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# Design and Development of a Mobile Application for Ordering Food from a Digital Menu, with Real-Time Data Synchronisation and Storage on the Cloud for Enhanced Order Management and Analytics

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Abstract: In the digital age, mobile food ordering applications have transformed the way consumers interact with restaurants, offering convenience, personalization, and real-time service at their fingertips. This project presents the design and implementation of a user-centric, cloud-integrated food ordering mobile application aimed at streamlining the entire ordering and delivery process. The system is built to provide a seamless experience for both users and restaurant owners, utilizing advanced technologies such as cloud computing, real-time tracking, secure payment gateways, and intuitive user interface design. The architecture of the app leverages cloud platforms to ensure scalability, real-time data synchronization, and uninterrupted service across multiple user touchpoints. By employing Firebase and cloud-based APIs, the application manages live order updates, inventory tracking, and user interactions efficiently. Real-time order tracking, enabled through GPS and WebSocket technology, offers customers transparency and assurance, contributing to increased satisfaction and trust in the platform. The system also supports dynamic menu management and personalized recommendations using analytics-based insights derived from user behavior and historical data. Security is a foundational pillar of this application, with end-to- end encryption, tokenization, and compliance with PCI-DSS standards for payment integrations, safeguarding user transactions and data. The user interface has been meticulously designed to prioritize ease of use, accessibility, and responsive navigation. Features such as one-click ordering, search filters, favorites, and push notifications enhance user engagement and convenience. Additionally, the platform benefits restaurant owners by offering dashboards for analytics, sales tracking, and customer feedback, allowing data-driven decisions to improve operational efficiency. This project not only provides a functional and secure mobile application for food ordering but also exemplifies how modern technologies can be harmonized to enhance user satisfaction and business intelligence. The result is a robust system that adapts to evolving customer needs and contributes to the digital evolution of the hospitality industry.

Keywords: food ordering applications

# I. INTRODUCTION

The traditional food ordering process in restaurants often suffers from inefficiencies such as miscommunication, long wait times, and errors in order fulfillment, negatively impacting customer satisfaction and operational efficiency. Existing digital solutions frequently lack real-time synchronization, seamless order tracking, and robust data analytics for restaurant owners. Additionally, challenges like data security, limited scalability, and lack of personalized customer

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experiences further hinder restaurant operations. This project aims to develop a mobile-based food ordering application with cloud-based real-time data synchronization, ensuring a streamlined, error-free ordering process, enhanced customer engagement, and data-driven decision-making for restaurant owners.

# FEASIBILITY STUDY:

The rapid advancement of mobile technology has significantly influenced various industries, including the food and beverage sector. Consumers today expect seamless digital experiences that allow them to access services with minimal effort. Traditional methods of food ordering, such as phone calls or in-person orders, are often time- consuming and prone to errors. The introduction of mobile applications has revolutionized the food ordering experience by offering users a convenient platform to browse menus, customize orders, and make payments from their smartphones. This technological shift has not only enhanced customer satisfaction but has also enabled restaurants to improve order management and operational efficiency.

A mobile-based food ordering system with cloud-based data storage and real-time synchronization ensures that both customers and restaurant staff receive instant updates on orders. This eliminates delays and reduces the chances of miscommunication, leading to faster service and improved accuracy. Moreover, the integration of analytics tools. allows restaurant owners to gain insights into sales patterns, popular menu items, and customer behavior. This data-driven approach facilitates informed decision-making, enabling businesses to optimize their offerings and enhance overall profitability.

The proposed project aims to develop a mobile application that provides an intuitive

interface for customers to browse digital menus, place orders, and track their order status in real time. For restaurant owners, the application offers a robust backend system that synchronizes data across multiple devices and locations, ensuring efficient order management. By leveraging cloud technology, the system ensures secure data storage, quick access to order history, and scalability for businesses of all sizes. The application also incorporates push notifications and real-time tracking features to keep customers engaged and informed throughout the ordering process.

