Review of Canteen Automation System

Aryan Verma[1], Ashish Rawat[2], Ansh Chawla[3], Bharat Mishra[4], Ms. Archana Agarwal[5]

[1-4]Students, Department of Computer Science and Engineering, Inderprastha Engineering College,

Ghaziabad, 201010, Uttar Pradesh, India

[5]Asst. Professor, Department of Computer Science and Engineering, Inderprastha Engineering College,

Ghaziabad, 201010, Uttar Pradesh, India

Abstract: Canteen Automation helps college students and faculty check in online, select the food they need, and order the right food with their fingertips. Registered members can easily place an order by adding products to the shopping cart. As soon as a person places an order for payment and confirms payment, the concession stand will promptly guide them. It works like a full real-time application. It uses a centralized payment interface (UPI). Canteen automation reduces waiting times. This has the advantage that if the kiosk is crowded, the time and meal can be adjusted according to the customer's needs. This is most effective when large gatherings are banned in a pandemic like COVID-19. College users have a specific username and password that they can use to log into the application.

INTRODUCTION

Computers have become a part of our lives where almost all information is accessible. Life in the 21st century is full of technological advances, and in this technological age, it is very difficult for any organization to survive without technology. The World Wide Web is a major contributor to the ever-growing global information database. Businesses can share information through the World Wide Web site. Fast diets and fast cooking methods coupled with the burgeoning catering industry have forced kiosks to focus on food preparation and order delivery rather than providing a rich dining experience. The delivery orders were all usually delivered to guards or by telephone until recently, but the system was hindered by several factors, including a lack of visible confirmation of the customer's order and the need to have a copy of the customer's menu. The order is set correctly and the crew must answer the call and take orders. The online grocery order technology we provide for canteen automation can be used in any food delivery industry. In addition to simplifying the order process for both the customer and the canteen, this system also offers additional features. When customers visit an order web page, they are given a modern interaction menu, complete with all available options, and adjust prices flexibly based on selected options. am. When an item is selected, it is added to the customer's order and details can be changed at any time prior to departure. You can use it to check if the elements of your program are as intended. Since the entire ordering process is automated, the system also significantly reduces the load at the canteen end. When an order is placed on the webpage, it is uploaded to the website and loaded in real time via a desktop application at the end of the dining area. Each item in the order and shipping details are displayed throughout the application in a concise and easy-to-read manner. You can order quickly and produce goods quickly, without confusion or delay. The main goal of this project is to provide easy access to cafe management tools for students, staff, etc. Usually, to take your order, you have to stand in long queues where people have to come to the canteen and order food and sand. But with it you complete the easiest process of storing your luggage and no longer have to stand in long lines.

LITERATURE SURVEY

We looked at various research papers to understand all the previous work done on the project we undertook. We have come to the following conclusions:

[1] The ordering system paper, tackled the similar project but it was not able to finish and confirm the order, as they lacked the payment.

[2] Menu automation paper, only was able to generate a real time menu of the items available but unable to place order on behalf of the customer

[3] Order Automation paper, this paper could only help the user decide the order but is unable to process it to the merchant.

[4] Android based Ordering system – They implemented the project but with the drawback of payment only through cash on delivery.

[5] RFID radio controlled order – They did the project but it wasn't web based, it required smart cards and other physical hardware – both at the user and merchant end.

[6] Smart Canteen – This paper stated that it was only possible for the user to place an order if they were registered with an application which wasn't freely available.

[7] Online Menu Ordering – This paper referred to a technique which was implemented by the user to be using a portal which was based on an outdated framework.

[8] Google Form Survey - We surveyed our customers to choose one of the common restaurants and eateries suggested in this article. A positive result was our kiosk automation system and more than 67% of the samples agreed.

[9] We also conducted a survey in which we asked our concessionaire vendors about their current system, which gave them the idea that developing a system that could digitally record customers and orders would help them. Predict future food sales.

[10] Traders had a hard time keeping track of their money and their orders because the current manual system is error-prone.

PROPOSED METHODOLOGY

Before we go into detail about the methodology we implemented, there are a few prerequisites that
we want our customers to meet. Users must have a device that is connected to the Internet and has online payment capabilities, if available.

