Table Booking and Food Pre-Ordering System

R. Sam Jeba Roshan  
U.G. Scholar  
Computer Science and Engineering  
Francis Xavier Engineering College  
jebaroshan@gmail.com

M.Pasumathi  
U.G. Scholar  
Computer Science and Engineering  
Francis Xavier Engineering College  
nimishmathi@gmail.com

Dr. E. Manohar  
Assistant Professor  
Computer Science and Engineering  
Francis Xavier Engineering College  
manohar2k@ymail.com

Abstract - The Food Pre-ordering App is an android application which helps the user to select the restaurant from the list of cities and order the food items available at desired time and reserve seat in the respective restaurant. The user has to register first, then login to the app. The location is enters by the user and it provides the restaurants available from that location on the basis of ascending order. The user can view the menu and order the available items based on the time. The order list is send to the restaurant through the app. It is easy for searching the restaurants nearby and saves time with its simple and effectiveness.

I. Introduction

With the rapid development of information technology Android application has been increasing in recent years.

A. Advantages of Android application:

- Android application is easy to carry
- Global partnership with large install base
- Very powerful development framework
- Open marketplace for distributing apps

Based on the advantages of both applications, I motivated myself to develop an Android application. In a world as busy as it is today, it is convenience and time that is of prime importance for any kind of consumer, in any business category. An ideal service nowadays needs to offer freedom of choice to the consumer, adaptability to fit into the tight schedule of the consumer, great ease of use and a measure of thoughtfulness. The on-demand food delivery apps of the day like UberEats, Swiggy, Zomato and quite a few others are great example of services that have the potential to live up to all this and more! In this proposed system the application to reserve table with ordered food on time at respective restaurant mentioned by the customer is implemented.

II. Food Pre-Order System

FOOD ORDER SYSTEM is a web application designed for use in the food delivery system. This system will allow restaurants to increase scope of business by reducing the labor cost involved

Food delivery option are available at other apps like Zomato, Swiggy, etc.,

The food pre-order system not focus on food delivery, but it focuses on reservation of desired food in the respective restaurant.

III. Android Framework

Android is known as a mobile operating system based on the Linux Kernel. It is mainly designed for touch screen mobile devices such as smart phone and table computers. Meanwhile, the Android OS is widely used in televisions, games consoles, digital cameras and other electronics because of its open and customizable features. Android was developed initially by Android, Inc. and bought by Google in 2005.
The source code of the Android application is available under free and open-source software licenses. It means that the device manufacturers, enthusiast developers and wireless carriers can freely modify. Most Android devices are shipped with a combination of open source and proprietary.

Today, Android is the most popular mobile Operating System. It is the leader in smartphone market in the world. Customers select mobile phones with the Android operating system as their first choice. Meanwhile, the programmers throw themselves into the Android application development camp.

A. Linux Kernel

At the bottom of the layers is Linux Kernel. Linux Kernel provides a basic system functionality, which are memory management, device management etc. Also, it handles the things that Linux is good at such as networking.

B. Libraries

On top of Linux Kernel there is a set of libraries including open-source Web browser engine WebKit, SQLite database, libraries to play and record audio and video, SSL libraries and so on.

C. Android Runtime

It provides a key component called Dalvik Virtual Machine that is a kind of Java Virtual Machine designed for Android. It also offers a set of core libraries: it enables the developers to develop Android applications using the standard Java programming language.

D. Application Framework

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

There are some requirements the proposed application must fulfill to meet the objectives of the project.

The requirements to be achieved:

In Background Management Platform:

- Administrator can add and modify food categories.
- Administrator can add, modify and query food information.
- Administrator can add, modify and query employee information.
- Administrator can manage orders produced from the web application and Android application.

In Android Application:

- Customer can view food information, such as category, name, price, image, description and so on.
- Customer can order food.
- Customer can modify food item, food amount in Shopping Cart.
- Produce food order.
- Customer can also reserve the table.

