"VIT Canteen" Food Ordering System

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***Abstract:-*Canteens from VIT campus faces the problem of crowd of students during lunch hours. So, to tackle this problem, we have developed a unified platform called "VIT Canteen". This platform contains major two system that's online food ordering system and UPI for efficient payment handlings.**
VIT Canteen is an application where students, faculties and also visitors can order food online in advance. Each order gets one order ID to track it. You can pay using a online payment gateways called UPI.
Overall, the "VIT Canteen" application returned a sufficient solution for crowd management in canteens in our college, improving the overall experience for all customers. Anyone can use this unified application easily to order their food. It makes the entire process smoother and faster. Via order ID customer can easily track their order and can go to collect their order on time.

Keywords – College canteens, crowd management, online food ordering, UPI, Order ID

I. INTRODUCTION

The application "VIT Canteen" points to solve the problems of too many customers in canteens in our college campus. The system enables to users to place their order and to owner or admin to view order of customers. The use of this application reduces the workload of staff of canteen and making it more efficient.
The motto of this project is to apply an online food ordering platform with cashless payments to reduce overcrowding in canteen during lunch hours. By integrating this application with e-menu card student can pre-order their food, can save their time. Cashless payment system improves the payment process to be more faster and more secure.
In summary, "VIT Canteen" application provides solution for overcrowding issues in canteen in campus. This application aims to improves the overall system of canteen in college canteen. It also helps to customers to buy their food and receive it in short time.

II. LITERATURE REVIEW

A comprehensive review of related research papers was conducted to understand previous work done on the project. The following inferences were drawn from the literature:
[1] A paper from IJITEE presented a Cross-Platform System for Canteen Food
Ordering System that used Dart language,
Flutter for frontend and Firebase for backend. Although the project is socially relevant, it is not commercially available. However, the large database may lead to more time consumption to get the information, and cancellation of orders is not possible.

[2] another paper from IRJET presented a Canteen Food Ordering System and Management that used Java language in Android Studio, as well as machine learning. Although the project is socially relevant, it is not commercially available. The administration can predict orders or menu for the following day by analyzing data of previous orders and collections. However, cancellation of orders and refund policy is not available.

[3] A similar paper was published in SSRN which presented a Canteen Automation System with Payment Gateway that used Python language, HTML and CSS for frontend, Django for framework, and SQL as database. The automation system has its own database, enabling the tracking of all data. Although this project is socially relevant, it is not commercially available.

[4] A similar system was presented by a paper in SAMRIDDHI presented an Online Food Ordering System for College Canteen that used Java language in Android Studio, HTML and CSS for frontend, Raspberry Pi controller for framework, and SQL as database. The Android app created in this project is more attractive, saves more time, and informative than the normal canteen system. The speed of the

Android system is faster compared to queuing-based systems. However, the order will be valid for only 60 minutes after which cancellation of the order will not be possible.

III.METHODOLOGY

EXISTING SYSTEM:

The current system in canteens is based on the on cash, paper bill. Due to the requirement that the customer pay the exact amount and wait for the change in canteen. Existing system in our canteen is too time consuming.

Everything is done manually by taking cash, calculation, managing data and all. These are all things also hectic for owner.

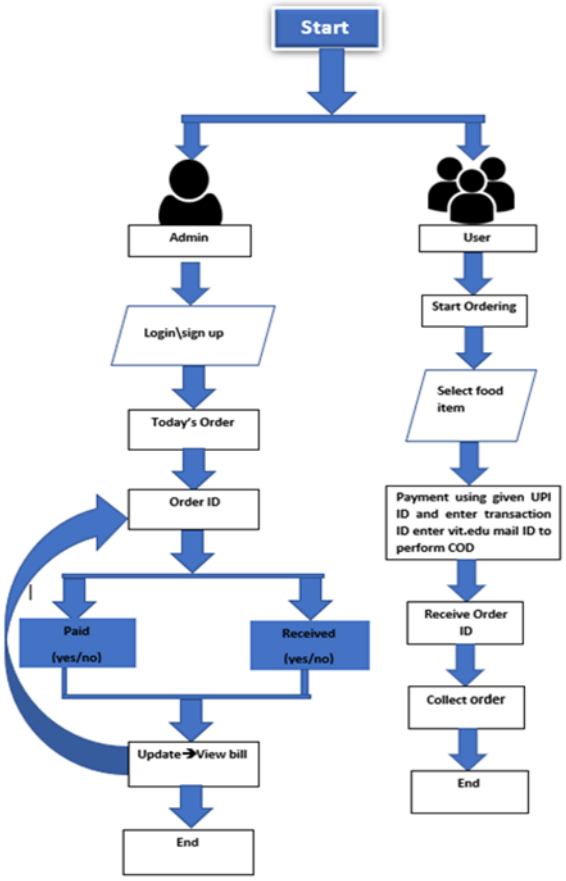
PROPOSED SYSTEM:

"VIT Canteen" is an application developed for ordering food from the canteen in VIT campus. User doesn't need to authentication process in this system. Only owner needs to do that process of login. User can simply select their food and will place their order. After it, the system will ask user to do payment and it redirects to payment application. After the payment, user should put reference number or their mobile number as transaction ID. After this all, customer will receive an order ID. User must collect their order within 15 minutes of placing order.

