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Title in English

Coffee Shop Website

A Research Report

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Bachelor of Engineering in Information-Technology-Engineering**

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Chapter 1

1. Introduction

The Terrace Cafe website is a modern and intuitive online platform designed to reflect the cafe's commitment to quality service and delicious offerings. In today's fast-paced digital world, a strong online presence is essential for attracting and retaining customers, especially in the food and beverage industry. As a team project, the goal of the Terrace Cafe website is to provide an accessible and engaging experience that mirrors the welcoming ambiance of the physical cafe while offering the convenience of online browsing and ordering.

Understanding the needs and expectations of our customers, the website focuses on delivering a seamless and user-friendly interface. It allows visitors to explore a variety of menu options, including drinks, food, and snacks, with easy navigation and appealing visuals. The categorized menu ensures that customers can quickly find and order their favorite items. Additionally, the website integrates essential e-commerce features such as adding items to a cart, customizing orders, and checking out, all designed to make the online ordering process smooth and efficient.

Beyond ordering, the website emphasizes community engagement through a customer review section where visitors can share their feedback and experiences. This feature not only builds trust but also provides valuable insights for improving our services. The inclusion of user account management, complete with login and registration forms, offers a personalized experience, making it easier for returning customers to access their order history and preferences.

Furthermore, the website is built with a responsive design that ensures it functions optimally across all devices, from desktops to smartphones. This adaptability guarantees that customers have a positive experience whether they are

ordering from home, at work, or on the go. With features that prioritize speed, simplicity, and security, the Terrace Cafe website aims to set a high standard for online service in the cafe industry.

In addition to the core features, the Terrace Cafe website includes future-ready elements like data management tools for easy updates and promotional sections to highlight special offers and new menu items. As part of our continuous improvement efforts, we are exploring options like loyalty programs, real-time order tracking, and advanced analytics to further enhance customer satisfaction. This report will detail all the key features, technical aspects, and proposed improvements to give a comprehensive overview of the website's capabilities and potential.

Chapter 2

2. Website Objective

The **Terrace Cafe website** aims to serve as a seamless digital extension of the physical cafe, ensuring a user-friendly experience for both new and returning customers. The objectives of the website are crafted to align with the cafe's vision of delivering quality service, convenience, and customer engagement.

2.1. Enhancing Customer Convenience

One of the primary goals of the Terrace Cafe website is to make the ordering and browsing process as simple and efficient as possible. Customers can easily navigate through a categorized menu featuring drinks, food, and snacks. This categorization not only helps users locate their desired items quickly but also introduces them to new menu options they might not have discovered otherwise.

Additionally, the website allows customers to add items to their cart, customize their orders (e.g., selecting sizes or adding special instructions), and proceed to a secure checkout process. This eliminates the need for lengthy phone calls or in-person visits, providing a streamlined ordering experience from the comfort of their homes or on the go.

2.2. Reflecting the Terrace Cafe Brand

The Terrace Cafe prides itself on its cozy and welcoming ambiance, and the website is designed to reflect this brand identity. Through modern design elements, high-quality imagery, and a cohesive color scheme, the website embodies the essence of the cafe. The website's visuals and functionality convey professionalism while maintaining the warmth and friendliness that Terrace Cafe is known for.

This digital branding ensures that the cafe remains competitive in a crowded marketplace, attracting not only regular customers but also new patrons who prioritize a modern and accessible online presence.

2.3. Supporting Business Growth

By transitioning to an online platform, the Terrace Cafe website expands the cafe's reach beyond its physical location. Customers can now place orders from anywhere, increasing sales and enabling the cafe to operate more efficiently. Features like customer reviews and ratings also help build credibility and attract new customers who rely on recommendations.

Furthermore, the website allows the cafe to offer promotions and discounts directly to customers, enhancing engagement and encouraging repeat visits. For instance, limited-time offers displayed prominently on the homepage can drive sales during slower periods.

2.4. Building Stronger Customer Relationships

The website incorporates features like a login and registration system, enabling customers to create personalized accounts. This allows the cafe to provide tailored experiences, such as saved order histories, special offers for returning customers, and loyalty rewards programs. By fostering stronger connections, the Terrace Cafe ensures customer retention and satisfaction.

2.5. Staying Competitive in a Digital-First World

In today's technology-driven era, having an online presence is essential for survival and growth. The Terrace Cafe website ensures that the cafe keeps pace with industry trends. By integrating user-friendly features like mobile responsiveness, secure payment gateways, and real-time updates, the website sets a benchmark for modern cafes.

