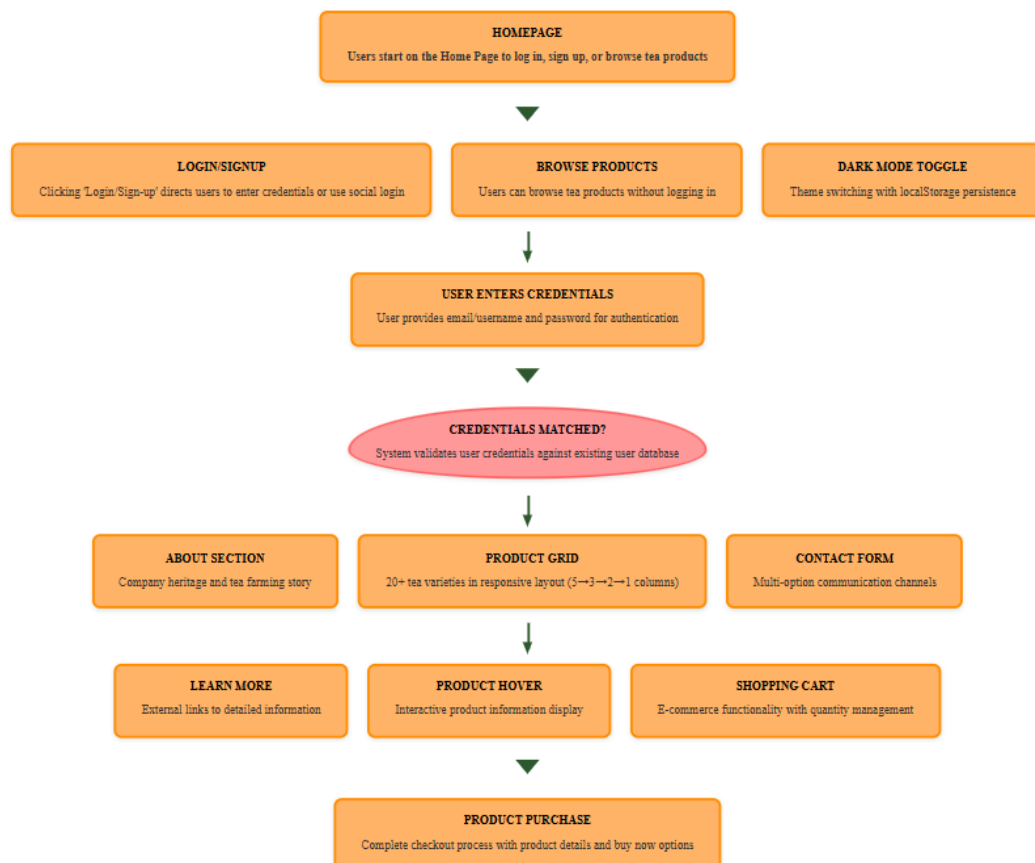


Figure 1: User Flow Diagram

3.3 Wire Framing

A wireframe for the Nepal's Tea Trading website outlines the basic design of its homepage, product catalogue, user authentication, and contact sections across desktop and mobile platforms. The wireframes demonstrate the structural layout for an authentic Nepali tea e-commerce platform.

Homepage Design: Features tea heritage story, company branding, and navigation menu with the welcome message "From the heart of Ilam to your cup – authentic, herbal, and handcrafted teas and more."

Product Listings: Grid-based layouts displaying tea varieties (Golden, White, Black, Green, Oolong, Perl Green) and herbal options (Rose, Hibiscus, Lemon Grass, Tulsi, Peppermint, Rhododendron, Chamomile). Additional products include Churpi, Ghee, Noni Ghee, Lollipop, Aakabare spices, and kiwi varieties.

User Authentication: Login buttons, user account access, dark mode toggle, and search functionality for personalized browsing experiences.

Responsive Design: Desktop features horizontal navigation with 5-column product grids. Mobile transforms to hamburger menu navigation with single-column listings, maintaining functionality while optimizing touch interactions.

