*International Journal For Technological Research In Engineering*
*Volume 6, Issue 9, May-2019* *ISSN (Online): 2347 - 4718*

# PAPERLESS RESTAURANT SYSTEM

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***Abstract: The purpose of this project is to develop paperless restaurant system that can be used to transfigure the traditional ordering system. Normally in restaurants menu order system is actual provided in menu card format so that customer has to collect the menu item then the waiter has to come and take the order, which is long process. So we designed this paperless restaurant system that displays food items for customers on their available devices such as user phone, tablet etc. It provides many advantages as great user friendly, saving time, reduce human error and provide customer feedback.***
***Keywords: Android, Paperless restaurant, Digital ordering, smart menu.***

## I. INTRODUCTION

Nowadays, people's standard of living has been increased and changed due to the technology. It has totally changed the traditional methods of doing daily activities, Thus making life easier and effective. But it is not much evident in the food sector specially in food ordering and serving areas in hotels, restaurants, cafes etc. Even today also restaurants use the common manual process of using waiter waiting to take order with pen and paper. In this traditional pen and paper approach the waiter writes down the order according to the customers which then is given to kitchen chefs, keeps records of it and then makes bill. This process is simple and common but may result in human errors. The waiter may mistake in noting the customer orders or may provide late order taking and late food serving which may result in customer dissatisfaction and restaurant losses. To solve this drawbacks on manual process paperless restaurant system is proposed to manage the overall food ordering and serving process. The following section explains that it enables one to interact with what is displayed directly in the screen, where it is displayed, rather than indirectly call the waiter and ordered the menu. These devices also allow multiple users to interact with the touch screen simultaneously. So to overcome all these and save time of customers and waiter by providing facilities like digital food ordering thus beneficial for both restaurant and customer. The paperless Restaurant system project with user and admin accounts, ordering amount calculations and appropriate billing. The paperless restaurant system helps the restaurant manager to manage the restaurant more effectively and efficiently by computerizing meal ordering, billing and hotel management system.

## II. LITERATURE SURVEY

S.Pieska, M.Liuska and J.Jauhiainan[1]have presented how smart menu can be used in the restaurant system to remove the bottleneck pen paper menu in restaurant and also shows from the result of online survey which significantly shows that people are not satisfied with pen paper based system. Intelligent restaurant system are on interesting application area for merging both intra-cognitive and inter –cognitive communications.

B.K.Mishra, B.S.Choudhary and Tanmay Bakshi[2]this describes the touch based digital ordering system on android. This work aims to substitute the traditional method by automating food ordering process. This system uses wireless communication centralized with database and android app to place the order. The android application installed on the device that must be kept on table which contains the menu details .The components used to make the system are android OS, tab, desktop OS.

Noor Azah Samsudin, Shamsul Kamal Ahmad Khalid, Mohd Fikry Akmal Mohd Kohar,Zulkifli Senin and Mohd Nor Ihkasan [3] this paper provides wireless food ordering process with customer feedback . It enables admin to setup the system in wireless environment and update the menu easily . The aim of this system is to obtain the customers feedback after serving the food which helps the restaurant owner to improve the quality of their food as well as service.

Sonal Dimbar, Aishwarya Kumbhakarna and Priyanka Shend[4] it describes how mobile menu should look like and what kind of details should be shown with the food name. Different modules like admin, kitchen and user is discussed in how they worked together is described. When we compare the traditional system with that of the smart restaurant there are numerous advantages of using an android device for ordering rather than going manually. This application is user-friendly. The customer just need to use the app which is kept at the restaurant and then log in to continue for ordering.

Mayur D Jakhete and Piyush C Mankar[5] the menu will be displayed automatically in the customer mobile application using wireless. The main aim is to automate the menu in the restaurant in the android phone and it provides the user friendly environment. The customers can order the food from the phone by themselves and the restaurant will provide the dynamic menu along with pictures of food items.

## III. EXISTING SYSTEM

The existing system is on the basis of paper based menu that is by using pen and paper. Where a waiter should take the orders from the customers by using paper and pen. This process may take a lot of time and can lead to errors while taking orders. And sometimes chef may not understand the handwriting of waiter and he may prepare any other dish my mistakenly. Like customer may say a one dish while taking order waiter may write a another dish related to that dish or similar to that.

Drawbacks of existing system:

- Manually may consume more time.

- In this manual process it is difficult to maintain the bulk of record.
- Lack of errors and accuracy.
- It involves lot of paper work.