2.6. Enabling Future Expansion Opportunities

The Terrace Cafe website is designed with scalability in mind. As the cafe grows, new features can be seamlessly integrated into the platform. For example, the addition of loyalty programs, event booking systems, or seasonal menu updates can be implemented without disrupting the existing functionality.

Chapter 3

3. Key Features

The Terrace Cafe website offers a wide range of features designed to deliver a seamless, user-friendly experience while addressing the cafe's operational needs. These features enhance the customer journey, improve efficiency, and reflect the cafe's commitment to excellence

3.1. Categorized Menu

The website features a well-organized and visually appealing menu that allows customers to browse items by category.

- **Drinks:** A wide range of beverages, including coffee, tea, smoothies, and specialty drinks, each presented with high-quality images, descriptions, and customizable options.
- **Food:** From breakfast dishes to hearty meals, this section ensures customers can easily browse the cafe's offerings.
- **Snacks:** Quick bites and side dishes are showcased with detailed descriptions and pairing suggestions.
- **Dynamic Menu Display:** Seasonal or promotional items can be highlighted to attract customer attention.

This categorized approach ensures that customers can quickly locate their desired items while also discovering new offerings.

3.2. Add to Cart and Checkout

The e-commerce functionality of the Terrace Cafe website ensures a smooth and efficient ordering process.

- **Customizable Orders:** Customers can select sizes, toppings, or special instructions for their orders.

- **Easy Cart Management:** Items in the cart can be updated, with options to add or remove items and view a real-time price summary.
- **Secure Checkout:** The checkout process includes secure payment options and an intuitive interface to minimize cart abandonment.
- **Order Confirmation and Tracking:** After placing an order, customers receive confirmation with an estimated preparation or delivery time.

3.3. Customer Reviews and Ratings

Building trust and community engagement is key to the Terrace Cafe's success. The website allows customers to share their experiences through a review system.

- **User Feedback:** Customers can rate menu items, share their experiences, and provide valuable feedback.
- **Interactive Review System:** Reviews are displayed prominently, helping new customers make informed decisions.

3.4. User Account Management

The Terrace Cafe website provides an account system for returning customers to enhance personalization.

- **Personalized Experience:** Registered users can save order preferences, view their order history, and receive special offers.
- **Account Security and Password Recovery:** A secure login system ensures customer data is protected, with options for password recovery when needed.

3.5. Responsive and Intuitive Design

A modern website must cater to users on all devices, and the Terrace Cafe website achieves this through:

- **Mobile Optimization:** The website is fully responsive, providing an optimal experience on smartphones, tablets, and desktops.

- **Quick Loading Times:** The design is lightweight and optimized for fast performance, ensuring customers can place orders without delays.

3.6. Real-Time Order Status Updates

This feature ensures customers are always informed about their orders.

- **Order Tracking:** Customers can check the status of their orders, whether for delivery or pickup, in real time.

3.7. Online Ordering System

The website streamlines the ordering process to accommodate various customer preferences.

- **Delivery Options:** Customers can input their address for doorstep delivery.
- **Pickup Options:** For those nearby, the website offers a pickup option with an estimated preparation time.

3.8. Engagement Features

To build a strong connection with customers, the website includes:

- **Newsletter Subscription:** Customers can sign up to receive updates about new menu items, promotions, and events.
- **Social Media Links:** Direct links to the cafe's social media platforms encourage interaction and help customers stay updated.

Chapter 4

4. Technical Features

The Terrace Cafe website incorporates modern technologies and design principles to provide a seamless user experience while ensuring scalability, security, and efficiency. This chapter explores the core technical features that make the platform robust and future-ready.

4.1. Content Management System (CMS)

The Terrace Cafe website includes a lightweight CMS for managing dynamic content.

- **Menu Updates:** Admins can easily update menu items, pricing, and availability.
- **Promotions and Announcements:** A dedicated section allows for the quick addition of special offers, discounts, or seasonal updates.
- **User-Friendly Dashboard:** The CMS interface is intuitive, requiring minimal technical expertise for day-to-day operations.

4.2. Scalability for Future Growth

The website is built with scalability in mind to accommodate future expansions.

- **Modular Codebase:** The use of frameworks like React.js or Angular ensures modularity, making it easy to add new features without affecting existing functionalities.
- **Cloud Hosting:** By hosting the website on cloud platforms like AWS or Google Cloud, the infrastructure can handle traffic surges during peak hours.
- **API Integration:** The platform is designed to integrate third-party APIs (e.g., mapping services for delivery or loyalty programs) as needed.

