Simplified Ipad Ordering System For Hotels

C.Goutham thapa[1] Mr.Arthik Daniel Das[2]
[1]U.G. Student [2]Assistant Professor
[1,2]Department Of Computer Science and Engineering
[1,2]Saveetha School Of Engineering, Saveetha University,Thandalam, Chennai, India.

Abstract— Simplified Ipad Ordering System for Hotels is an IPad application based project. It will give restaurant customers access to menus of food items organized in categories. Customer will have quick access to menus of food and other items with simple navigation, up or down swipes to vertically scroll through food and other items. This application can be used in two ways. Customer also can access to the ipad or else the hotel waiter can serve over several tables with a single ipad. Once the order is done, the push message will be sent to the kitchen POS (point of sales). A push notification will be appear in the monitor available in the kitchen. The push message contains table no, list of item with needed ingredients. Customer can order multiple numbers of items with their choices. The ordered items contains item id, item quantity, table no, date & time and device id. It can overcome the human error while taking the order. The application have search bar option which helps the customer to search and select the items. Search bar makes easy of access to the needed items fast. Customers also can add the several items to their favorite block. Even feedback, like, unlike, email and printing options are available.
Key words: customer, push notification, items.

I. INTRODUCTION

Digital systems are using in many kind of busibess sector. Here this project uses digital system in hotel ordering applucation. Most of people want something new scenario in many criteria. So hotel ordering system is developed using the digital technology. POS stands for piunt of sales which is used in this application. pos systems are used to provide the push notification once the user call any function the push message will appear to the another pos system. This project uses xcode framework to develope using objective c programming language. This application is compatible with mac or ios platform. To overcome the time duratiion between taking the order in paper sheet and make a call to kitchen. If hotel spent some bulk of ammount to buy some ipads once, servant cost will be reduced. If hotel or restaurant has 20 servants at a time to work 7 to 10 servents are enough ti serve at a time. Monthly salary charge can be reduced.

II. SYSTEM ANALYSIS

A. Existing System

In current scenario, restaurant will have POS systems and the system will be accessed by the employees in the restaurant, customers don't have access to the system. This may increase the servant cost.

B. Proposed system

E-Menu application will provide restaurant customers with a tool to access menus of food items to make an order related to a restaurant. E-Menu is an intranet application which will replace the menu card. The customer will be given an iPad to access the menu; the customer can select the items and place an order. Once order is placed, it will send a push notification to the service manager and the manager will pass the request to the kitchen. If an item is not available the service manager will push back the customer item order request and customer will receive the message & will place order of some other item.

III. REQUIREMENT SPECIFICATION

A. Introduction

The requirements specification is a technical specification of requirements for the software products. It is the first step in the requirements analysis process it lists the requirements of a particular software system including functional, performance and security requirements. The requirements also provide usage scenarios from a user, an operational and an administrative perspective. The purpose of software requirements specification is to provide a detailed overview of the software project, its parameters and goals. This describes the project target audience and its user interface, hardware and software requirements. It defines how the client, team and audience see the project and its functionality.

B. Hardware and Software Specification

(1) Hardware Requirement
Hard Disk   : 80 GB and above.
RAM   : 512 MB and above.
Processor   : Pentium III and above.
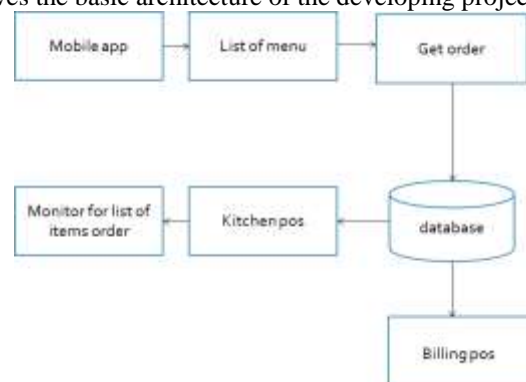
(2) Software Requirements
Operating System: Mac OS
Language   : Objective C
Database   : SQLite
Tools   : iOSSimulator
Framework   : XCODE 4.5

IV. SYSTEM DESIGN

A. Architecture Diagram

It gives the basic architecture of the developing project.

