

TableTop Food Ordering System

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Abstract—It is interesting to see that the hardware revolution not only brought huge numbers of new gadgets to Kickstarter but it also made us rethink the mantra smartphones and apps will rule the world".

The landscape of tabletop ordering systems evolved immensely in the past two years as smartphones and apps became ubiquitous. Tabletop ordering is not a novel idea and the benefits are obvious. We, as guests, spend less time waiting for waiters to take our order while at the same existing serving staff can provide the over-the-top engagement to guests that require it.

Restaurants across the world (most notably in US and Japan) are embracing tabletop ordering systems, which is a fancy way of saying that guests can order directly from the table without the help of serving staff. In the restaurant of tomorrow (and for some of you, today) you sit down and use a device to browse the menu, select your create your order and get it delivered to your table.

So, the Japanese Technology of Tabletop Food Ordering is going to set a new benchmark in Indian Hotel Industry in coming future, since the fact that number of waiters in the hotel industry are reducing cannot be neglected. Restaurant/bar owners on the other side gain better insight into their customers and their business, upgrading the business with features so far only available in on-line stores (instant customer feedback, real-time statistics, dynamic inventory, etc).

Keyword - Smart, Food Ordering System, Automation System, Automation of Restaurant, USER, KITCHEN, MANAGER..

I INTRODUCTION

The basic aim for implementing the TableTop Food Ordering System is to make whole process of food ordering in hotels automatized and also providing comfortable and easy services to the customers. The other aim is to reduce the manpower in the hotels. This is done by the system by directly placing the customer order from the system itself.

The existing system takes a lot of time to place the order as the order is taken manually from the customer with help of waiters. The TableTop Food Ordering System helps overcoming this situation and provide a efficient way to order the food from the table itself the system

II EXISTING SYSTEM

In Restaurant industry mainly two systems are used on large scale, which are explained further in detail.

Self Service Restaurant

This process required the guests to place order at the service counter in the restaurant. The guests shall have decision in advance, before presented at the counter, of which menu items to order. Menu catalog is mostly presented as posters placing behind the order counter.

Automated Food Ordering System

In order to reduce service cost and enhance customer experiences, few restaurants have invested in the service automation system. The automation system used to capture the food order from guests ranged in many

forms but mostly comprise of an electronic of conductive material.

The above mentioned existing system have following drawbacks:-

1. Requires more security because of wireless technology.
2. There is no authentication service is provided.
3. Data is stored in local database

To overcome all these drawbacks of existing systems, we come with this project which is aTableTop Food Ordering System.

III PROPOSED SYSTEM

To overcome the drawback of existing system we have developed TableTop Food Ordering System. The architectural design of the proposed system is shown in Figure

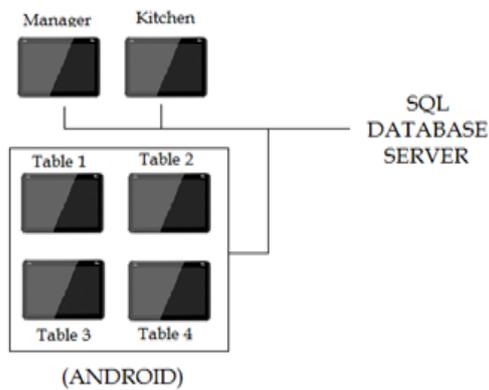


Fig. 1 Proposed System Architecture

The proposed system is mainly divided into four parts,

1. Table – The customer can directly order the food from the table itself by using this system. The customer can even track the status of his order.
2. Kitchen – The Kitchen authority can accept or reject the order.
3. Manager – The manager has the overall control of the system, he can add or remove the item from menu and can track the orders.
4. Server – All the data generated, is stored in the server and based upon the same future decisions are taken.

In order to implement the above discussed Proposed System, the following diagrams helps us to understand the design of the proposed system.