Desktop Prototype

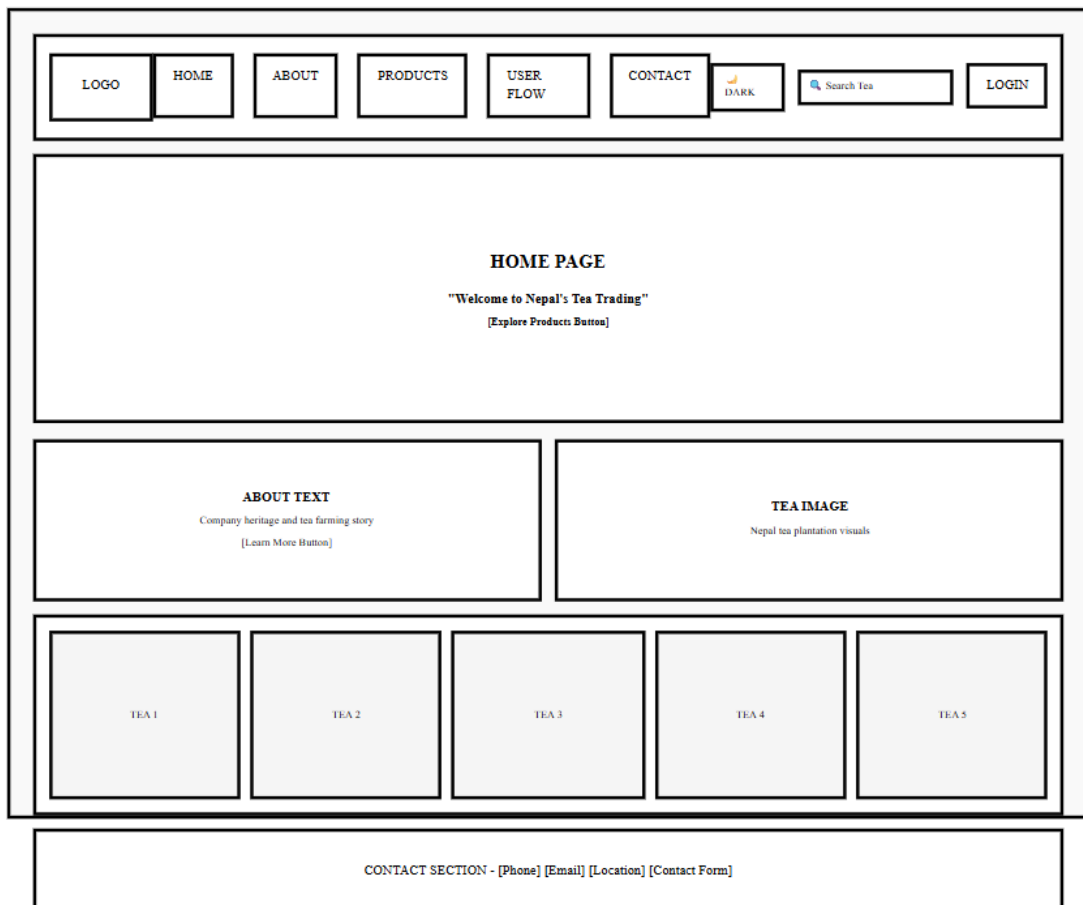


Figure 2: Desktop Prototype Wireframe

Phone Prototype

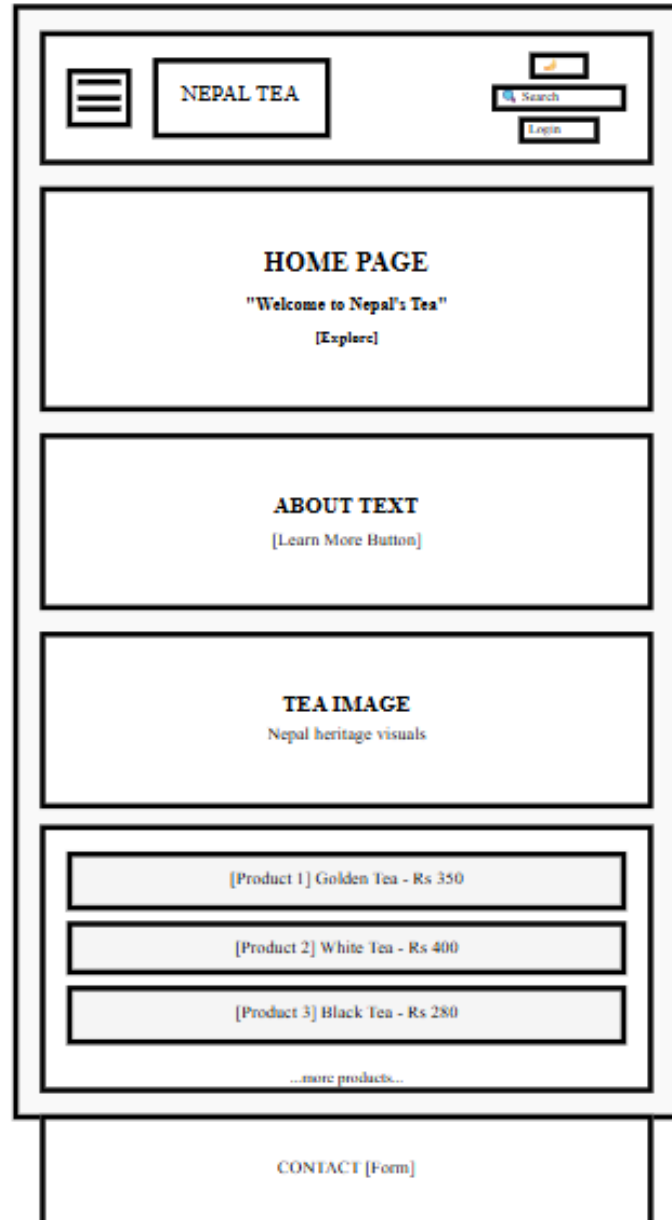


Figure 3: Phone Prototype Wireframe

3.4 System Description

The system consists of HTML5, CSS3, and JavaScript files that together create a fully responsive frontend for Nepal's Tea Trading website. HTML5 was employed to structure the semantic content, providing accessibility-friendly markup and proper document structure for the web pages. CSS3 was utilized extensively for responsive styling, implementing six media query breakpoints (360px to 1400px+) to ensure optimal display across all device types. The CSS includes advanced features such as CSS Grid for product layouts, Flexbox for flexible components, smooth transitions, and dark mode styling.

JavaScript was integrated to add comprehensive interactivity, enabling dynamic features such as hamburger menu functionality with overlay system, dark mode toggle with local Storage persistence, shopping cart operations, search functionality with real-time filtering, and smooth scrolling navigation. The system architecture follows modern responsive design principles with mobile-first approach, ensuring excellent performance on smartphones while scaling up to desktop displays.

The file structure includes the main homepage (nepalsteatrading.html), comprehensive styling (re-css.css), interactive functionality (nepalsteatrading.js), shopping interface (shopping.html with shopping.css and shopping.js), product detail pages (product-details.html), product data structure (products.json), and authentication system (loginpage.html with loginpage.css and loginpage.js). Additionally, the project includes organized image assets in the photo directory with subdirectories for logos, products, backgrounds, and decorative elements. This combination of technologies ensures a cohesive, responsive, and engaging user experience that effectively promotes Nepal's tea industry through modern web standards.

CHAPTER 4

SYSTEM TESTING, DEBUGGING, AND RESULTS

4.1 Testing

The Nepal's Tea Trading website was tested on various web browsers to ensure compatibility. Functionality tests were conducted to check the interactivity features implemented using JavaScript, ensuring they performed consistently across different browsers and devices. These tests verified that user interactions such as form validations, dynamic content loading, and responsive design adjustments functioned as expected across platforms, providing a seamless experience for all users accessing the Nepal's Tea Trading website.