The admin will receive order ID on their side of application. The admin's role is to monitor all the incoming orders and serve them accordingly and provide excellent services to both new as well as existing customer.

The methodology of the proposed system involves the development of a mobile application that simplifies the ordering process for customers. The application is designed with a user-friendly interface, allowing users to browse through the menu and select their desired food items. The payment process is also made easy and secure with the implementation of appropriate payment gateways. The system is developed using appropriate programming languages, frameworks, and database management systems to ensure optimal performance, security, and reliability. The system is tested rigorously to ensure that it meets the desired requirements and is free of errors or bugs. The proposed system aims to improve the overall customer experience by reducing wait times and providing an efficient and reliable service.

Flowchart of the system

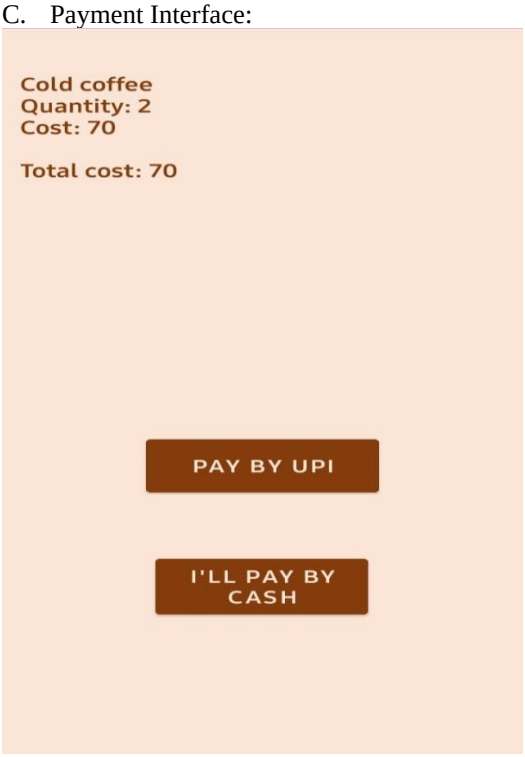


IV.SIMULATIONS

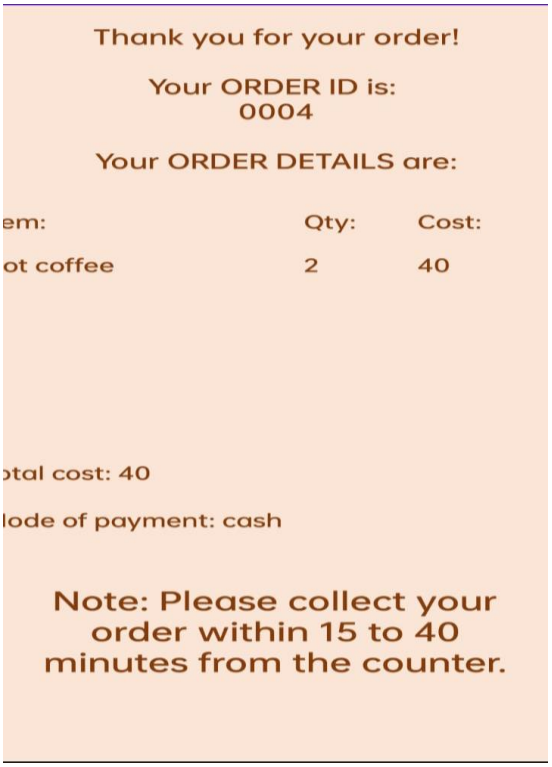
A. Welcome Interface:

B. Canteen Menu:

C. Payment Interface:

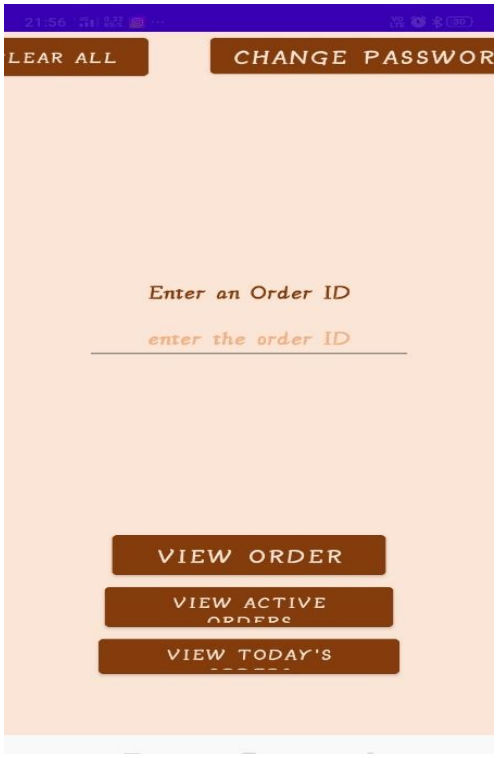


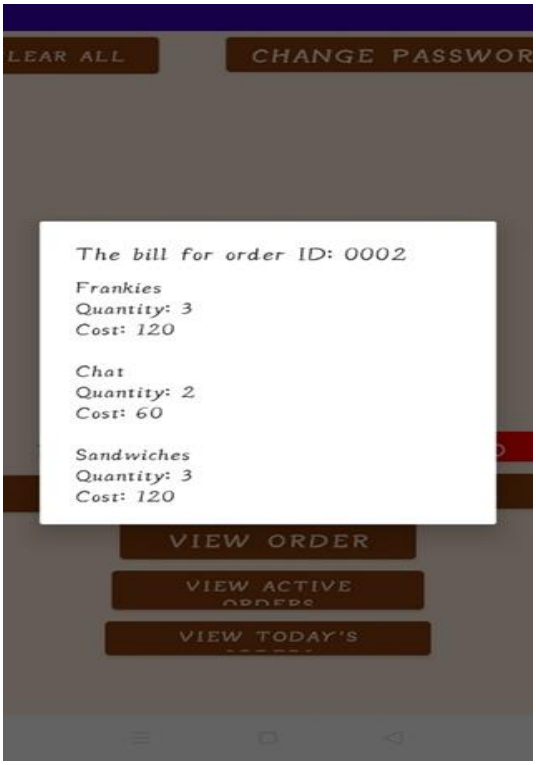
D. Order ID generation:



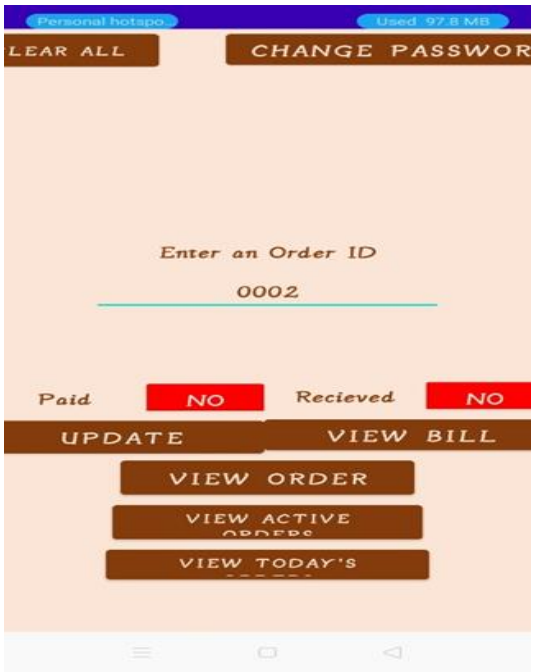
E. Owner Interface:

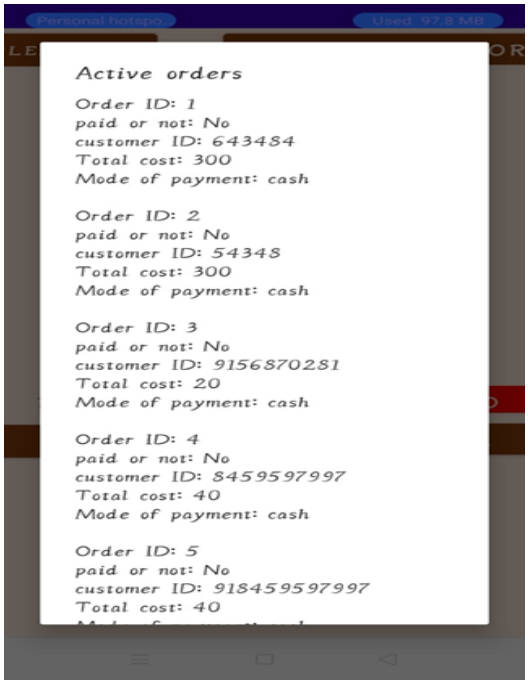
F. Order Monitoring Interface:





G. Order Controlling interface:





III. RESULT AND DISCUSSION

To overcome the drawbacks of standard framework and to give the customer more flexibility, this system is designed. It not only proves to be efficient but also helps maintain order. The database can be studied and used wisely by the canteen, like pre-executing certain orders at busy hours.

The system becomes orderly, and it is easier to manage orders, although, a person needs to be appointed specially from the owner's side to keep track of the events in the system from time to time.

In due time, the usage of this app can be extended to outside of VIT due to its versatility.

We are sure that this application will benefit both, the customer and owner, tremendously.

IV. CONCLUSION

- The aim of our project was to save the waiting time of students in café and make recess more enjoyable.
- The proposed system would effectively address the issue of crowded canteens during lunch breaks. By allowing for flexible mealtimes, students will no longer be forced to wait in long lines or experience bottlenecking. This online food ordering system outperforms the college queuing system in terms of time usage.
- Our system would improve the efficiency of giving food on time for users. Our app requires the user to log in first. You can then access the menu where in you can select the food which you wish to order.
- After ordering the food, you can pay for the food via online payment gateways such as Google Pay, UPI, PhonePe, etc. The food will be given on the basis of order number and there won't be any misplacement in giving the food.

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