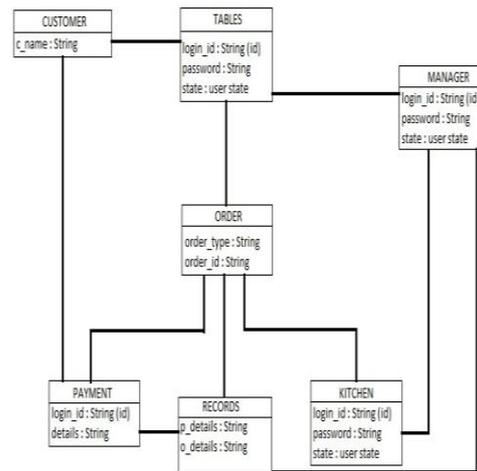


Fig. 2Class Diagram for TableTop Food Ordering System

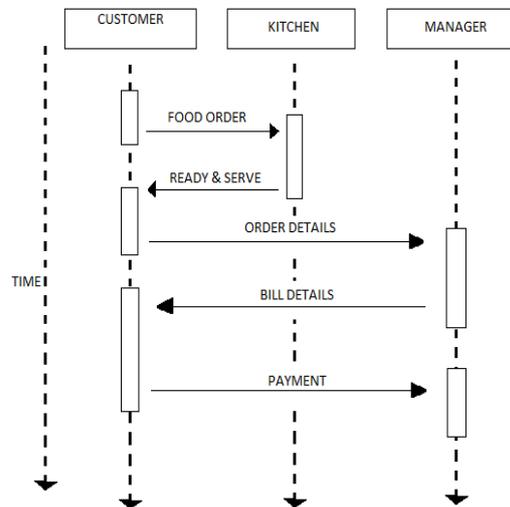


Fig. 2 Sequence Diagram for TableTop Food Ordering System

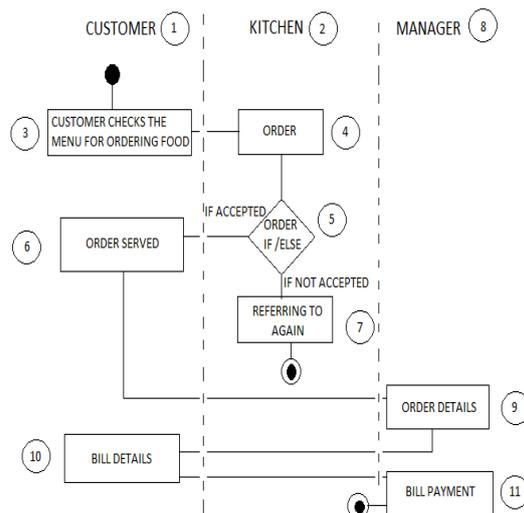


Fig. 3 Activity Diagram for TableTop Food Ordering System

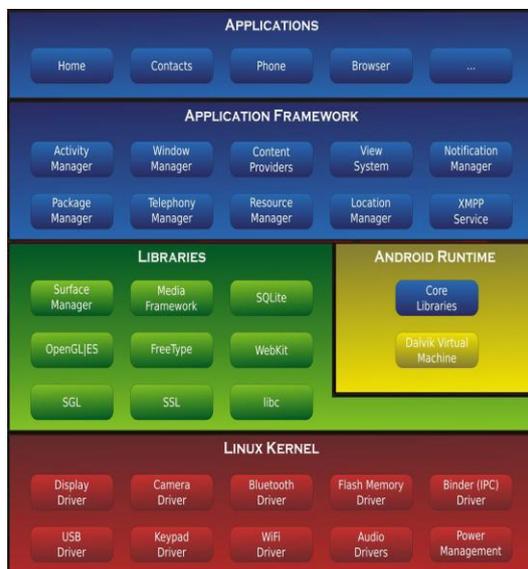
With the help of this designs, the system is designed and implemented which helps in automation of the restaurant

IV ABOUT ANDROID

Android is open source; it can be liberally extended to incorporate new cutting edge technologies as they emerge. The platform will continue to evolve as the developer community works together to build innovative mobile applications. This platform of the Android OS was chosen for its immense popularity in the market at present and especially by observing its attraction amongst the student class of the users. Also the Android has a huge advantage for the developers in terms of the SDK provided by Google or the large communities like the developer. For example, an application can call upon any of the phone's core functionality such as making calls, sending text messages, or using the camera, allowing developers to create richer and more cohesive experiences for users.

Android Architecture:

Android operating system is a stack of software components which is roughly divided into five sections and four main layers as shown below in the architecture diagram.



Linux kernel:

At the bottom of the layers is Linux - Linux 2.6 with approximately 115 patches. This provides basic system functionality like process management, memory management, device management like camera, keypad, display etc. Also, the kernel handles all the things that Linux is really good at, such as networking and a vast

array of device drivers, which take the pain out of interfacing to peripheral hardware.

Libraries:

On top of Linux kernel there is a set of libraries including open-source Web browser engine WebKit, well known library libc, SQLite database which is a useful repository for storage and sharing of application data, libraries to play and record audio and video, SSL libraries responsible for Internet security etc.

Android Runtime:

This is the third section of the architecture and available on the second layer from the bottom. This section provides a key component called Dalvik Virtual Machine which is a kind of Java Virtual Machine specially designed and optimized for Android. The Dalvik VM makes use of Linux core features like memory management and multi-threading, which is intrinsic in the Java language. The Dalvik 3 VM enables every Android application to run in its own process, with its own instance of the Dalvik virtual machine. The Android runtime also provides a set of core libraries which enable Android application developers to write Android applications using standard Java programming language.

Application Framework:

The Application Framework layer provides many higher-level services to applications in the form of Java classes. Application developers are allowed to make use of these services in their applications.

Applications:

You will find all the Android application at the top layer. You will write your application to be installed on this layer only. Examples of such applications are Contacts Books, Browser, Games, etc.

V TECHNOLOGIES USED

ANDROID XML:

For user interface, Eclipse (version MARS) android application development software will be used. XML will be used for designing the Graphical User Interface (GUI).

