BAKERY ORDER AND BILLING APP

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ABSTRACT : This innovative bakery management app streamlines the entire order-to-service process, enhancing the efficiency of bakery operations and improving the overall customer experience. Tailored for waitstaff and cashiers, the app seamlessly integrates key functionalities to optimize workflow.When a customer arrives, the waiter utilizes the app to take orders, which are then processed for the cashier. The cashier gains real-time access to order details, facilitating smooth transaction handling and providing customers with accurate billing information.Upon customers order, the order is swiftly transmitted to the kitchen, where the order items get prepared. The system facilitates clear communication between the kitchen and waitstaff, ensuring timely and accurate service. Once the dishes are ready, the waiter serves the ordered item to the designated table.The cashier, with order details can keep track of each table's expenses, making it easier for customers to pay either to the waiter or directly to the cashier. Customers have the flexibility to settle their bills at the table or at the cashier counter by providing their table number.

I. INTRODUCTION

In today's fast-paced world, efficiency and convenience are paramount in every business, including the food industry. The bakery order-taking application is designed to revolutionize the way bakeries manage

their operations and serve their customers. With a focus on simplicity, speed, and accuracy, this application aims to streamline the entire process of taking orders, managing inventory, and generating bills.The bakery order-taking application is a digital solution that leverages the power of Flutter and Firebase to create a seamless experience for both customers and bakery staff. By digitizing the order-taking process, customers can easily browse through the bakery's menu, select their desired items, and place their orders with the server. With the assignment of table numbers, the application ensures efficient table management, allowing servers to keep track of each order and serve customers promptly.Traditional order-taking methods in bakeries often involve manual processes that are time-consuming and prone to errors. With the increasing demand for quick and convenient service, there is a growing need for a digital solution that can streamline operations and improve customer satisfaction. The bakery order- taking application addresses this need by providing a user-friendly platform for both customers and bakery staff to interact seamlessly.

II. PROPOSED SYSTEM

The proposed system is a comprehensive bakery order taking application designed to streamline the ordering process, enhance customer experience, and facilitate efficientmanagement of orders and sales.

User Roles

- Customer: Can view the menu, select food items, add them to the cart, view the total items and price, confirm the order, and make payments.
- Server: Assigned to take orders from customers, select table numbers, add items to the cart, confirm orders, and generate QRcodes for payment.
- Cashier: Handles payment transactions, both cash and QR code payments, and updates the paymentstatus in the system.
- Admin: Manages the system, views today's ongoing orders and total weekly orders, and analyzes sales data.

2. Order Taking Process

- Server selects the table number and takes the order from the customer through the app.
- Customer selects food items from the menu, which are added to the cart.
- Server confirms the order, and the total items and price are displayed in the cart.
- After the customer finishes eating, the server presents the final bill to the customer.
- Customer can choose to make payment either through cash or using the QR code generated by theapp.

3. Payment Options:

- Customers can pay using cash to the cashier or through the QR code generated by the app.
- Cashier updates the payment status in the system once payment is received.

4. Data Management:

- Table number, date, total amount, and total number of items ordered are stored in Firebase.
- Admin can access reports and analytics, such as today's ongoing orders and total weekly orders.

- Admin can view top 3 best-selling items and top 3 least-selling items toanalyze sales trends.

5. Security Measures:

- Only authorized users (servers, cashiers) can access the app.
- Payment transactions are secure, and QR codes are generated for each transaction to prevent fraud.

6. Benefits:

- Improved efficiency in order takingand payment processing.
- Enhanced customer experience witheasy order selection and payment options.
- Real-time tracking of orders and sales data for better decision- making.
- Secure payment transactions and data storage.

7. Future Enhancements:

- Integration with loyalty programs ordiscounts for frequent customers.
- Integration with inventory management to track stock levels and reorder items.
- Option for customers to provide feedback or reviews through the app.

Overall, the proposed bakery order taking application offers a seamless andconvenient solution for both customers andstaff, ensuring smooth operations and efficient management of orders and sales.

III.IMPLEMENTATION

The Bakery Order Taking App is built using Flutter for the UI/UX, Firebase for the backend, and Android Studio for application development. This software specification outlines the key features, components, and technologies used in the development of the app.

A) FIGMA: Figma is a cloud-based design and prototyping tool that enables teams to collaborate on designing digital products such as websites, mobile apps, and user interfaces. It provides a platform for designers, developers, and other stakeholders to work together in real-time, streamlining the design process andimproving communication.

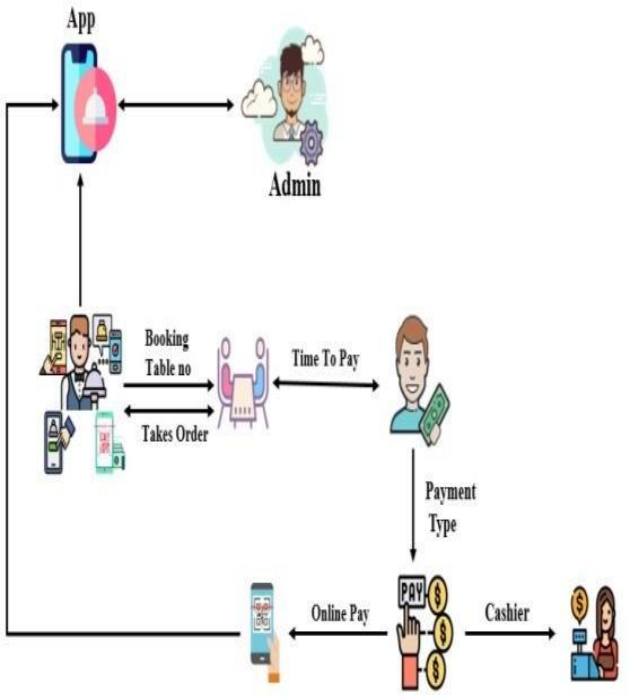
B) FLUTTER : Flutter is a mobile app **SDK (Software Development Kit)** used to develop high-fidelity and high- performance Android and iOS apps. Due to its powerful graphics and animation libraries, the Flutter framework allows developers to easily build user interfaces that react smoothly in response to touch. Flutter is built on the Dart programming language, allowing for an efficient development workflow with hot reloading.

C) DART : Dart is an open-source general-purpose programming language developed by Google. It supports application development in both client and server-side. But it is widely used for the development of android apps, iOS apps, IoT(Internet of Things), and web applications using the Flutter Framework.

D) FIREBASE : Firebase is a product of Google which helps developers to build, manage, and grow their apps easily. It helps developers to build their apps faster and in a more secure way. No programming is required on the firebase side which

makes it easy to use its features more efficiently. It provides services to android, ios, web, and unity. It provides cloud storage. It uses NoSQL for the database for the storage of data.

IV. FLOW DIAGRAM



V. CONCLUSION

Moreover, the app offers flexibility in payment options, allowing customers to settle their bills conveniently either with the waiter at the table or at the cashier counter by providing their table number. This flexibility contributes to a positive customer experience and fosters a sense of The establishment not only embraces modern technology but also positions itself for enhanced customer satisfaction, increased operational efficiency, and informed decision-making for sustained business success.

VI. REFERENCES

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