Test Area	Test Method	Expected Result	Actual Result	Status
Homepage Layout	Manual Inspection	Elements are correctly positioned and styled.	Elements are aligned and styled correctly.	Passed
Navigation Menu	Manual Clicking	Links navigate to correct pages	Links navigate as expected.	Passed
Responsive Design	Resizing browser window	Layouts adjust correctly for various screen sizes.	Issues faced on small screen sizes	Needs Improvement
Form Validation	Input valid and invalid data	Form displays appropriate error messages	Error messages are displayed correctly	Passed
Shopping Cart	Add/Remove Products	Cart updates with correct items and pricing	Cart functionality works as expected	Passed
Dark Mode Toggle	UI Testing	Theme switches between light and dark modes	Dark mode applies correctly to all elements	Passed
Login Authentication	Email Domain Validation	Only @apexcollege.edu.np emails accepted	Domain validation works correctly	Passed

Table 1: Testing

4.2 Debugging

Several issues were encountered during development, including layout discrepancies and JavaScript errors. These challenges were addressed through iterative testing and debugging processes. Key issues resolved included:

Navigation Menu Responsiveness: Fixed hamburger menu toggle functionality for mobile devices by implementing proper event listeners in `nepalsteatrading.js`

Form Validation Logic: Enhanced email domain validation in `loginpage.js` to ensure only `@apexcollege.edu.np` addresses are accepted

Shopping Cart Calculations: Resolved price calculation errors in `shopping.js` to ensure accurate total updates when items are added or removed

CSS Layout Issues: Adjusted responsive breakpoints and grid layouts to improve display on smaller screen sizes

Image Loading Problems: Standardized image paths and verified all product images load correctly from the photo directory

This iterative approach not only improved the overall stability and performance of the website but also enhanced the user experience by eliminating potential obstacles and ensuring a seamless interaction with the site.

4.3 Results

The final product is a functional Nepal's Tea Trading website that successfully showcases authentic Nepali tea products. The visual design closely mirrors professional e-commerce standards while maintaining consistency in layout, colour schemes, and typography that reflects Nepal's tea heritage. This achievement reflects the successful implementation of HTML, CSS, and JavaScript to create key functionalities and visual elements, providing users with an intuitive and engaging interface when accessing the Nepal's Tea Trading website.

Key accomplishments include:

- **Multi-page Navigation:** Seamless navigation between homepage (nepalsteatrading.html), login page (loginpage.html), and shopping page (shopping.html)
- **Product Showcase:** Comprehensive display of Nepali tea varieties including Golden Tea, White Tea, Black Tea, Green Tea, and Oolong Tea with detailed descriptions from products. Json
- **Interactive Shopping Cart:** Fully functional cart system with add-to-cart, quantity management, and real-time price calculations
- **User Authentication:** Secure login system with domain-specific email validation (@apexcollege.edu.np) and password verification
- **Responsive Design:** Mobile-friendly layout with hamburger menu implementation for smaller screens
- **Dark Mode Feature:** Complete theme switching capability with user preference storage
- **Cultural Branding:** Authentic representation of Nepal's tea trading industry through visual design and product presentation

The website successfully demonstrates practical web development skills while serving as an effective digital platform that celebrates and promotes Nepal's rich tea culture and trading heritage.

CHAPTER 5

SUMMARY

5.1 Conclusion

This project successfully achieved its objective of creating a comprehensive Nepal's Tea Trading website that showcases authentic Nepali tea products and culture. The development process provided valuable hands-on experience in frontend web development and significantly enhanced understanding of HTML, CSS, and JavaScript integration. The website effectively demonstrates the rich heritage of Nepal's tea industry through an intuitive user interface that combines traditional cultural elements with modern web technologies.

