



ISSN: 2319-5967

ISO 9001:2008 Certified

International Journal of Engineering Science and Innovative Technology (IJESIT)

Volume 5, Issue 2, March 2016

Designing and Implementation of Ubiquitous Application for Hospitality Regulation System (DIUHRS)

Sangita Chaudhari, Shreyank Vartak, Tejal Rane, Vineet Singh

Abstract—With the introduction of the technologies like wifi, Bluetooth and technological devices such as tablets, simple concepts of the real world are moving towards wireless, fast, less complex and also time saving fronts. “Designing and implementation of ubiquitous Application for Hospitality Regulation System” which happens to be our project topic is also one attempt to ease the process of ordering in various restaurants. The basic functionalities that are expected from the project and are essential as well can be listed as Ordering, Waiting, Billing and Advertisement. As far as the advertisement and customer attraction part of the application, we included the GPS based message sending which detects the location of registered users and can be set to user defined radius. The main objective behind the system or project is solely to minimize the time any customer spends while he is unattended. The system aims towards achieving quality with minimized time which is normally required to deal with for the same chores in a traditional manner. As far as the system rises up to issues like delayed ordering and payment, inefficient ways of feedback collection and analysis and bill payment, it also helps in attracting the customer with the GPS based messaging. This system is a convenient, speeded and efficient in the above aspects mentioned. Also, the system is not so far fetched that it may fail or lack to achieve practical and real life standards.

Index Terms: - Ordering, Waiting, Billing and Advertisement.

I. INTRODUCTION

The present condition in majority of hotel or restaurant chains is that the number of waiters is about 40% to the number of tables that the restaurant fashions. This basically should be mentioned as a trend rather a condition. So, whatever it may be, the way it affects customers and their satisfaction level was our prime concern while taking steps towards building of a application such as ours.

The attempt is made to overcome the drawbacks and backlogs in the previous methodology. The issues addressed by our team can be listed as:-

1. Introduction of device based ordering.
2. Fast and efficient communication on the owner side.
3. Electronic modes of payment on the device itself.
4. Real time location based offer broadcast.

The chef and the owner have different interfaces after the log-in. All bill related information is continuously updated in the database and can be monitored at every instant. The real time location based offer broadcast module works by continuously updating the location of existing or registered users and as per the administrator's decision of the length of the radius. Of course, the user is required to have the android application in the respective devices and should have completed the registration process.

II. LITERATURE REVIEW

The popularity of Android is not hidden from anyone. Not only to its users but also to the developers, android has proven to be a resourceful element for meeting requirements in much efficient and organized manner. Similar is the case when we speak of database software which help us in arranging, creating, modifying as well as storing information in a fashion that is flexible across more than one programming languages. These reasons are solid enough to justify our choice of back end and front end technologies.

As far as the issues in the real world are concerned with restaurants in consideration satisfactory service is what lacks. Consumers frequently complain about orders being taken late and therefore adding to the delay in preparation. Using DIUHRS this condition is evaded as the data is sent directly to the chef without even the need for a waiter to come in to take orders and therefore eliminating the delay caused in previous systems.



ISSN: 2319-5967

ISO 9001:2008 Certified

International Journal of Engineering Science and Innovative Technology (IJESIT)

Volume 5, Issue 2, March 2016

Hence, with the use of an integrated network system the flaws of the common methodology are effectively removed.

A. Hardware Requirements(minimum):

1. Memory: 1 GB RAM or more(for smooth running)
2. Primary Display: QVGA TFT LCD or larger, 16-bit color or better : Monitor resolution of 1024 x 768 or higher
3. Processor: Intel Pentium 4 or AMD Athlon 2 GHz (or faster)
4. Storage: 1 GB (or more) available hard disk space

B. Software Requirements(minimum):

1. Eclipse version 4.2.2 (Cocoa 32 for Mac OS X)
2. Android 4.2.2 platform API 17
3. Java Runtime Environment 1.6
4. Netbeans IDE