JAVA:

Java will be used for connecting various components of user interface to database system.

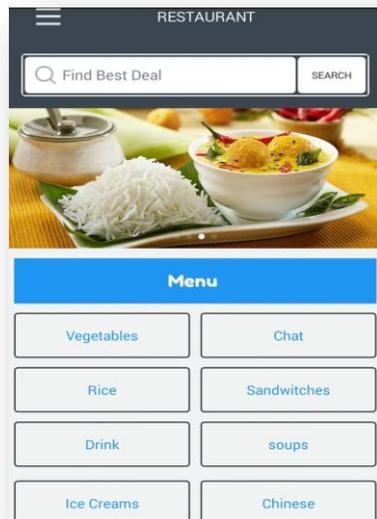
MYSQL AND PHP:

MYSQL is used as a database at the web server and PHP is used to fetch data from the database. Application will communicate with the PHP page with necessary parameters and PHP will contact MYSQL database and will fetch the result and return the results to application requesting it.

VI RESULT

USER(TABLE):

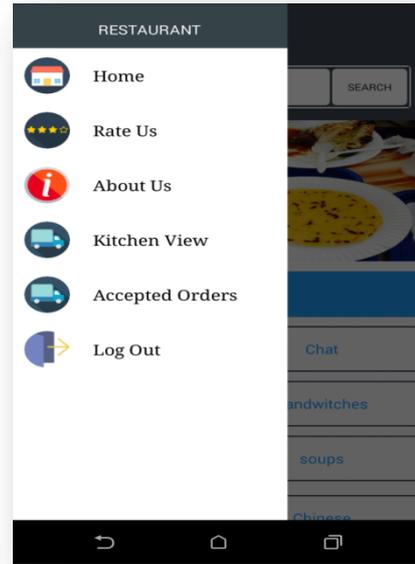
- If user is a customer then after login, app will direct him/her to this page.
- Then customer will select his/her order as shown in image.



- If user is a Customer then after login, app will direct him/her to this page.
- After login Customer can track his order, rate the restaurant, etc as shown in image.

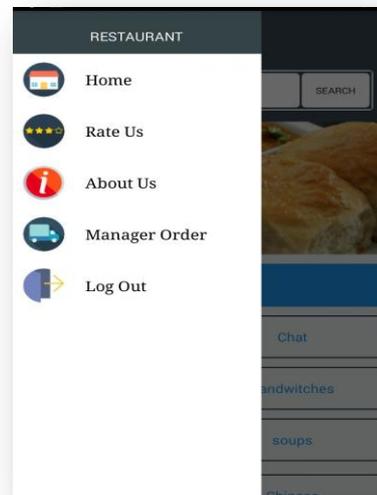
KITCHEN:

- If user is Chef then after login, app will direct him/her to this page.
- After login, Chef will be able to Handle activity related to kitchen as shown in image.



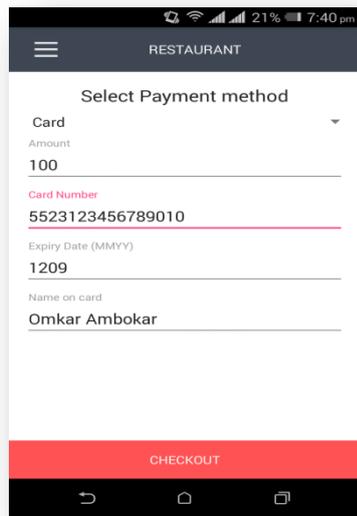
MANAGER:

- If user is Manager then after login, app will direct him/her to this page.
- After login, Manager will be able to Handle activity as shown in image.



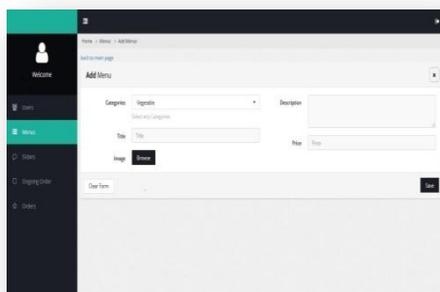
PAYMENT MODE:

- The user can pay by two modes either by cash or by debit/credit card.



DASHBOARD:

- Through this feature, the manager(Admin) can directly ADDOR DELETE a specific item from the menu.
- Also can change the images directly without updating the app.
- Dashboard can be also used by the kitchen authority to view the kitchen orders.
- Through Dashboard the manager can see the transactions of the day in a format he wants to such as .pdf .docx .xls, etc.



VII CONCLUSION

We present an Table Top food ordering system with-real time customer feedback. This system is convenient, effective and easy thereby improving the performance of restaurant's staff.It will also provide quality services for customer satisfaction. Overall conclusion is that, this is a fabulous food ordering system for the restaurant

sector, made by combining the Android and Wireless technology.In next phase, we will be working on providing provisions to accept different types of payments credit cards, debit cards, tips, etc.

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