Key achievements include the successful implementation of a multi-page website structure with seamless navigation, a functional shopping cart system for tea products, secure user authentication with domain-specific validation, and responsive design elements. The project successfully integrates cultural branding with practical e-commerce functionality, creating a platform that both educates users about Nepal's tea varieties and provides an engaging shopping experience.

5.2 Limitations

The current implementation focuses primarily on frontend functionality and does not include backend processing or database integration. The shopping cart system operates locally without persistent storage or payment gateway integration. Additionally, the responsive design requires further optimization for very small screen sizes (below 320px) as identified during testing.

Other limitations include:

- No real-time inventory management system for tea products
- Limited search functionality that currently provides visual feedback only
- Absence of user registration system beyond the current authentication
- No integration with actual tea suppliers or shipping services
- Static product information without dynamic pricing or availability updates

5.3 Future Enhancements/Recommendations

Future development could focus on expanding the website's functionality and improving user experience through several key enhancements. Implementing a complete backend system with database integration would enable persistent user accounts, order history, and real-time inventory management for tea products.

Recommended future enhancements include:

- **Backend Integration:** Develop server-side functionality using Node.js or PHP to handle user registration, order processing, and database management
- **Payment Gateway:** Integrate secure payment systems to enable actual e-commerce transactions for tea purchases
- **Enhanced Responsive Design:** Further optimize the website for all device sizes, including tablets and ultra-wide screens
- **Advanced Search Features:** Implement functional search with filtering by tea type, price range, and origin region
- **User Dashboard:** Create personalized user accounts with order history, wishlist, and tea preference tracking
- **Content Management System:** Develop an admin panel for easy updates to product information, pricing, and tea descriptions
- **Performance Optimization:** Implement image compression, lazy loading, and code minification for faster load times
- **Multi-language Support:** Add Nepali language option to better serve local customers
- **Social Media Integration:** Connect with social platforms to share tea culture and expand market reach
- **Review and Rating System:** Allow customers to rate and review different tea varieties

These enhancements would transform the current frontend demonstration into a fully functional e-commerce platform that could genuinely support Nepal's tea trading industry while providing an exceptional user experience for tea enthusiasts worldwide.

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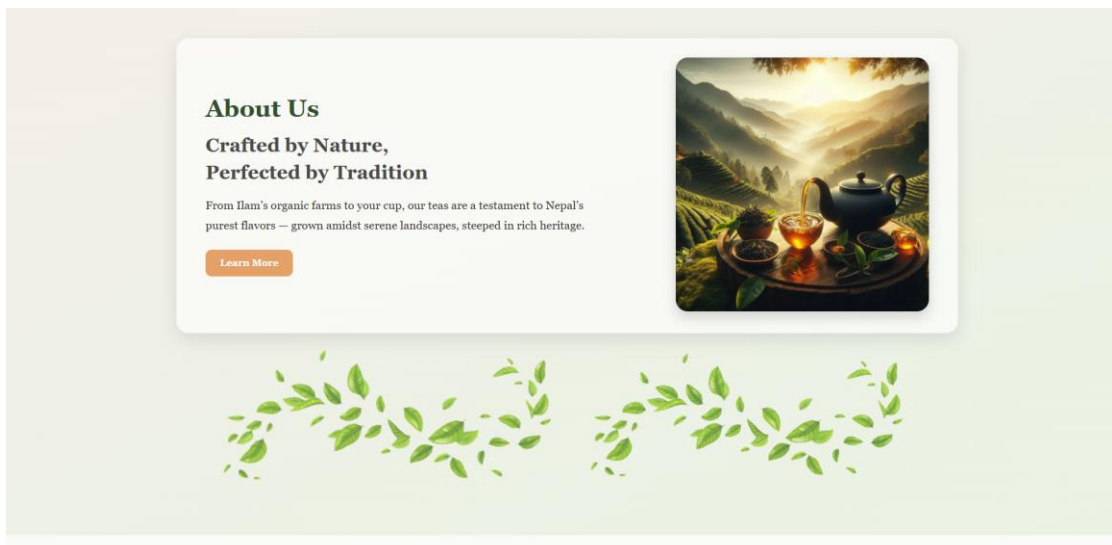
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APPENDICES

In this appendix, a snippet of the website is provided for reference. This showcases key elements of the frontend design, including layout, styling, and basic interactive features.



