Restaurant Locator and Booking – Yummy!

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ABSTRACT

With the developement of technology and modern science, people are expecting information about the location of any object for tracking purpose. This paper presents a study on Restaurant Locator and booking services and directed on locating and tracking of android devices .In this paper we present location based restaurant information tracking and booking system. We design and implement an android application in which customer can place order and book tables in advance by selecting desirable table. . If the customer does not arrive in time, the same will be cancelled; but Yummy! Will provide a push notification 5 minutes before the expiry of booking.

Keyword : - *Adapters, Push Notifications, Google Maps, Geolocation.*

1. INTRODUCTION

A fine dining restaurant chain, operating from multiple locations in various cities, wanted its customers to locate the nearest restaurant quickly and also see the current waiting time in those restaurant. As an option, a customer could also book a table from the phone only. Therefore, they planned to develop a restaurant locator and booking application, "Yummy!".

Yummy! will display the nearest restaurant locations on a map on the basis of the user's current location. Each location will display the approximate waiting time (if any) in minutes. The user may select a location and book a table. The table will be kept reserved up to predetermined time duration from the time of booking. If the customer does not arrive in time, the same will be cancelled; but Yummy! Will provide a push notification 5 minutes before the expiry of booking.The solution has to be developed using IBM Worklight Studio and will be deployed on IBM WAS, DB2, and Worklight Server. The target device will be an Android Phone. The development will follow the IBM's Rational Unified Process. This document is the primary input to the development team to architect a solution for this project.

2. LITERATURE SURVEY

To overcome the limitations of above system, we propose customizable Restaurant Locator and Booking using web based application. It is a wireless restaurant locator system which is based on android devices. Android smart phones attract both the general and commercial users. Android is a Linux based operating system for mobile devices such as smartphones and tablets. Location Based services using Android OS Motivated by the use of Android mobile OS in Health and other applications, we present the use of Android Devices in Business applications, namely the locator and booking system in restaurants. Considering the promising future of Android market, it is beneficial and worth to write applications for android that target mob of people.

After going to a new city in every visitors need a restaurant located near by the major problem faced by the visitors to find a budget restaurant.Person need a path finder application or the smart mobile applications so that easy to track the location of the hotel and checkout the status.normally survey tells that it is a complex situation to find the suitable hotel.

"e-Restaurant: Online Restaurant Management System for Android....IJACSA Special Issue Selected Papers from International Conference & Workshop On Advance Computing 2013....Dr. Vinayak Ashok Bharadi Associate Professor, IT Department, Thakur College of Engineering & Technology Kandivali(E) , Mumbai, India".

As per the above paper e-restaurant system needs a high speed internet interface to provide the services."Digital Dining System using Android Parag Bhingre, Taruni Boddu, Aboli Chandak, Dhiraj Devkar, Prof. Shiv Prasad Patil Department of Information Technology, NBNSSOE."use of application based system reduces the complexity.we can say that one single application for the multiple services continence of use for the user.

The Objectives of our proposed system are:

- To combine Wireless technology and Android OS to automate restaurant locator and table booking process.
- To minimize the imperfection in conventional system by reducing the working of a restaurant.
- To make provisions for obtaining feed-back from the customers and provide the restaurant a means of review of their service.
- To utilize wireless communication and smart phone technology in implementing the automated system.
- To make more user interfaces friendly and customization for the restaurant owner to update the menu content on the customer devices.
- To enable real-time feedback between the restaurant owner and customers on the order status.

3. EXISTING SYSTEM:

Existing systems like Zomato and Food Panda only allow patrons to view details of restaurants, trending food items, and order food online. Zomato allows users to search for restaurants according to a particular area, and particular food item. It lets users to write reviews about a restaurant and its food . In Food Panda, users can search for restaurants and also order food online . These systems are most widely used today but there is a necessity of new features like table booking and tailored order, which we aim to provide through this research work.