Users must also have a location-enabled device that can track the location of their order. You can now go to the various tools and frameworks you used to implement your project.
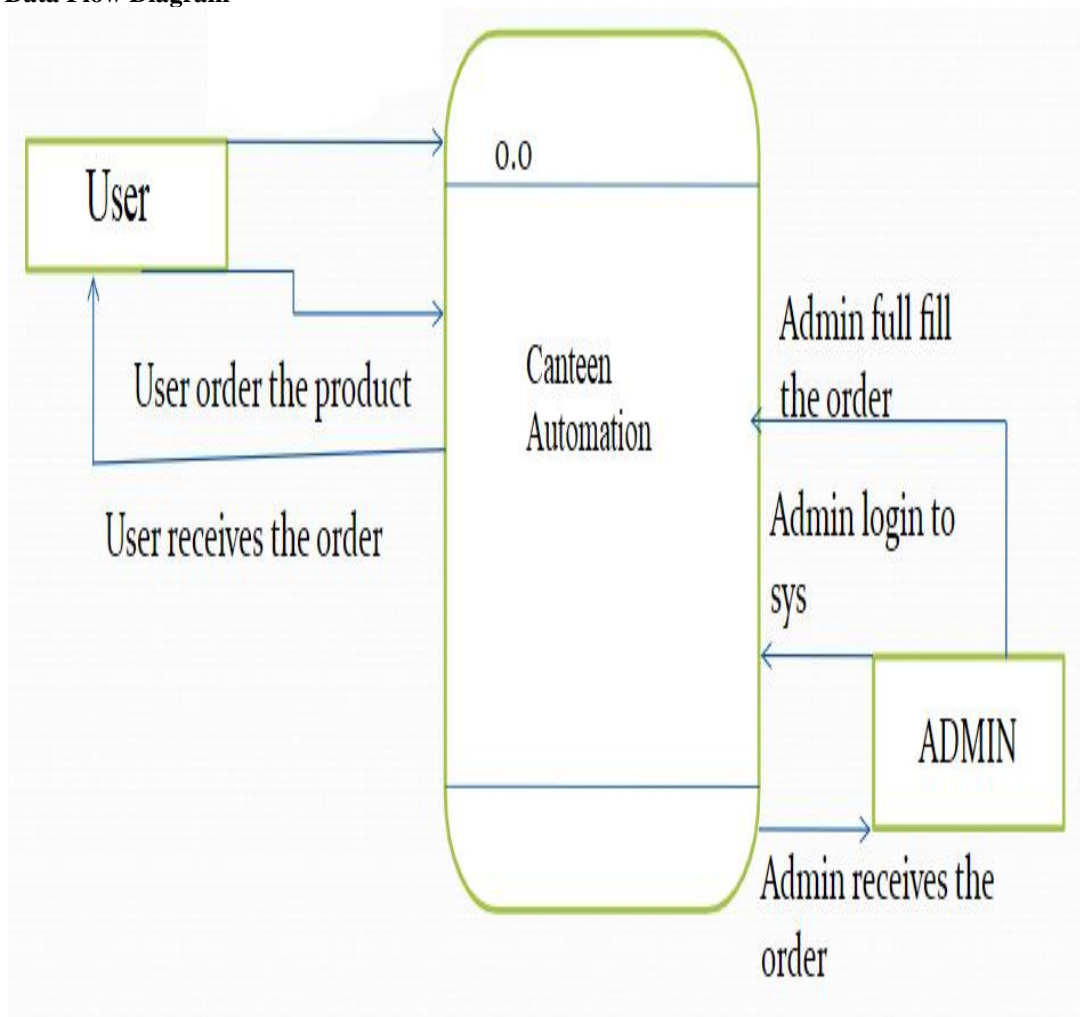
Language: Java
External Interface: XML
Framework: Android
Database: Firebase, MySQL.