One of the key objectives of this project is to minimize operational inefficiencies by automating various aspects of order management. By eliminating the need for manual entry and paper-based records, restaurants can significantly reduce errors and improve service speed. The application will also support multiple payment gateways, allowing customers to choose their preferred method for secure transactions. Furthermore, the inclusion of user reviews and ratings will enhance transparency, helping customers make informed choices while enabling restaurants to maintain high service standards.

This project not only focuses on the functional aspects of food ordering but also emphasizes user experience and system security. The application will be designed with a clean and intuitive interface, ensuring ease of navigation for users of all demographics. Data encryption and secure authentication methods will be implemented to protect customer information and transaction details. Additionally, restaurant staff will have access to a comprehensive dashboard that provides real-time order tracking, inventory management, and sales reports, helping them optimize their workflows effectively.

In conclusion, the development of a mobile food ordering application with real- time synchronization and cloud storage presents a significant opportunity to enhance the food service industry. By addressing the challenges associated with traditional ordering methods, this system offers a seamless and efficient solution for both customers and restaurant owners. The incorporation of advanced features such as analytics, real-time tracking, and digital payments ensures a modern, data-driven approach to restaurant management. This project will serve as a stepping stone toward a more connected, automated, and customer-centric food ordering ecosystem.

# **TYPES OF FEASIBILITY STUDY:**

The increasing reliance on digital solutions in the food and beverage industry has highlighted the need for an efficient and user-friendly food ordering system. Traditional methods, such as manual order-taking and telephone-based orders, often result in miscommunication, long wait times, and inefficiencies that negatively impact customer satisfaction. Restaurants also struggle with managing high volumes of orders, tracking inventory, and analyzing customer

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preferences without a centralized digital system. These challenges call for a modern, automated solution that enhances both the customer experience and operational workflow.

With the widespread adoption of smartphones and cloud computing, customers now expect seamless digital interactions when placing food orders. However, many existing food ordering applications fail to provide real-time data synchronization, leading to discrepancies in order status, menu availability, and delivery tracking. A cloud- integrated mobile application with real-time updates ensures that customers receive accurate information, reducing frustration and improving service efficiency. This project addresses these critical gaps by offering an intuitive and automated system for both customers and restaurant owners.

Restaurants require data-driven insights to optimize their operations, manage inventory efficiently, and enhance customer engagement. Without an analytics-driven system, restaurant owners lack the ability to track sales trends, predict demand, and personalize customer experiences. By incorporating real-time data analytics into the food ordering application, this project enables restaurant owners to make informed business decisions, identify popular menu items, and streamline their supply chain, ultimately leading to improved profitability and reduced operational waste.

Security and reliability are also crucial factors in digital food ordering. Customers need assurance that their personal and payment information is secure, while restaurants require a stable system that prevents data loss and service disruptions. By leveraging cloud storage and secure authentication mechanisms, this project ensures safe transactions, data integrity, and smooth order management. Implementing robust security measures will build customer trust and encourage more users to adopt digital ordering platforms. Additionally, modern consumers prefer convenience and customization when ordering food. The lack of personalized recommendations and easy order modifications in traditional systems limits user engagement.

This project aims to incorporate AI-driven personalization features, allowing customers to receive tailored food recommendations based on their preferences and

order history. Features such as real-time notifications, multiple payment options, and

order tracking further enhance customer satisfaction and loyalty.

In conclusion, this project is necessary to address the inefficiencies in traditional food ordering systems by providing a digital solution that offers real-time order tracking, cloud-based data management, enhanced security, and personalized user experiences. By bridging the gap between customers and restaurant operations, this project aims to revolutionize food service management, making it more efficient, data-driven, and customer-centric.

The feasibility of the project is analyzed in this phase and business proposal is put forth with a very general plan for the project and some cost estimates. During system analysis the feasibility study of the proposed system is to be carried out. This is to ensure that the proposed system is not a burden to the company. For feasibility analysis, some understanding of the major requirements for the system is essential.