Chapter 5

5. Future Improvement

The Terrace Cafe website is designed to provide a robust foundation for customer engagement and operational efficiency. However, there is always room for innovation and growth. This chapter outlines potential future improvements that can enhance the website's functionality, user experience, and business value.

5.1. Push Notifications

To improve engagement and keep customers informed, the website can incorporate push notifications.

- **Order Updates:** Notify customers when their order is confirmed, prepared, or ready for pickup/delivery.
- **Promotions and Events:** Alert customers about limited-time offers or upcoming events.
- **Personalized Recommendations:** Suggest menu items based on past orders or browsing behavior.

5.2. Advanced Analytics and Insights

Integrating advanced analytics tools will help the cafe better understand customer behavior and improve decision-making.

- **Sales Trends:** Identify peak hours, popular items, and seasonal demand fluctuations.
- **Customer Preferences:** Analyze order history to optimize menu offerings.
- **Predictive Analysis:** Use machine learning models to predict future trends and adapt strategies accordingly.

Chapter 6

6. Conclusion

The Terrace Cafe website is a comprehensive digital platform designed to enhance the customer experience, streamline operations, and drive business growth. By leveraging user-friendly design principles, advanced technical features, and innovative solutions, the website fulfills its purpose as an essential tool for modern cafes aiming to remain competitive in today's digital landscape.

6.1. Summary of Achievements

The development of the Terrace Cafe website has successfully addressed the primary objectives outlined in the project's inception:

- **Customer-Centric Features:** The categorized menu, seamless add-to-cart functionality, and efficient checkout process make ordering a hassle-free experience for customers.
- **Dynamic Engagement:** Features like customer reviews, real-time order updates, and promotional offers foster an interactive and engaging environment.
- **Scalable Infrastructure:** By utilizing modular codebases, cloud hosting, and secure data management, the website is well-equipped to handle increased traffic and future feature enhancements.
- **Mobile Responsiveness:** The site's mobile-friendly design ensures accessibility and usability across a range of devices, catering to the growing number of mobile users.
- **Data-Driven Decisions:** Analytics tools integrated into the platform provide valuable insights into customer behavior, enabling informed business decisions.

6.2. Future Prospects

The Terrace Cafe website is designed with adaptability and growth in mind. As customer needs evolve and new technologies emerge, the platform is well-positioned to incorporate future enhancements, such as:

- Developing a dedicated mobile app for enhanced accessibility and engagement.
- Introducing AI-driven personalization features to offer tailored recommendations and promotions.
- Expanding delivery services with route optimization and real-time tracking.
- Enhancing sustainability efforts through digital receipts and eco-friendly initiatives.

These prospects align with Terrace Cafe's commitment to delivering exceptional service and staying ahead of industry trends.

Chapter 7

7. References

7.1. Tools and Resources Used for Development

This section highlights the primary tools and resources employed in the development process of the Terrace Cafe website:

1. Code Editor:

- **Visual Studio Code:** The primary text editor used for writing, debugging, and managing the website's HTML, CSS, and JavaScript code. Its extension ecosystem facilitated improved development productivity.

2. Version Control:

- **Git:** Used for managing source code changes during development.
- **GitHub:** Hosted the project repository, enabling collaboration among team members and version history tracking.

3. Testing Environment:

- **Browser Developer Tools:** In-built tools in browsers like Google Chrome and Firefox were utilized to test website functionality and responsiveness.
- **Postman:** Used for testing APIs during the Node.js backend integration phase.

4. Package Manager:

- **Node Package Manager (NPM):** Helped manage JavaScript dependencies and libraries for backend and frontend development.

5. Local Server Setup:

- **Node.js:** Provided the runtime environment for backend development and served the React frontend.

6. Operating Systems:

- Development was conducted across platforms, including Windows for testing and local deployment.

7.2. Frameworks, Libraries, and APIs

1. Languages and Core Technologies:

- **HTML5:** Structured the content of the website.
- **CSS3:** Designed and styled the website for aesthetic and responsive layouts.
- **JavaScript:** Brought interactivity to the website and handled client-side logic.

2. Backend Framework:

- **Node.js:** Served as the foundation for creating the backend server and handling HTTP requests.

3. APIs:

- No external APIs were used in this project. However, internal APIs were developed using Node.js to handle operations such as menu data management and order processing.

4. Version Control:

- **Git:** A distributed version control system used for tracking changes in the source code.

5. Deployment Platform:

- While not implemented in this phase, GitHub can be integrated with services like Netlify or Vercel for future live deployment.

6. Browser Compatibility:

- The website was tested for cross-browser compatibility, including Chrome, Firefox, and Edge, to ensure consistent performance across different environments.