A.   Data Flow Diagram

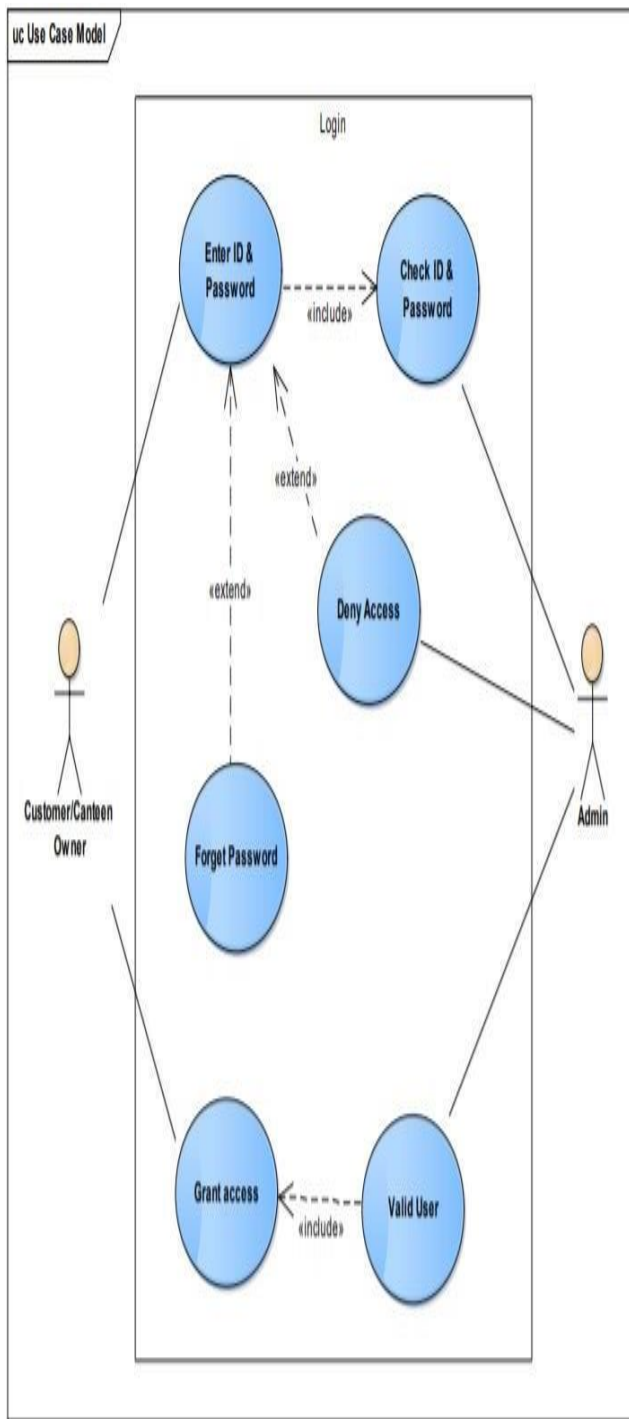**B.**   **Use Case Diagram**

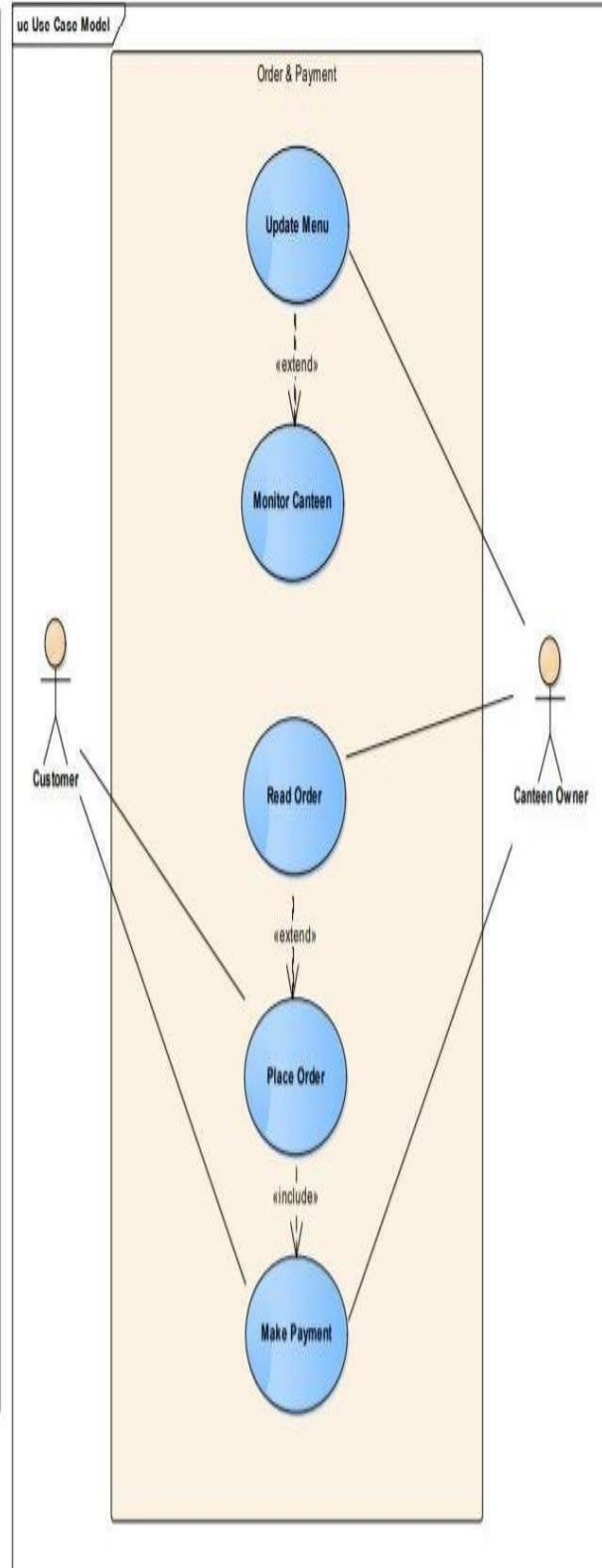