V. Mechanism

A. Register

The page is compared with the website foreground public pages, the customer must register an account to view the information of dishes. When the customer launches the Client application on an Android mobile, a pop-up window will display. The customer needs to click the “Register” Button for the first time to use this application. After clicking, the customer will see the Register window, then he needs to fill in a valid username and password to finish the registering task. When the customer’s registering is successful, the window will jump back to the log in window automatically.

B. User Login page

On the Customer Login page, the customer needs customer to fill in a valid username and password to log into the application and will open customer main page, then Customers may order foods and also booking favorite sitting tables here.
C. Location Identification

The place to where we should reach can be mapped and the direction to the destination is also being provided to the user using the Google map API. It provides the user with the location they are currently located. It displays area and restaurant name.

D. View Dishes

In the dishes display window, there are different tab views for different dish categories. Each tab view contains the corresponding dishes. The customer can view the dish information via clicking the tab views. Before adding dishes to the shopping cart the user can view the optional menu and the user can view the details of dish or add the dish to the shopping cart.

E. Shopping Cart

Once the user clicks the “Add to Cart” button, the pop-up window of dish amount will appear, in this window, the customer needs to fill in the integer number and click “Order” button to confirm. Now the customer should go to the shopping cart window. The dish items the customer ordered will be shown as a list view here. The application will calculate the sub price and total price automatically. If the customer wants to delete some dish item or modify the dish amount, clicking anywhere of the dish item row will produce a pop-up window to display to let the customer do related operations. In addition, the user also can clear the shopping cart, continue to purchase dishes and confirm the order similarly to the operations on the application. Also, the placed order will be shown in the background management platform Administrator Login page.

The administrator need fill in a valid username and password to log in to the Background Management Platform. Here a validation function will check whether the username and password provided by the administrator are valid or invalid, if the username and password are valid, the administrator will log in successfully and enter the Background Management Main page, and otherwise a warning message will show After the administrator has logged in successfully, he will be allowed to enter the Background Management Main page. The administrator can also log out of the system by clicking “Logout System” link and “red cross” button.

VI. Database and GUI Design

It will describe database design and main graphical user interface design in this application.

A. Database Design

MySql was chosen as a database, the table structures and attributes are the same as POJO classes mentioned in Model Structure shows above. The main entity and their relations will be described in detail next.

B. GUI Design

The user interface design was one of the core tasks in this project. The aim of UI design is to make the application to be accepted and used easily by users. The main UI will be shown next.

VII. Application Design

Fig.1. The working of food pre-ordering system
The customer place food order through app in the food the orders in the food ordering system. Restaurant employee ordering system. The order is store in the database. Admin can view all retrieve the order from the database and prepare food on time.

VIII. Sample Output

A. Admin Login Page

The administrator login to the food pre-ordering system by using his username and password. Then the admin page is displayed to the admin. The admin page consist of all ordered information.

B. User Login Page

The user login to the food pre-ordering system by using his username and password.

C. Restaurant Selection

The user has to select the respective hotel in the list from the desired city.

D. Menu Order
Based on the time of order, it shows the list of menu items which are available at that time.

E.Order Success

After click on the pay tab, the order will be placed successfully.

IX. Conclusion

The scope of the system is to implement the phone application for user to obtain food/restaurant information easily through the internet on the Android and pre-order their food at respective hotel at desired time. The current assumption for the restaurant owner is to upload their menu and send it to the administrator. It makes a sense if the web server is set up as a web application so that the user can upload menu information through the web.

Since social network is a current mainstream trend, our food pre-ordering application would become very popular if user can share the information about a specific item to their friends with ease.

References


   http://www.android-app-market.com/android-architecture.html

[7] Connection between PHP (server) and Android (client) Using HTTP and JSON

   http://developer.android.com


[10] Source of restaurants information
    http://www.foodpub.com/