Three key considerations involved in the feasibility analysis are

" ECONOMICAL FEASIBILITY

- " TECHNICAL FEASIBILITY
- " SOCIAL FEASIBILITY

**ECONOMICAL FEASIBILITY:** This study is carried out to check the economic impact that the system will have on the organization. The amount of fund that the company can pour into the research and development of the system is limited. The expenditures must be justified. Thus the developed system as well within the budget and this was achieved because most of the technologies used are freely available. Only the customized products had to be purchased.

**TECHNICAL FEASIBILITY:** This study is carried out to check the technical feasibility, that is, the technical requirements of the system. Any system developed must not have a high demand on the available technical resources. This will lead to high demands on the available technical resources. This will lead to high demands on the available technical resources. This will lead to high demands being placed on the client. The developed system must have a modest requirement, as only minimal or null changes are required for implementing this system.

**SOCIAL FEASIBILITY:** The aspect of study is to check the level of acceptance of the system by the user. This includes the process of training the user to use the system efficiently. The user must not feel threatened by the system,

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instead must accept it as a necessity. The level of acceptance by the users solely depends on the methods that are employed to educate the user about the system and to make him familiar with it. His

level of confidence must be raised so that he is also able to make some constructive criticism, which is welcomed, as he is the final user of the system.

These are the requirements for doing the project. Without using these tools & software's we cannot do the project. Therefore, we have two requirements to do the project. They are

· Hardware Requirements.

· Software Requirements.

### **II. LITERATURE SURVEY**

SURVEY 1

Title: Step Counting Algorithms in Smartphones: Accuracy and Reliability Analysis – Journal of Biomedical Informatics

Year: 2018

Author: Fernandez, L., et al

Description:

This paper presents a thorough analysis of step-counting algorithms used in smartphones, particularly focusing on their accuracy and reliability under varying conditions. With the proliferation of health and fitness applications, accurate step counting has become essential for tracking user activity levels. The study explores both hardware and software-level influences on step detection performance. Multiple experiments were conducted using different smartphone models and step-counting methodologies, including threshold-based methods and more sophisticated machine learning approaches. The researchers evaluated step count accuracy during various user activities such as walking, running, and stair climbing, and under different device placements (e.g., hand-held, in pocket, in a bag). Results revealed that accuracy varied significantly based on the smartphone's location on the user's body and the motion pattern of the individual. For example, carrying the device in a pocket yielded higher consistency in step detection compared to holding it in the hand.

Environmental conditions such as terrain and walking pace also had a noticeable impact. The study highlights that although many smartphone applications claim to offer accurate fitness tracking, inconsistencies exist that can affect users relying on them for health insights. In response, the authors propose improved calibration strategies, context-aware algorithms, and hybrid sensor integration (like combining GPS and accelerometer data) to improve accuracy. The paper calls for standardization across devices and platforms to ensure consistent health metrics. SURVEY 2

Title: Mobile Application Development for Food Ordering Systems – International Journal of Computer Applications Year: 2019

Author: Smith, J., et al

Description:

This paper provides an in-depth exploration into the development of mobile applications specifically designed for food ordering systems. It addresses the complete software development lifecycle—from requirement gathering and system design to testing and deployment—highlighting the essential components required for building a scalable and user-friendly platform. The authors present a detailed architectural framework, emphasizing modularity and the separation of concerns across the front-end, back-end, and 13 database layers. The study focuses heavily on usability and efficiency, outlining how food ordering apps must cater to fast-paced environments where users expect real-time updates, rapid loading times, and minimal effort to place an order. The paper describes a usercentric design process that includes wireframing, UI prototyping, and interactive feedback loops with potential users to refine features such as menu browsing, item customization, cart management, and payment processing. Additionally, the backend development involves database schemas to handle dynamic menu updates, order status management, and user profiles. The system supports admin control panels for restaurant owners, allowing them to manage their offerings and view customer analytics. One of the standout aspects of this research is its attention to multi-platform compatibility. The authors

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explore cross-platform development tools such as React Native and Flutter, enabling simultaneous deployment for both Android and iOS devices. Security considerations, including user authentication and secure payment gateways, are also discussed, ensuring that sensitive data is handled with care. The system supports admin control panels for restaurant owners, allowing them to manage their offerings and view customer analytics. One of the standout aspects of this research is its attention to multi-platform compatibility.

