FOOD ORDERING SYSTEM VIA WIRELESS

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DECLARATION

I hereby declare that this project report entitled
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is written by me and is my own effort and that no part has been plagiarized
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DEDICATION

To my dear supervisor
Prof. Dr. Shahrin b. Sahib@Sahibuddin

To my beloved parents
Mr. Ismail b. Wadin & Mrs. Norsiah bt Mohd Yusoff

To my siblings
Mohd Noorizhar b. Ismail

Noorikma Anis bt. Ismail

NurulFathi Zakiyyah bt. Ismail

To my beloved best friend
Mohd Bazli b. Hairirizaman

Muhd Fahimi bin Ismail

Muhammad Hadi b. Muhammad Kammarudin

Wan Syafidatul Ima bt Wan omar

And

Fellow Friends

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ABSTRACT

Food Ordering System via Wireless is developed in order to fulfill the Projek Sarjana Muda (PSM) requirements. The tools and software used to develop the system is Java Net Bean and Microsoft Access 2003. The report consists seven (7) chapters in and each chapter describes about each phases of the development. Starting with Introduction, Literature Review and Project Methodology, Analysis, Design, Implementation, Testing and Project Conclusion. It is hoped that the system will be enhanced in the future in order to make it more efficient to be used in other organizations.

ABSTRAK

Food Ordering System via Wireless adalah sebuah sistem yang dibuat atas tujuan memenuhi kehendak Projek Sarjana Muda (PSM). Peralatan yang digunakan dalam membangunkan sistem ini adalah Java Net Bean and Microsoft Access 2003. Keseluruhan laporan projek ini mengandungi tujuh (7) bab dan setiap bab menghuraikan setiap fasa pembangunan sistem ini. Bab dimulakan dengan bab Pengenalan, Ulasan Kesusasteraan dan Projek Metodologi, Analisis, Reka Bentuk, Pengaplikasian, Pengujian Sistem dan Kesimpulan Projek. Diharapkan sistem ini dapat diperbaiki dengan lebih baik lagi pada masa depan untuk menjadikannya lebih efisyen untuk digunakan di lain-lain organisasi.

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CHAPTER I

INTRODUCTION

1.1 Project Background

The project that I planned to developed for Project Sarjana Muda is a system entitled Wireless Ordering Food System 1.0. The objective of developing this system is to allow for a faster service, long with a higher quality and freshness of food served, thus avoiding unpleasant surprise for the customer, who would not have to wait for a long time to gets a plate of food.

By doing this, while the waiter gathers customers, customer only have to send details of the order via a wireless connected built in computers and the bartender or chef that will be equipped with the same device will be able to start preparing food that has been requested.

The waiters also will be equipped with small terminal equally connected to the network, which will be used to transfer the order to the kitchen where it will be printed and display.

Sometimes confusion, misunderstanding of the menu and discomfort of the consumer can also cause delays for the restaurant operator. The delay may have a significant effect on the commercial success of the restaurant, particularly for restaurants whose commercial viability depends on providing fast service. In addition, consumers who had an unpleasant experience when ordering at a restaurant may not return to that restaurant.

Processing and dispensing a food order using the method described above also requires the fast food restaurant to maintain a larger staff. This can increase the costs of operation of the restaurant. In addition, because consumers may

be confused or have difficulty seeing the menu, the restaurant may be required to devote greater amounts of space to the menu observation and ordering area of the restaurant. The extra space requirement may, in turn, reduce the ability of the restaurant to efficiently allocate space to other uses, such as seating or food preparation. The organization that will apply this system is a restaurant that will provide a faster and more efficient service.

Nowadays the restaurants only get waiters for ordering food. This will lead to a problem such as lack of specific ingredient, waited too long for taking orders from customer and various more. There are so many times in a restaurants where the waiter come back a minute after taking orders, to inform with sad expression that the food is unavailable.

Furthermore these technologies will also function the other way round, which is carrying information from the kitchen to the waiting staff. In fact, through this system the chef only have to prepare a meal or a dish and inform the waiter using a Wireless technology.

Once the project is completed, will have the first restaurant using wireless ordering food system, besides serving famous tasty specialties and will do it in technologies gaining terms of speed of service but also in taste and freshness.

1.2 Problem Statement

Basically the obstacles while developing this ordering system are achieving the logical and successful of the system. The problem that may be issue in this ordering system such as

1. Precise of the right menu served to the customer

    Accuracy in serving within a range of time

2. Placing order via wireless network instead of waiting for waiter/waitress for an order

    Placing order as soon as reach the dining table

3. Save information or data in a database

Purchase order made customer saved in a database

Ordered entered by customer will recorded an able to make any changes

1.3 Project Objective

The project objectives and problem solving:

1. To develop an ordering food system using wireless technology.
2. To develop a system with wireless connection.
3. To implement the network device able to communicate.
4. To look for the perfect software to developed the system and compatibility.

1.4 Project Scope

The project scope:

1. This system will be developed using Net Bean 6.0. This software is used to design the system graphical user interface during implementation phase.
2. This system will be developed for admin use, stand alone.
3. This system only limited 1 to 5 device connected.