3.1 ISSUES FOUND IN EXISTING SYSTEM:

- Not familiar with the new place
- No ratings available
- Budgets is not known
- Every time have to ask the facilities restaurant provides
- Quality of the restaurant may compromise if the ratings not available.
- Payment options are limited

- Existing system if not online Can't take order while on the move
- Need to wait after ordering the food.
- No push notification provide to user
- Difficult to find new restaurant at new location

4. PROPOSED SYSTEM:

Yummy! will display the nearest restaurant locations on a map on the basis of the user's current location. Each location will display the approximate waiting time (if any) in minutes. The user may select a location and book a table. The table will be kept reserved up to predetermined time duration from the time of booking. If the customer does not arrive in time, the same will be cancelled; but Yummy! Will provide a push notification 5 minutes before the expiry of booking.

4.1 ASSUMPTIONS

1. The scope will be limited to customers viewing the availability of restaurants and booking a table. Features like viewing and ordering from menu are not included in this scope.

2. The application will be targeted for one device type only. From the perspective of ease of availability, an Android device is recommended.

3. The application assumes the availability of an appropriate back-end system.Therefore, it will be essential to create a bare bone skeleton of the same in order to make Yummy! work. All data will be entered from the DB2 backend or uploaded directly in to tables using CSV files.

4. Users of the application are assumed to be pre-registered for accessing the making a booking and accessing queue status.

4.2 SYSTEM ARCHITECTURE

Yummy! will be a HTML5 application. Its high-level architecture is illustrated through the following diagram that highlights the key system components and their interactions.

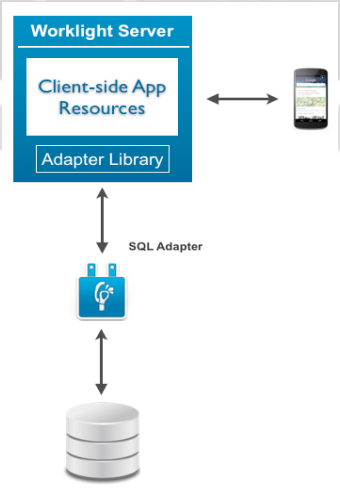

Fig-1: system architecture

1. The HTML5 based mobile web application is loaded from Worklight Server.It communicates the current location to the server for fetching the restaurants in and around the current location of the user; bookings if any; and booking that have been marked as expired or in waiting with wait time on the mobile device.

2. A SQL adapter uses location information/user id to fetch details/update booking status if any, from/to "Yummy backend data base".

3. The database in DB2 holds the "Yummy" tables and performs the actions requested by the adapter viz

a) fetching locations, user's booking request, and b) updating booking status. The booking status through this application can be 'Waiting', 'Ready to Serve', 'Expired'.

4.3 Algorithmic flow:

1. Start
2. If New user then Register and goto step (4)
3. If existing user goto step (4)
4. Login user
5. System will trace user current Location from above information of user
6. When user search any "near by restaurant " option
7. Then system will show list of restaurant.
8. After selecting restaurant by user system will show the details of selected restaurant
9. Either user book a table or place order
10. If user want to book the table then he have to specify time and goto step(12)
11. If user want to place order then he will select item and goto step(13)
12. If table is avaliable then table is book and push notification arrive 5 min before expiry of booking and goto step(14)
13. User will get bill and he can pay by credit card or cash
14. User will logout

5. RESULTS

Table -1: Comparison Of systems

	Existing System	Proposed System
Operating system	IOS	Android
Communication channel	Communication between the customer and the waiter	Communication between the customer and the terminal.
Customer identification	RFID and additional hardware required	User account maintained in the database server.
Server location	Localized server	Centralized server
Recommendation system	Not implemented	implemented
exclusivity	Exclusive to every establishment	Can be extend to be used by multiple establishment.