SURVEY 3 Title: Cloud-Based Solutions for Real-Time Data Management – Journal of Cloud Computing Year: 2020 Author: Johnson, K., et al Description:

This paper explores the integration of cloud computing technologies into mobile applications with a strong emphasis on real-time data management, a necessity for modern, high-performance apps like food delivery platforms. The study highlights how cloud infrastructures such as Amazon Web Services (AWS), Microsoft Azure, and Google Cloud provide the essential tools and frameworks needed to ensure seamless data access, synchronization, scalability, and high availability for mobile applications. The authors begin by explaining the limitations of traditional client-server architectures, particularly in handling real-time demands from mobile apps with thousands of concurrent users. To address these constraints, the paper outlines a transition to cloud-native models that use services such as real-time databases (e.g., Firebase, DynamoDB), auto-scaling virtual machines, and content delivery networks (CDNs). These technologies ensure that mobile apps remain responsive, no matter how many users access the system at once. The core contribution of the paper is its proposed architecture for real-time data flow, which utilizes a microservices approach.

This structure breaks down the application into independently deployable modules such as user authentication, order management, and payment 14 processing all hosted and maintained in the cloud. The system also includes WebSocketbased communication and event-driven APIs to ensure live updates between users and restaurant owners, allowing for features like order status tracking and inventory updates without delays. To address these constraints, the paper outlines a transition to cloud-native models that use services such as real-time databases (e.g., Firebase, DynamoDB), auto-scaling virtual machines, and content delivery networks (CDNs). These technologies ensure that mobile apps remain responsive, no matter how many users access the system at once.

The paper explains how offering users a sense of control—such as being able to track their delivery in real-time or modify orders with ease—leads to a stronger sense of engagement and trust. Moreover, customer service integration within the app (e.g., live chat or helpdesk support) is shown to positively influence perceptions of reliability and professionalism. The research combines quantitative survey data with qualitative feedback from users to evaluate how specific app features influence user perception and behavior. The authors identify several key components that contribute to a positive customer experience. These include intuitive navigation, high-quality food imagery, real-time order tracking, and the ability to customize meals.

SURVEY 4

Title: Secure Payment Integration in Mobile Applications - Journal of Financial Technology

Year: 2021

Author: Gupta, R., et al

Description:

This paper focuses on the critical role of secure payment integration in mobile applications, with a special emphasis on food ordering platforms where real-time transactions and user trust are paramount. As online payments become the standard for mobile commerce, ensuring the safety, speed, and reliability of financial transactions has 15 become a major concern for developers and end-users alike. The authors examine various encryption methods, regulatory compliance standards, and payment gateway technologies that contribute to robust payment systems. The study outlines the architecture of secure mobile payment systems, detailing key components such as tokenization, end-to-end encryption (E2EE), and multi-factor authentication (MFA). Tokenization ensures that sensitive card information is replaced with unique identification symbols (tokens) that cannot be exploited if intercepted. The authors explain how

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integrating APIs from reliable payment processors like Stripe, Razorpay, and PayPal can streamline payment workflows while offering layers of security. Another major focus of the paper is on compliance with global financial regulations such as PCI-DSS (Payment Card Industry Data Security Standard), GDPR, and PSD2.

The authors stress that adhering to these frameworks not only protects user data but also avoids legal liabilities for app developers and businesses. Additionally, secure coding practices. The authors examine various encryption methods, regulatory compliance standards, and payment gateway technologies that contribute to robust payment systems. The study outlines the architecture of secure mobile payment systems, detailing key components such as tokenization, end-to-end encryption (E2EE), and multi-factor authentication (MFA).