III. EXISTING SYSTEM

If we were asked for one word description of the existing system, for most of us it would be “Paper-based”. From taking the order, payment of the bill (this part is with an option of electronic mode in most sites) and collecting feedback, the whole procedure is almost completely paper-based. The losses include wastage of time and paper. In our proposed system the display of menu card on the device (Tablet), the payment option on the device and the feedback is recorded with the help of the device as well which directly leads to saving of time as well as paper. As far as the menu card is concerned it faces problems only in cases of updating. For smaller changes if we are to change the whole menu card then the system will surely lack feasibility. This is where DIUHRS comes in. Another situation that creates havoc is when we need to go through some older bills for some calculation or analysis. Going through all the papers which might be kept in a safe although keeping a good number of bills is not only a challenge in itself is a messy and tedious job. And on the other hand keeping files in a database makes not only storage but searching and sorting a job of minutes. Yet another situation is whether the waiters know of the available and absent menu items. Many times a situation may arise that a waiter takes an order and ends up realizing that it was not available in the kitchen only to hamper the credibility and management of the hotel. The biggest enemy of a good dine is the order in which the dishes are brought in front of the customer. Imagine having your main course before any of your starters or drinks being brought on the table at any odd interval. Such conditions or problems faced can surely be fought with if we have the orders reaching the kitchen or the chef directly from the customer and no window of delay and order mismatch. Last but not the least we have the methods instated by the hotel as far as the advertisement and customer attraction is concerned. Traditionally, no attempt is made on a visible scale in this field. We on the other hand use a module to use such a requirement as mentioned in the introduction.

IV. IMPLEMENTATION

Following diagram shows the system architecture which having application side and client side.

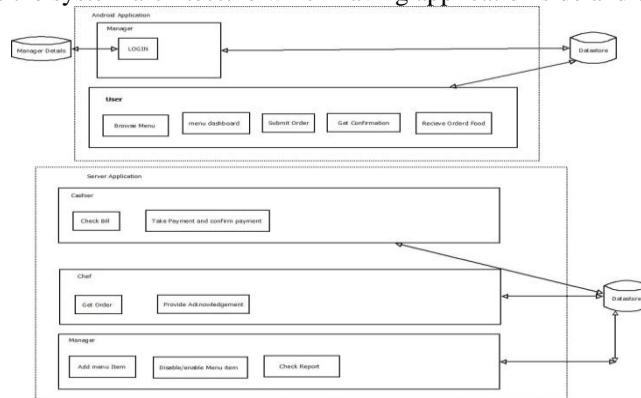


Fig 1: System Architecture diagram



ISSN: 2319-5967

ISO 9001:2008 Certified

International Journal of Engineering Science and Innovative Technology (IJESIT)

Volume 5, Issue 2, March 2016

Device present on the table: - The customer comes in and goes through the menu available in the device or tablet and places his order.

Order brought in by the waiter: - The waiter brings in the order on the table.

Billing: - The billing can be paper based or electronic. Hence, the customer can use either hard cash or any card comfortable with.

Deals for the user: - The customer can find out about the deals of the restaurant on the device itself. Even if the customer is using a device with the application and registered mobile number, the customer can be made aware of the offers using GPS based messaging.

Clear and precise display: - The menu items are accompanied with pictures for a clearer and precise presentation.

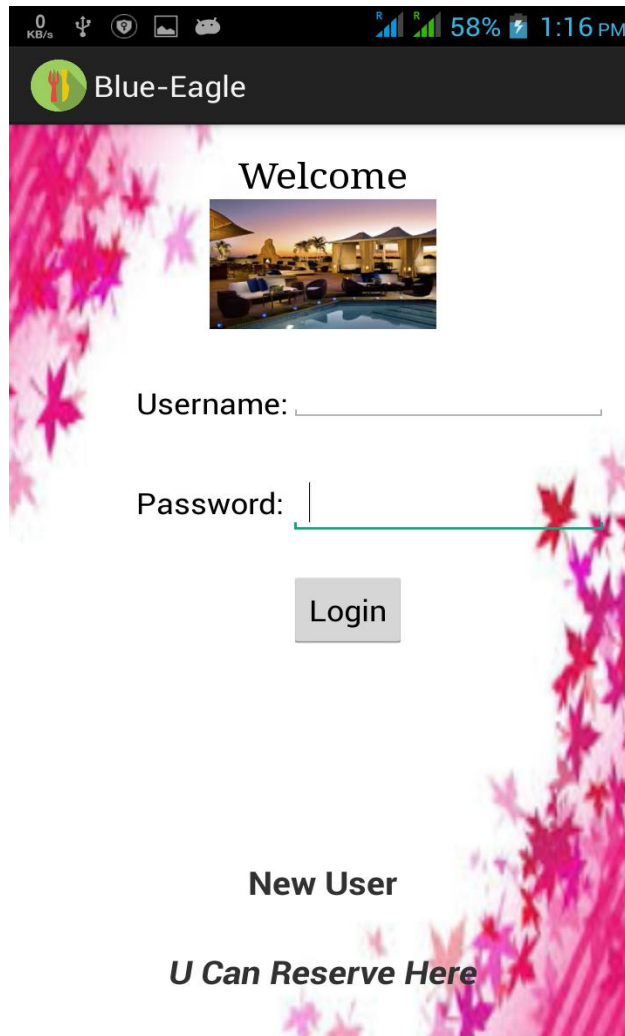
Flexible menu: - The menu can be changed as per requirement and availability.