5.1 Home Screen

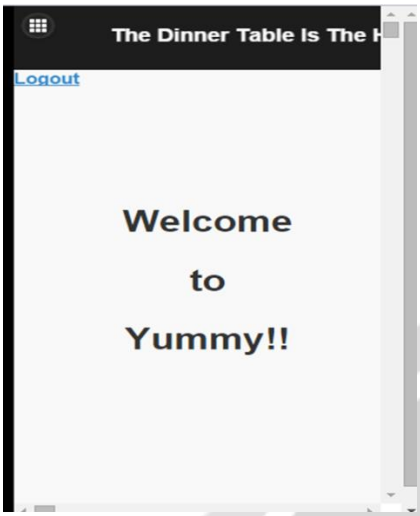

Fig -2 homepage

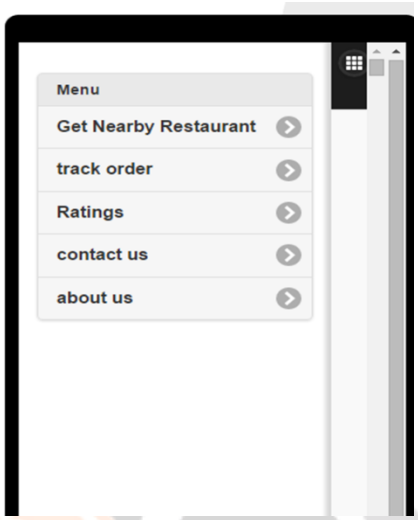

Fig -3 options on panel

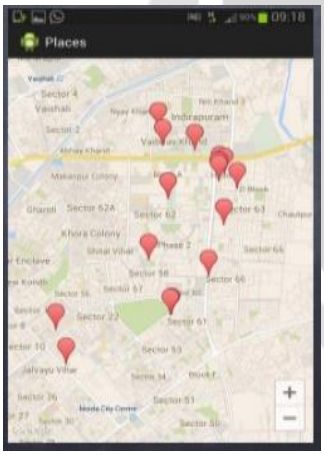

Fig -4 map screen

Fig -5 search screen

Fig -6 ratings

6. CONCLUSIONS

In this paper, we present "Restaurant Locator and Table Booking-Yummy !! This system is convenient, effective and easy thereby improving the performance of restaurant's staff. It will also provide quality of service and 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 like checks, credit cards, debit cards, tips, etc. The system can be further extended to register and link multiple restaurants to enhance the dining experience of customers .

7. FUTURE WORK

- Can tag the dishes he likes at a particular restaurant for the future aspects.
- Can invite friends at a particular restaurant for any special occasion.
- Can provide feedback to different groups on social networking sites .

8. ADVANTAGES:

- Booking table while on the move.
- Helpful for newly visitor.
- Provide list of nearest Restaurants.
- Provide path to visit that restaurant.
- Provide users current location.
- Didn't need to wait for order.
- Easy to find the restaurant quality and budget from ratings.
- Submit comment and feedback

9. ACKNOWLEDGEMENT

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10. REFERENCES

[1] Shweta Shashikant Tanpure, Priyanka R. Shidankar, Madhura M. Joshi, "Automated Food Ordering System with Real-Time Customer Feedback",in International Journal of Advanced Research in Computer Science and Software Engineering, Vol. 3, Issue 2, February 2013.

[2] Ashutosh Bhargave, Niranjan Jadhav, Apurva Joshi, Prachi Oke, Prof. Mr. S. R Lahane, "Digital Ordering System for Restaurant using Android", in International Journal of Scientific and Research Publications, Volume 3, Issue 4, April 2013.

[3] Soon Nyean Cheong, Wei Wing Chiew, Wen Jiun Yap,"Design and Development of Multi-Touchable E-Restaurant Management System" ,in 2010 International Conference on Science and Social Research (CSSR 2010), December 5 - 7, 2010, Kuala Lumpur, Malaysia.

[4] "Implementing Customizable Online Food Ordering System Using Web Based Application" Varsha Chavan, Priya Jadhav, Snehal Korade and Priyanka Teli Computer Department,Pune University Indapur, Maharashtra,India International Journal of Computer Science and its Applications - Volume 2: Issue 1.

[5] Digital Dining System using Android Parag Bhingre, Taruni Boddu, Aboli Chandak, Dhiraj Devkar, Prof. Shiv Prasad Patil Department of Information Technology, NBNSSOE, taruni2394@gmail.com International Journal of Engineering Research and General Science Volume 3, Issue 2, March-April, 2015