# SURVEY 5

Title: Designing User-Friendly Interfaces for Mobile Applications - International Journal of Human-Computer Interaction

Year: 2020

Author: Ahmed, N., et al

Descripton :

This paper offers a comprehensive analysis of the principles and best practices behind designing intuitive, user-friendly interfaces for mobile applications, with a particular focus on high-demand sectors like food ordering and delivery. The authors argue that in today's fast-paced digital environment, users expect seamless, visually appealing, and frictionless app experiences. Poor interface design is cited as one of the leading causes of app abandonment, making usability a critical factor in application success. Ahmed and colleagues explore the fundamental components of user interface (UI) and user experience (UX) design, including layout structuring, visual hierarchy, color theory, typography, and feedback mechanisms. The study emphasizes the importance of consistency, minimalism, and ease of navigation in retaining users and enhancing their satisfaction. Mobile-specific considerations such as touch interaction, screen resolution, and device orientation are also discussed as central to crafting a responsive and adaptive design. The authors introduce several usability evaluation methods such as heuristic analysis, A/B testing, and usability testing with real users to iteratively refine app interfaces.

### **III. METHODOLOGY**

This paper presents a comprehensive study on the implementation of real-time order tracking systems within mobile applications, particularly those in the food delivery sector. The authors explore both technical and experiential dimensions of real-time tracking, emphasizing how this feature significantly enhances transparency, trust, and user engagement. Real-time order tracking is identified as one of the most sought-after functionalities in food ordering apps, as it provides users with continuous updates from the moment an order is placed until it is delivered. The study proposes a modular architecture using GPS integration, push notification services, and backend order management system to facilitate accurate and timely tracking. The system architecture involves various stakeholders-users, delivery personnel, and restaurants-all synchronized through cloud- based services and RESTful APIs. The use of technologies such as Google Maps APIs, Firebase Realtime Database, and WebSockets is analyzed in depth for their role in enabling live location updates. Kumar and colleagues also discuss the challenges in achieving real-time accuracy, such as GPS drift, network instability, battery constraints, and data synchronization issues. To mitigate these, the authors propose optimization strategies including periodic update intervals, background data processing, and hybrid location tracking using both GPS and Wi-Fi signals. One significant insight from the paper is the psychological comfort real-time tracking offers to users. Knowing where their food is and when it will arrive reduces anxiety and enhances satisfaction. On the restaurant side, the tracking feature allows for better coordination and resource management, improving overall service quality.

# DISADVANTAGES OF EXISTING SYSTEM:

This paper explores the integration of cloud computing technologies into mobile applications with a strong emphasis on real-time data management, a necessity for modern, high-performance apps like food delivery platforms. The study highlights how cloud infrastructures such as Amazon Web Services (AWS), Microsoft Azure, and Google Cloud

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provide the essential tools and frameworks needed to ensure seamless data access, synchronization, scalability, and high availability for mobile applications. The authors begin by explaining the limitations of traditional client-server architectures, particularly in handling real-time demands from mobile apps with thousands of concurrent users. To address these constraints, the paper outlines a transition to cloud-native models that use services such as real-time databases (e.g., Firebase, DynamoDB), auto-scaling virtual machines, and content delivery networks (CDNs). These technologies ensure that mobile. The study finds that customers appreciate a seamless, fast, and personalized ordering process, which not only increases satisfaction but also encourages repeat usage.

# **PROPOSED SYSTEM:**

apps remain responsive, no matter how many users access the system at once. The core contribution of the paper is its proposed architecture for real-time data flow, which utilizes a microservices approach. This structure breaks down the application into independently deployable modules—such as user authentication, order management, and payment processing—all hosted and maintained in the cloud. The system also includes WebSocket- based communication and event-driven APIs to ensure live updates between users and restaurant owners, allowing for features like order status tracking and inventory updates without delays.

# ADVANTAGES OF PROPOSED SYSTEM:

Results revealed that accuracy varied significantly based on the smartphone's location

on the user's body and the motion pattern of the individual. For example, carrying the device in a pocket yielded higher consistency in step detection compared to holding it in the hand. Environmental conditions such as terrain and walking pace also had a noticeable impact. The study highlights that although many smartphone applications claim to offer accurate fitness tracking, inconsistencies exist that can affect users relying on them for health insights. In response, the authors propose improved calibration strategies, context-aware algorithms, and hybrid sensor integration (like combining GPS and accelerometer data) to improve accuracy. The paper calls for standardization across devices and platforms to ensure consistent health metrics.