Fig 1.1 Use case for Login Page

Fig. 1.3 Use case for Order, Payment & Update
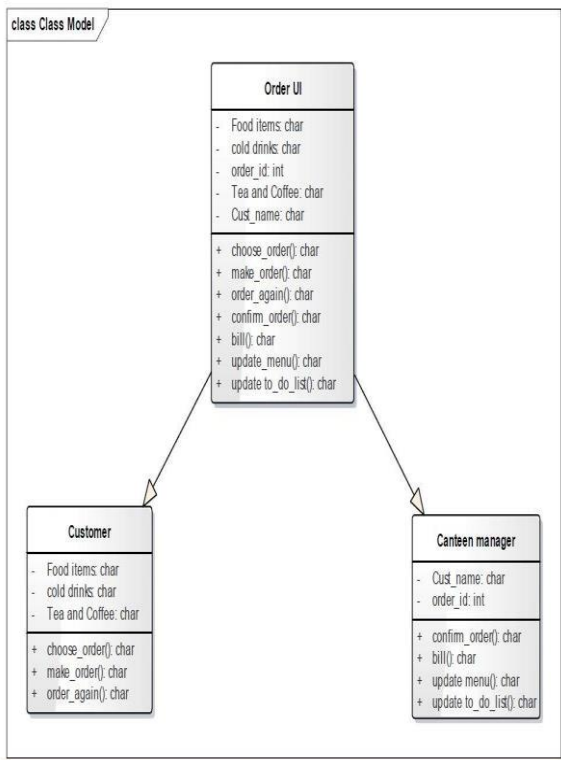
C. Class Diagram