Status check on the order: - The order status can be checked whether it is in cooking stage or served.

Table reservations: - The registered customer can reserve table from any device.

V. RESULTS

Login Page:-



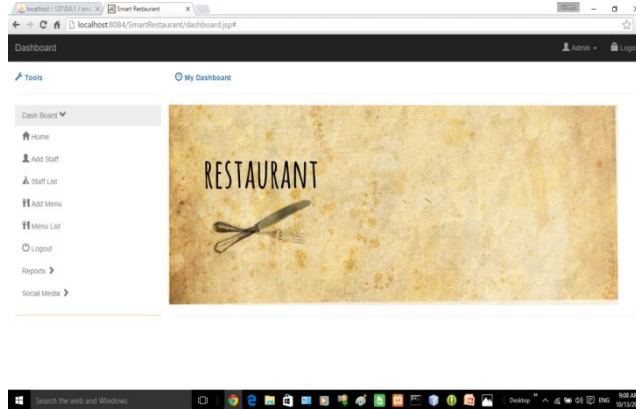


ISSN: 2319-5967

ISO 9001:2008 Certified

International Journal of Engineering Science and Innovative Technology (IJESIT)
Volume 5, Issue 2, March 2016

Server Side interface:-



Database:-

Table	Action	Rows	Type	Collation	Size	Overhead
bills	Browse Structure Search Insert Empty Drop	39	InnoDB	latin1_swedish_ci	16 K	18
bill_status	Browse Structure Search Insert Empty Drop	2	InnoDB	latin1_swedish_ci	16 K	-
courses	Browse Structure Search Insert Empty Drop	9	InnoDB	latin1_swedish_ci	32 K	-
menus	Browse Structure Search Insert Empty Drop	100	InnoDB	latin1_swedish_ci	32 K	-
orders	Browse Structure Search Insert Empty Drop	4	InnoDB	latin1_swedish_ci	16 K	-
order_status	Browse Structure Search Insert Empty Drop	4	InnoDB	latin1_swedish_ci	16 K	-
register	Browse Structure Search Insert Empty Drop	1	InnoDB	latin1_swedish_ci	16 K	-
roles	Browse Structure Search Insert Empty Drop	3	InnoDB	latin1_swedish_ci	32 K	-
sub_courses	Browse Structure Search Insert Empty Drop	7	InnoDB	latin1_swedish_ci	32 K	-
tables	Browse Structure Search Insert Empty Drop	15	InnoDB	latin1_swedish_ci	16 K	-
userorder	Browse Structure Search Insert Empty Drop	0	InnoDB	latin1_swedish_ci	16 K	-
users	Browse Structure Search Insert Empty Drop	3	InnoDB	latin1_swedish_ci	32 K	-
12 tables	Sum	196	InnoDB	latin1_swedish_ci	272 K	18

VI. CONCLUSION

The application is capable of tackling the issues mentioned above and also be able to impulsively aid consumer satisfaction. Feasibility and efficiency of such a system won't degrade as majority of the job is based on software parameters and whatever hardware is being used is not so high end to not be cost efficient. A module of the project also ends up attracting customers whenever the admin feels like announcing any sort of offers which help build customer owner relationship in a better way.

REFERENCES

- [1] M.H.A. Wahab, H.A. Kadir, N. Ahmad, A.A. Mutalib and M.F.M. Mohsin, "Implementation of network-based smart order system," International symposium on Information Technology 2010.
- [2] Cormac O'Connell, Restaurant Assignment.
- [3] "QOrder" The portable ordering system for Android devices.
- [4] Advanced Analytical, Inc (October 2004) "LRS Restaurant Server Pager", Available http://foodsoftware.com/Product_0132.asp.
- [5] GHIRS: Integration of Hotel Management Systems by Web Services * only used or utilized for studying and analyzing of the topic only.
- [6] https://developer.blackberry.com/playbook/android/documentation/sys_requirements_playbook.html.