# SYSTEM ARCHITECTURE:



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Volume 5, Issue 5, June 2025



### **MODULES:**

This paper delves into the transformative power of data analytics in the domain of restaurant management, with a specific focus on how digital systems—especially mobile food ordering apps—generate actionable insights that can significantly improve business performance. The authors emphasize that restaurants using modern digital platforms can move beyond traditional decision-making based on intuition and instead leverage data- driven strategies to enhance operations, optimize menus, reduce waste, and better understand customer preferences. The paper outlines a data lifecycle beginning with the collection of transactional and behavioral data through mobile apps and point-of-sale (POS) systems. This includes information such as order frequency, item popularity, peak ordering times, delivery durations, and customer demographics. The authors propose a structured analytics framework comprising descriptive, predictive, and prescriptive analytics. Descriptive analytics helps understand past trends (e.g., best-selling dishes), predictive models forecast future customer behavior (like likely reorder times), and prescriptive analytics provide recommendations, such as ideal staffing during rush hours or targeted promotions. These methods are used to assess interface clarity, discoverability of features, error prevention, and task completion rates. Furthermore, the paper highlights the significance of onboarding flows that help new users get started quickly, while not overwhelming them with unnecessary information.

# MODULE EXPLANATION

This paper offers a comprehensive analysis of the principles and best practices behind designing intuitive, user-friendly interfaces for mobile applications, with a particular focus on high-demand sectors like food ordering and delivery. The authors argue that in today's fast-paced digital environment, users expect seamless, visually appealing, and frictionless app experiences. Poor interface design is cited as one of the leading causes of app abandonment, making usability a critical factor in application success. Ahmed and colleagues explore the fundamental components of user interface (UI) and user experience (UX) design, including layout structuring, visual hierarchy, color theory, typography, and feedback mechanisms.

#### **IV. IMPLEMENTATION**

implementation of real-time order tracking systems within mobile applications, particularly those in the food delivery sector. The authors explore both technical and experiential dimensions of real-time tracking, emphasizing how this feature significantly enhances transparency, trust, and user engagement. Real-time order tracking is identified as one of the most sought-after functionalities in food ordering apps, as it provides users with continuous updates from the moment an order is placed until it is delivered.

# V. EXPERIMENTAL RESULTS:

The design and development of this cloud-based mobile food ordering system yielded several important outcomes that reflect both technical success and practical usability. The integration of mobile interfaces, digital menus, real-time synchronization, and cloud analytics ensured a robust and scalable solution for modern food service environments.

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Volume 5, Issue 5, June 2025





### Purpose

- This is the initial login screen of the app.
- It acts as a gateway to access the food ordering system.

### Components

- Logo/Image: The chef holding a pizza symbolizes that this is a food-related app.
- Username Field: Input box for the user to enter their username.
- Password Field: Input box for password (masked for privacy).
- Login Button: A button to validate credentials and proceed.

# Functionality

- Users must enter their login credentials.
- Empty fields indicate the user has not interacted with the form yet.

# Login Screen (User Input Added)

• Purpose

This screen shows the login screen after user interaction.

- Components
  - Username entered: hello
  - Password entered: represented by dots (.....) for security.
  - Login button is pressed after filling the fields.

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Volume 5, Issue 5, June 2025



### Functionality

- Once the login button is pressed, the app should validate these credentials.
- If the credentials are correct, the user proceeds to the next screen (home or dashboard).

Available Restaurants	Hotel Ra	nghavendra Hotel
ah Ghouse Cafe	Mini Meals	₹60.00 • 0 •
House	Poori	₹35.00 - 0 +
le Lassi	Set Dosa	₹30.00 - 0 •
laan Centre	Kesari Bath	₹25.00 - 0 •
	Sambar Vada	₹20.00 - 0 -
-Dhaba		
rand		
havendra Hotel		
nthi Delux Hotel		
2		
Login Successful	Welcom	ne back to the menul
		Total: ₹0.00
e password to Google?		VIEW CART

**Available Restaurants** 

Food items in the Restaurants

# Restaurant List Screen (Post Login)

# Purpose

This is the main dashboard or home screen after a successful login.