## IV. PROPOSED SYSTEM

The proposed Paperless restaurant system is working well on android phones. It is having three modules; User, Kitchen and Admin module. Here Admin has provision to control the overall system in the restaurant. This will improve the system popularity since there is no need for wired communication. The orders from the customers will be transferred through the Wi-Fi network. The admin can add the items, add the offers and also can view the bill and user feedback. The users can also provide the feedback after serving the food. The Kitchener has to accept or reject and that notification will be sent to customer. This system convenient to use for both the customer and restaurant in a cost effective way and it makes the fine dining experience of the customers. The system allows to get real time feedback from the customers and also it helps admin to easily update and to announce various offers on different occauations.

## V. DESIGN AND IMPLIMENTATION

Fig 1: DFD LEVEL 0

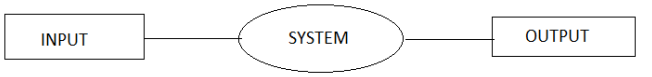



Fig 2: DFD LEVEL 1

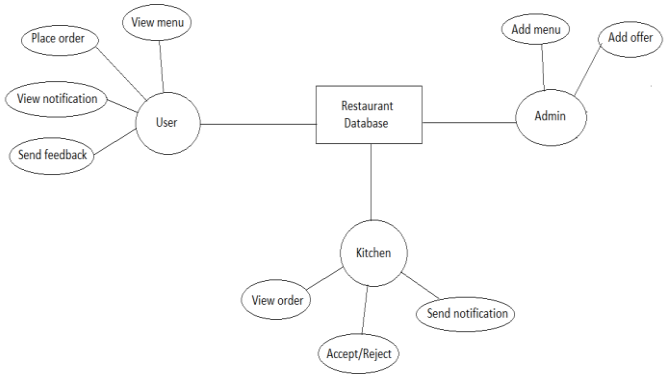
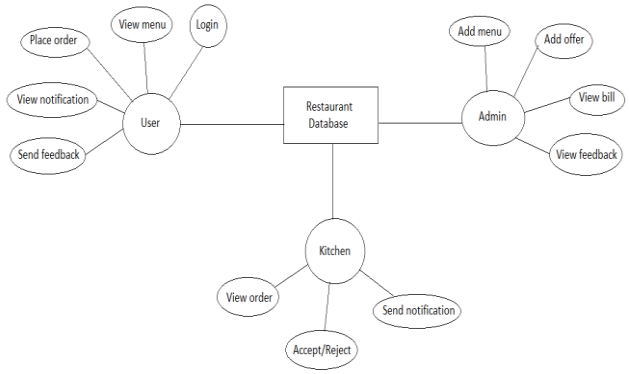



Fig 3: DFD LEVEL 2




The implementation is he stage of the project when the theoretical design is turned out into a working system. Thus it can be considered to be the most critical stage in achieving the successful new system and in giving user the confidence that new system will work and will be effective.

The implementation stage involves careful planning, investigation of existing system and its constraints on implementation, designing of methods to achieve changeover and evaluation of changeover methods.

Modules:

User: The user module consisting an android application that can be used by admin, employees in a restaurant o handle the clients and there orders and can help them easily to place orders. This application, created mainly for proof of proper user mobile interaction.

Admin: Admin is the person who will manage the entire system. This type of user will also do maintenance and control the application of the system. Admin takes a responsibility to a new customer, new menu into database, etc.

Kitchen: Kitchen is managed by Kitchener who will accept or reject the order from the customer and sends the notification if the order has accepted.

## VI. SNAPSHOTS

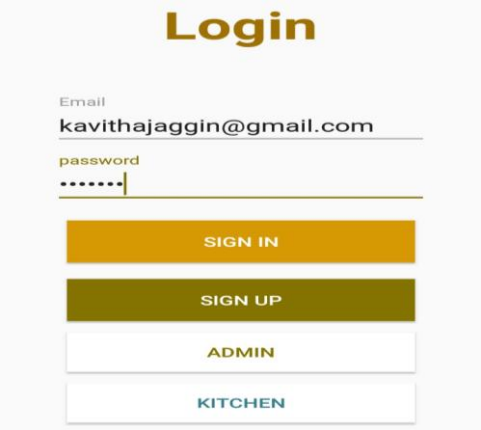



Fig 1: shows the login page for the customer, where the more number of users can sign up.

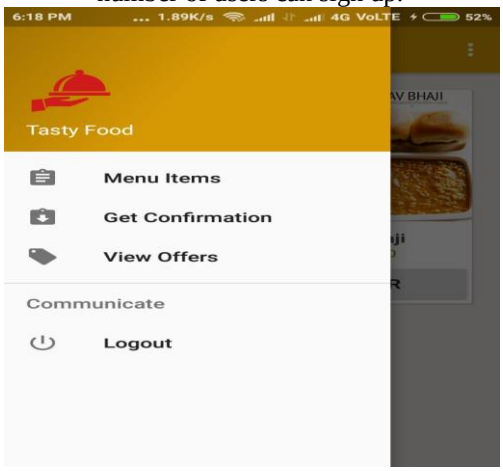



Fig 2: is a dashboard type of layout which contains menu items, confirmation and offers.