V. SYSTEM IMPLEMENTATION

A. Modules and features Explanation:

1) Order Item

Order items contains item id, device id, item quantities, table no, date and time. This information is used to get and take item order.

2) Like and unlike items

Update like, unlike, product id and Facebook user id for a like and unlike item and return update status success or failure.

3) Search

Get filter menu item categories and its search criteria. Get items based on the search criteria applied.

4) Favorites

Get favorites items of all or particular customer based on the customer and their friends Facebook ID. Even the customer can make their own favorites items list and can access it wherever they want.

5) Push notification

Push notification based on the restaurant server action for an order made. This notification is displayed in both the kitchen POS and customer ipad.

B. Experimental analysis:

This screenshot displays list of items that in available in the restaurant and it also provides the facility to search for the customers needed food recipes.
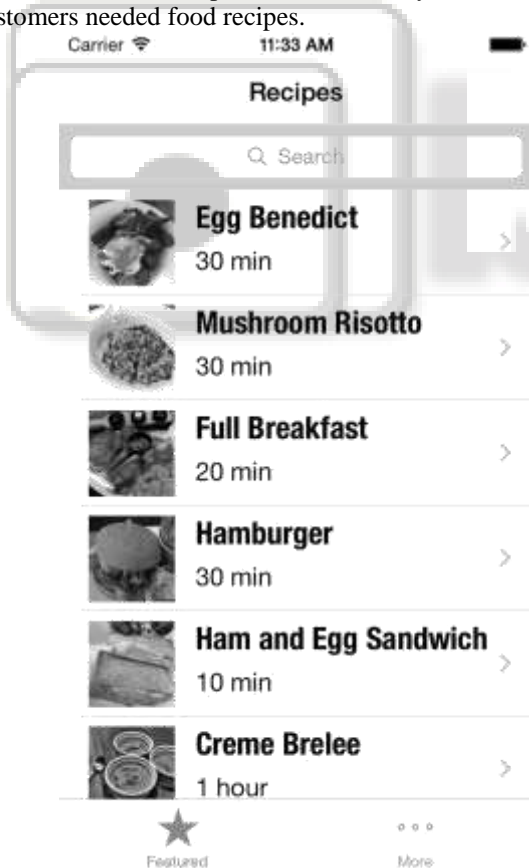
The search field feature in this application makes the possibilities to the customer to search their required food item quicker and easier manner. When a user starts a search, the search display controller will superimpose the search interface over the original view and display the search results. Interestingly, the results are displayed in a table view that's created by the search display controller. The available delegates that let you interact with the search result and search bar:

- The search results table view's data source, which is needed to provide the data for search result table.
- The search result table view's delegate, which is used to respond to the user's selection of a search item.
- The search display controller's delegate, which responds to the events such as when the search starts or ends and when the search interface is displayed or hidden.
- The search bar's delegate, which is responsible for responding to changes in the search criteria.
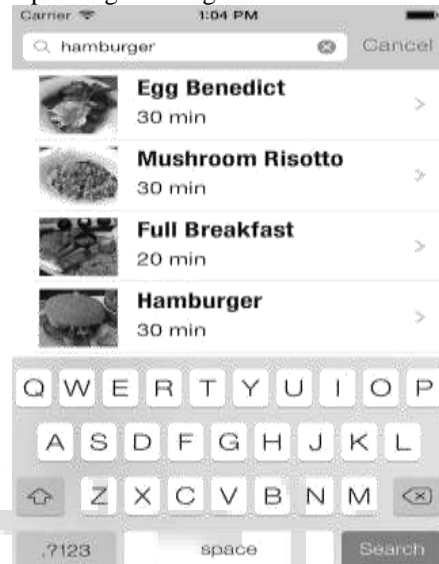
The search feature is particularly important when you need to display tons of information in table view. Once the customer selects the particular item the ingredients detail will be display.