Displayed Message: "Login Successful!" - indicates the user has successfully logged in.

# Components

List of Available Restaurants:

- Shah Ghouse Cafe
- Pista House
- Matwale Lassi
- Madina Naan Centre
- Seasons
- Papaji-da-Dhaba
- Surabhi Grand
- Hotel Raghavendra Hotel
- Hotel Shanthi Delux Hotel
- Bakers Q

### Functionality

This screen allows the user to browse available restaurants.

Likely, tapping on a restaurant would navigate to a menu or ordering screen.

Google prompt at the bottom is a native Android feature asking to save login credentials for future convenience.

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Volume 5, Issue 5, June 2025



#### Menu Screen (Initial State)

#### Purpose

This screen serves as the main menu interface where users can browse the available food items offered by the restaurant. It allows users to select their desired dishes and begin building their order.

### Components

- The screen displays the name of the hotel/restaurant at the top: "Hotel Raghavendra Hotel". ٠
- Each food item is presented with its name and price, aligned in a list format.
- Below each item are three control buttons: a minus button (-) in red to decrease quantity, a counter showing the current quantity (default is 0), and a plus button (+) in blue to increase the quantity.

#### **Functionality**

Users interact with the menu by pressing the plus button to add items, which automatically updates the quantity shown in the center counter. The minus button becomes active once an item is added and allows users to remove or reduce the quantity. At the bottom of the screen, a summary section displays the total price of the selected items. The "VIEW CART" button enables navigation to the cart screen where users can review their selections.

			10-37		
Ho	tel Raghavendra Hote	el		Your Cart	
Mini Meals	₹60.00	- 0 +			
Poori	₹35.00	- 1 +			
Set Dosa	₹30.00	- 1 +			
Kesari Bath	₹25.00	- 0 +			
Sambar Vada	₹20.00	- 0 +			
	Walcome back to the menul			Order placed! Order ID:	
	Herebine back to the ment.	Total: ₹65.00		40c0b905-6888-4105-a33e-e1bc347edacb	Total: ₹0.00
	VIEW CART		PLACE ORI	DER	ORDER HISTORY
			and the second se		
A	dding items to the	cart		Placing Order	

# Menu Screen (Items Selected)

### Purpose

This is a dynamic version of the main menu screen, reflecting the user's ongoing interaction with the menu as they select food items.

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#### Volume 5, Issue 5, June 2025



#### Components

Same elements as the initial menu screen: hotel name, item list, quantity controls, and total display. Two items have updated counters – e.g., Poori and Set Dosa, each showing a selected quantity of 1.

### Functionality

As users select items, the system calculates the total cost in real-time, which in this case is  $\gtrless 65.00$  ( $\gtrless 35$  for Poori and  $\gtrless 30$  for Set Dosa). The buttons for those items now allow both incrementing and decrementing of quantities. The "VIEW CART" button remains available for users to move forward once satisfied with their selections.

# Cart Screen

### Purpose

The cart screen allows users to review their selected items, confirm the order, and proceed with the final placement.

### Components

A heading titled "Your Cart" confirms that the user has navigated to the order review section.

A system-generated message popup appears upon order placement, showing the unique Order ID (e.g., 40c0b905-6888-4105-a33e-e1bc347edacb).

The bottom section displays the total amount and two buttons: "PLACE ORDER" and "ORDER HISTORY".

### Functionality

Users can finalize their selections by tapping the "PLACE ORDER" button. Upon successful order submission, the app provides confirmation with an order ID and resets the cart total to ₹0.00. The "ORDER HISTORY" button allows users to view their previous or current orders and their statuses.

20138					
Order History					
ALL					
40c0b905-6888-4105-a33e-e1bc347edacb	LIVE				

#### **Order History**

# **Order History Screen**

### Purpose

This screen enables users to track their current and past orders, promoting transparency and providing confirmation of ongoing service.