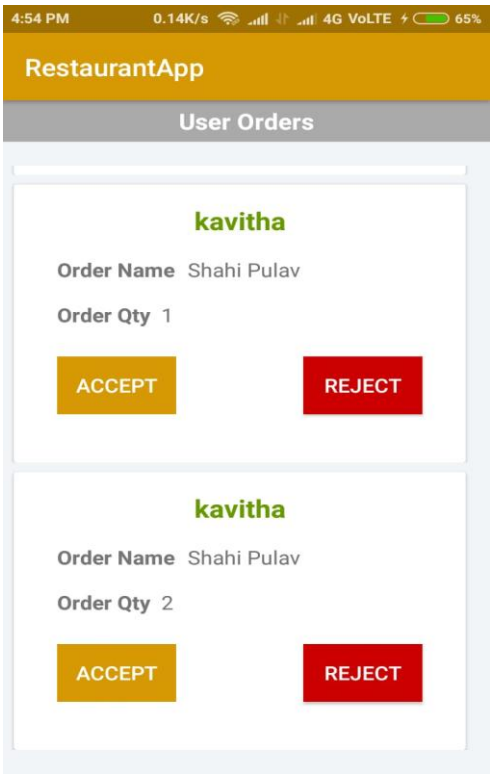



Fig 3: when order placed by customer, Kitchener can view order along with accept and reject options.

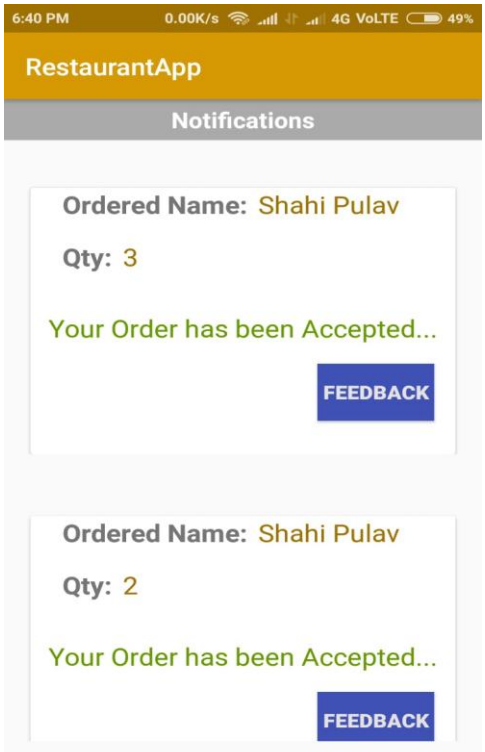



Fig 4: as the Kitchener accepts or rejects that notification will be sent to customer.

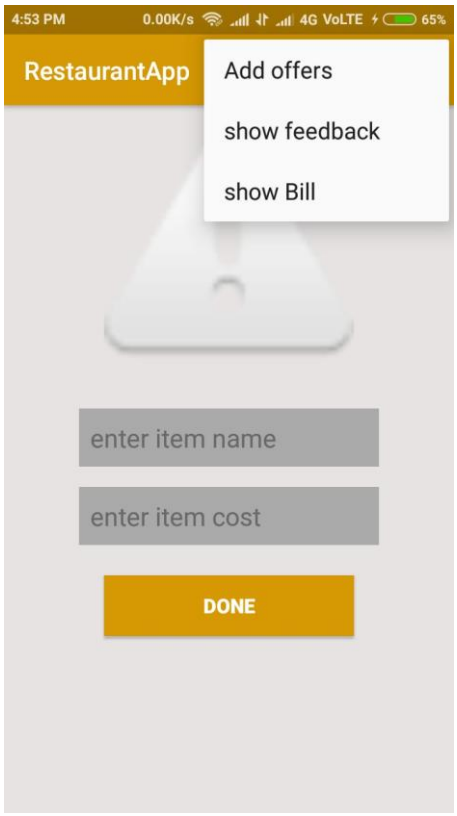



Fig 5: admin can add the food items, and also shows the options as add offers, show feedback, show bill.


Fig 6: shows the bill and admin will generate it to the customer.

## VI. CONCLUSION

Paperless Restaurant System is compared with earlier traditional methods such as Pen & Paper method. This will remove the manual process of food ordering and thus reduces the number of restaurant staffs saving cost of labour to a great extent. In future, the ordering system can also be made to be speech recognize ordering system. The user can just say the thing they wanted and the computer will automatically order for them.

## VII. FUTURE SCOPE

In future , the system can be expanded to lodge management, parking . and this ordering system can also be made to a speech recognize ordering system.

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