Appendix 1: Home/Main Page



Appendix 2 : Home/About us page

Product Gallery



Appendix 3 :Home / Product Gallery page

Contact Us

Reach out through any of the ways below or send us a message directly.

Call Us

+977-9817077458

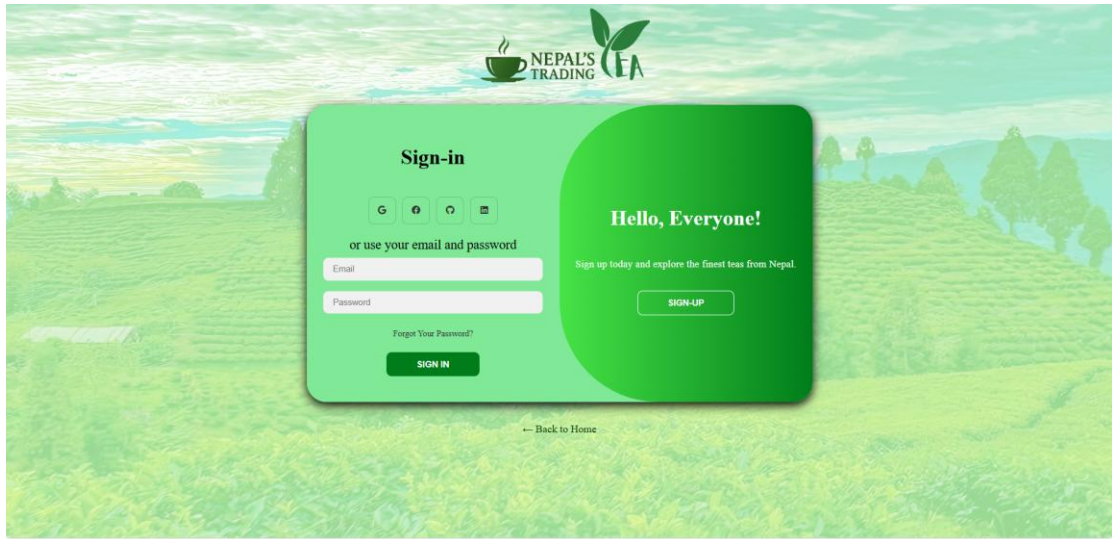
Email Us