The ingredients detail can be modified by the customer as per their needs and the time required to prepare the item is displayed in the window.

VI. CONCLUSION

We have proposed the digital technology in hotel ordering system. Development of Simplified Ipad Ordering System for Hotels is a challenging task. Now a day's most of people are aware of digital system usage and they know to use it too. It can overcome the human error while taking the order. More on in advance this project can be developed with even more features such as the robot taking the order with ipad.

REFERENCES

[1] P. Lessel, M. Böhmer, A. Kröner and A. Krüger, "User requirementsand design guidelines for digital restaurant menus," Proceedings of the 7th Nordic Conference on Human-Computer Interaction: Making Sense Through Design , pp. 524-533

[2] S. Pieskä, M. Luimula, J. Jauhiainen and V. Spitz, "Social Service Robots in Wellness and Restaurant Applications.," Journal of Communication and Computer, Vol 10, No. 1, 2013, pp. 116-123.

[3] T.-H. Tan and C.-S. Chang, "Development and evaluation of an RFIDbased e-restaurant system for customer-centric service," Expert Systems with Applications 37 (2010), pp. 6482–6492

[4] P. Baranyi and A. Csapo, "Definition and synergies of cognitive info communications," Acta Polytechnica Hungarica 2012; 9(1), pp. 67– 83, 2012.

[5] G. Sallai, "The Cradle of the Cognitive Infocommunications," Acta Polytechnica Hungarica Vol. 9, No. 1, pp. 171-181, 2012.

[6] E.W.T. Ngai, F.F.C. Suk and S.Y.Y. Lo, "Development of an RFIDbased sushi management system: The case of a conveyor-belt sushi restaurant," Int. J. Production Economics 112 (2008), pp. 630 -645

[7] Y. Qing-xiao, Y. Can, F. Zhuang and Z. Yan-zheng, "Research of the Localization of Restaurant Service Robot," International Journal of Advanced Robotic Systems, Vol. 7, No. 3 (2010), pp. 227-238

[8] E-Table™, The unique restaurant interactive ordering system Available at: http://www.e-table-interactive.com/, Accessed 3.10.2013

[9] eMenu International™ Interactive menus, Available at: http://www.emenu-international.com. Accessed 3.10.2013

[10] Bankok's Robot restaurant. Available at: http://travel.spotcoolstuff.com/unusual restaurants/bangkok/hajimerobot-restaurant , Accessed 3.10.2013

[11] Restaurant Service Robot FURO-R. Available at: http://www.futurerobot.com/contents_eng/s b42.html.

[12] China's first robot restaurant. Available at:http://www.designboom.com/weblog/cat/16/vie w/12648/chinas-firstrobot-restaurant.html.

[13] A. Ward, "Mechanic masterchef: Robots cook dumplings, noodles and wait tables at restaurant in China," Available at: http://www.dailymail.co.uk/news/article 2261767/Robot-RestaurantRobots-cook food-wait-tables Harbin.html#ixzz2g4fSvwhz,

[14] Restaurant Service Robot Platform (2006~2008). Available at: http://robot.kaist.ac.kr/?page_id=334,

[15] C. Granata, M. Chetouani, A. Tapus, B. Bidaud, and V. Dupourqué, "Voice and graphical -based interfaces for interaction with a robotm dedicated to elderly and people with cognitive disorders," 19th IEEE International Symposium on Robot and Human Interactive Communication. Viareggio, Italy, 2010, pp. 785-790

[16] K. Sääskilahti, R. Kangaskorte, S. Pieskä, J. Jauhiainen and M. Luimula, "Needs and User Acceptance of Older Adults for Mobile Service Robot," Ro-Man 2012, 21st IEEE International Symposium on Robot and Human Interactive Communication, Paris, France, 9-13 September 2012, pp. 559-564