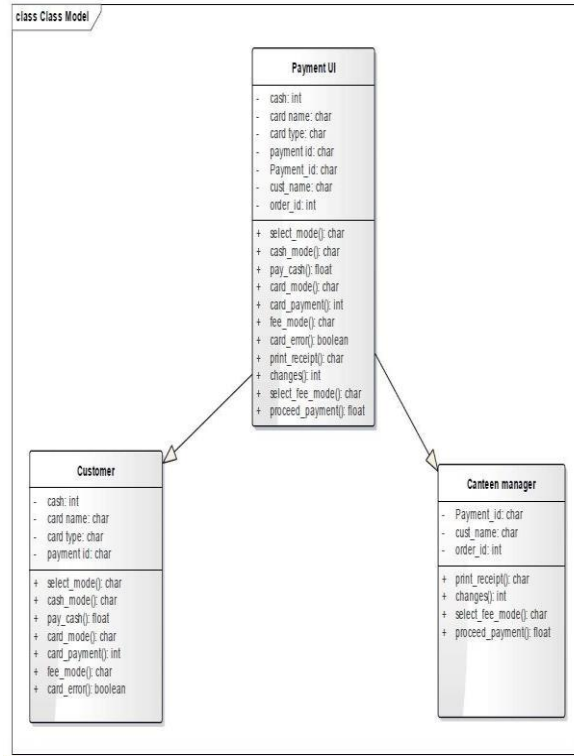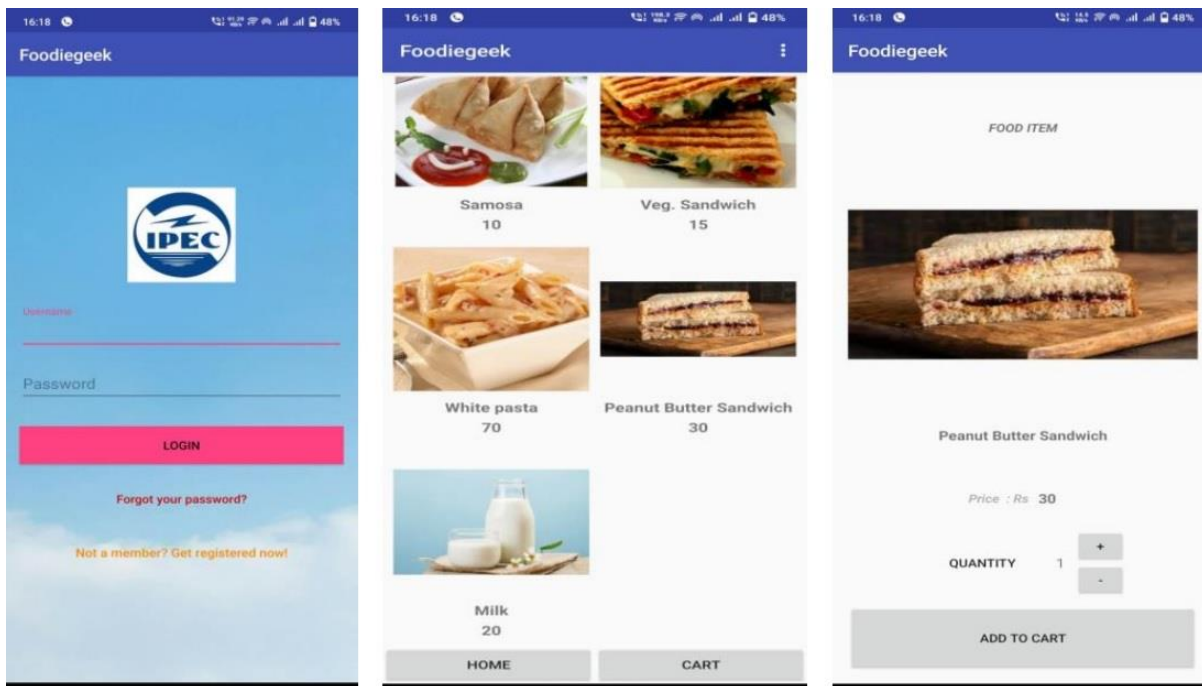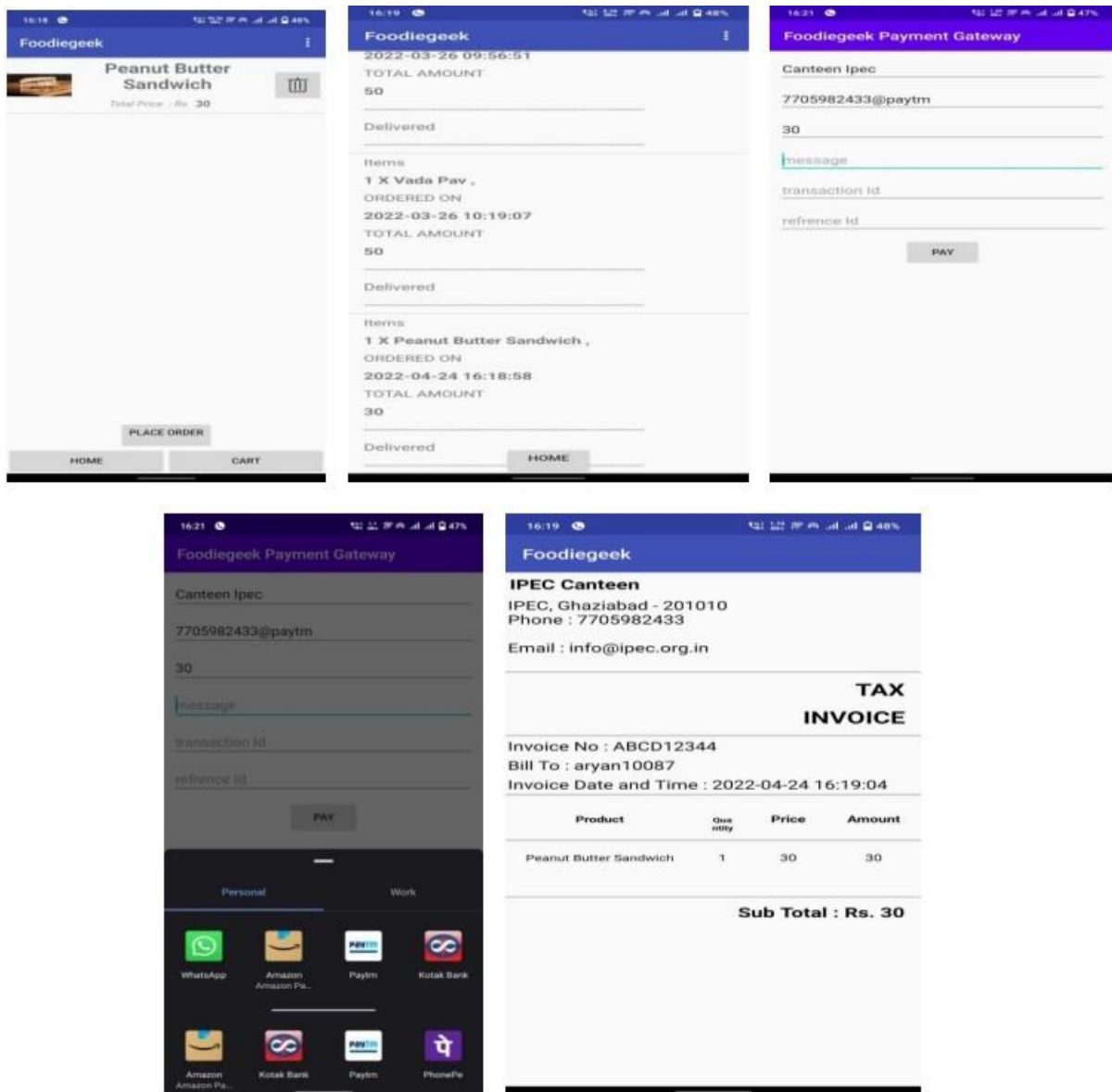Fig. 2.3 Class diagram of Order and Update

Fig. 2.4 Class diagram for Payment

RESULTS AND DISCUSSIONS

CONCLUSION

All the shortcomings of the current kiosk system: maintaining customer records, entering data into registers and subsequent maintenance of these registers; keeping a track of the billing and also maintaining the repository along with how much items are left in the food inventory are all surpassed in our proposed system. The user first visits our application and makes an account and completes the necessary procedure. After that, they are guided to the next page where they can browse through the food items and select and confirm their order. A summary of their order is generated and user confirmation is required. Once confirmed, a summary is sent to the store owner, where the customer prepares the dish and informs them when the food is ready to be served. Meanwhile a bill is generated at the customer side and they are navigated to the payment gateway. So our projects do ordering, automation and payment.

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