nepaltea24@gmail.com

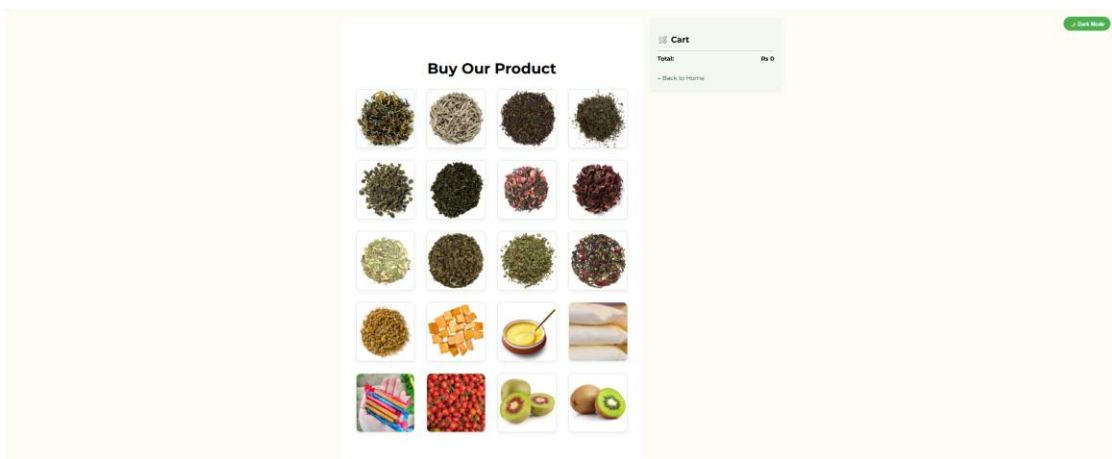
Our Location

Chandol, Kathmandu, Nepal

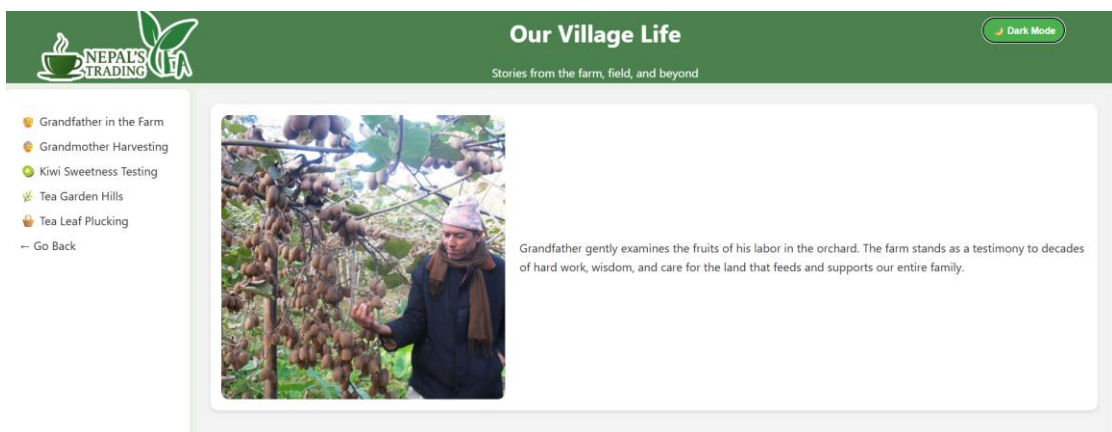




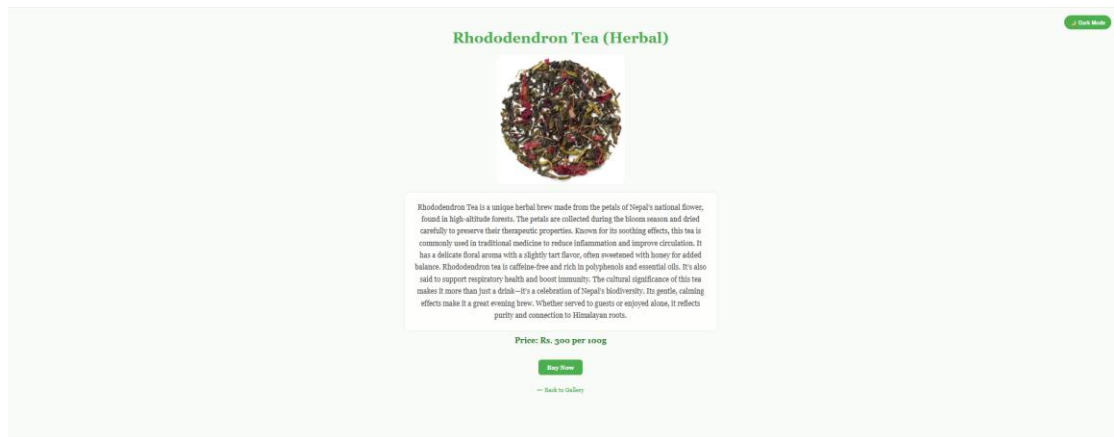
Appendix 5 : Login Page



Appendix 6 : Shopping Page



Appendix 7 : Root Page



Appendix 8 : Product Details Page