### Components

A title bar labeled "Order History" indicates that this screen holds records of previous transactions.

A filter option labeled "ALL" is visible, suggesting that users can sort their history (e.g., live, completed, canceled).

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Volume 5, Issue 5, June 2025



Each listed order displays an Order ID and a status label - in this case, "LIVE".

#### Functionality

The app fetches and displays all relevant past orders tied to the user's account. A "LIVE" status signifies that the order is still being processed. This screen helps users stay informed about their order's progress and maintain a record of their purchase history for future reference or reordering.

# FUNCTIONALITY OF THE APP:

The app provides a complete and user-friendly food ordering experience that begins with a clear display of available restaurants. When the user opens the app, they are presented with a list of restaurants to choose from. This serves as the entry point into the ordering process. Upon selecting a restaurant, the user is taken to a dedicated menu screen specific to that establishment. Here, all available food items are listed along with their respective prices. Each item features quantity control buttons which allow the user to increase or decrease the quantity they wish to purchase. Additionally, a small message pops up whenever an item is added to the cart, offering immediate feedback that the selection has been successfully registered.

As users add items, the total cost is dynamically updated and displayed at the bottom of the screen, allowing customers to keep track of their budget while making selections. Once they are ready to proceed, users can tap on the "View Cart" button which brings them to a detailed cart interface. In this section, all selected items are listed along with their individual prices and quantities. Users have the flexibility to modify item quantities directly from the cart or remove them altogether. This cart acts as a final checkpoint before confirming the order, giving users a chance to double-check their selections.

Once the user is satisfied with their cart, they can proceed by placing the order. Upon confirmation, the app displays a success message and generates a unique order ID that serves as a reference for that transaction. At this point, the cart is cleared and the total is reset to ₹0.00, confirming that the order has been placed successfully. If the user decides not to proceed with the order for any reason, there is also an option to cancel it. Selecting "Cancel Order" immediately clears the cart and resets the total amount, showing a message that confirms the cancellation.

To provide transparency and keep track of previous orders, the app includes an order history section. Here, users can view all of their past and current orders, each marked by its unique ID and a status indicator such as "LIVE," which signifies that the order is still active. This helps users monitor their order progression and refer to past transactions if needed. The presence of a dropdown labeled "ALL" suggests the ability to filter or sort order history, enhancing the user experience further. Overall, the app delivers a seamless and intuitive interface that covers every step of the ordering journey—from restaurant selection and menu browsing to cart management, order placement, cancellation, and historical tracking.

### **VI. CONCLUSION**

In conclusion, the restaurant ordering app offers a seamless and intuitive platform that simplifies the entire food ordering process for users. From the initial stage of selecting a restaurant to browsing through a detailed menu with real-time price updates, the app ensures that every interaction is smooth and user-friendly. Features like quantity adjustment, cart review, and order confirmation with unique IDs provide customers with complete control over their choices. Additionally, the instant feedback through dynamic pricing and notifications enhances the overall experience, making it easy for users to manage their selections before placing the final order.

Beyond ordering, the app provides valuable functionality through features like order cancellation and a detailed order history section. Users can cancel an order before final confirmation without hassle, and the order history allows them to view all previous transactions along with their status, such as active or completed. This not only builds user confidence but also promotes transparency and accountability. Overall, the app successfully integrates all key aspects of a digital food ordering system into a clean, responsive, and user-centric design, making it a reliable solution for everyday use.

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#### Volume 5, Issue 5, June 2025



### **FUTURE ENHANCEMENTS**

A modern food delivery application includes features like secure integration with online payment gateways and realtime order tracking to enhance user convenience. It uses AI-powered recommendation systems to suggest personalized food options based on user preferences. The app is available across platforms, including as a Progressive Web App (PWA), ensuring broad accessibility. Users receive digital invoices and can provide feedback to improve service quality. Additional features like loyalty programs, multi- language support, and an advanced admin dashboard make the app user-friendly and efficient for both customers and restaurant partners.

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