1.5 Project Significance

The wireless ordering system provides a completely new way of ordering food. Furthermore this system is an automate order placement, save time, increase customer satisfaction, reduce orders errors and waste. More over the system work

orders provide a record of business activity that can be accessed for budget planning purposes and in the event of legal proceeding

   a. Customer – This person is principle customer who will order food and make payment.

   b. Waiter/waitress – This person that will served food to the customer

   c. Cash Collector – This person will accept the cash from customer and gives back the change

   d. Food preparation person – This person receives the order placed by the customer through internal order system.

1.6 Expected Output

Basically producing an ordering system that flows logically that might utilize in the future. Generating a new way of ordering system that successfully developed. Develop an ordering system that manage to stores information, add, delete and change data in the database.

1.7 Conclusion

In a nutshell, the project is based on the system objectives. The system is provided with Staff and customer application for food ordering system and built using Net Bean 6.8 software. It provides more convenient and accurate method for staff in the restaurants since orders are transferred to the kitchen immediately and display to the chefs for further process. In view of time saving, less time consuming by waiting and transferring order using wireless technologies. In other word this can minimize the waiting time spent at the restaurant. Apart from using wireless technologies, it can be extended by using mobile phone Wireless technology. Thus make the application more simplistic and robust.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHADOLOGY

2.1 Introduction

A growing fast food business requires fact and efficient services from its employee. Online food ordering systems experiencing a healthy position compared to using Wi-Fi in restaurant industry. While these technologies are adopted, there are still some of the restaurants who are in confusion of whether to go online or phone ordering system.

2.2 Literature Review

A literature review is a body of text that aims to review the critical points of current knowledge on a particular topic.The crucial element of all research degrees is the review of relevant literature. It might give a new interpretation of old material or combine new with old interpretations. Or it might trace the intellectual progression of the field, including major debates. And depending on the situation, the literature review may evaluate the sources and advise the reader on the most pertinent or relevant. So important is this chapter that its omission represents a void or absence of a major element in research. There are good reasons for spending time and effort on a review of the literature before embarking on a research project.

2.2.1 Domain

Domain names are now as important as a restaurant's physical setting. For this Wi-Fi ordering food domain will be ExpressStation.com. These are restricted on a first-come, first-serve basis, and for this reason are increasing in value at an alarming rate. In this case a good location is required in order to make significant difference in sales.

Basically the other related domain would be strategically advertising on well known domain name and it helps increase business and expands customer. Food Wi-Fi ordering system facilitates the food order and delivery process for customers and restaurants. Restaurants receive orders directly and make sure that food is delivered or ready to pick up within a specified amount of time without overwhelming hired help. From ordering to eating, wireless food ordering efficiency is at the forefront of every one's mind .In sum, wireless food ordering means saving time and money. Customers can place their orders ahead of time and avoid wait times while restaurants can serve more customers at a time. Additionally, customers ordering food at table and place their orders conveniently from a single interface.

For this reason, the literature review towards the Wireless Food Ordering System technologies and java language platform should be analysis in details so that it can help to reach the objective of this project system

2.2.3 Keyword

Wireless communication technologies enable people to easily exchange information. In this system it implements wire and wireless data access to the servers' food ordering through either notebook or PC's desktop, PDA's over a wire or wireless integrated local area network.

Server – The PC's Desktop which manage all orders that have been sent through the network. Collecting data/information sent by customer or client on the other side. This server equipped with all devices and ordering system installed in the Server Desktop.

Client – Sending orders / information to the servers. Servers prepared for the information to be served. At the client side, each table will be equipped with all devices such as desktop integrated with network that would be able to send information to the server.

Network –This ordering food will have a network interface and will have an IP address/hostname which can be "pinged." The server in this case is the workstation which manages the queue.

2.2.4 Previous Research

2.2.4 (a) Case Study1: The Application of Wireless Food Ordering System.

Khairunnisa K., Ayob J., Mohd. Helmy A. Wahab, M. Erdi Ayob, M. Izwan Ayob, M. Afif Ayob.

The rapid growing of wireless telecommunication and the Internet lead an industry that is gaining more customers every day. Since users did not separately use the system, then WFOS was developed to answer for the new demand. Web-based applications provide access to data and services from a remote server, which may in turn access databases distributed across the enterprise network or the Internet.

Web-based applications are the preferred method of accessing data remotely because they provide solutions that are easy to administer and user-friendly. The use of Internet protocols as well as subsets of World Wide Web formatting and coding standards for wireless applications has shorten the development cycle drastically and free up developers to concentrate on more important issues. Most of handheld device support these technologies and thus an excellent candidate for inclusion in solutions that required remote database access. As mobile devices become smaller, cheaper, better and more connected, they are changing the way people access and work with information. The convenience and powerful functionality offered by mobile devices

such as PDAs, has encouraged many industries to investigate the benefits of using them. Originally, the PDA was intended to be an electronic version of a "personal organizer"; however, with the introduction of more powerful CPUs, operating systems and memory, today's PDAs are being customized for great variety of applications. Unlike desktop PCs and laptops, mobile devices have many constraints such as screen display size, interaction techniques and bandwidth over mobile networks. Despite these constraints, PDAs are the preferred mobile device for business applications because they are highly portable, have the ability to communicate with PCs and can access information from remote locations. Recent studies have documented the potential of PDAs to link data on a PDA (client) to a central database (server) allows unlimited potential in developing point-of care applications and systems for patient data management. It has been demonstrated that there are several potential uses of PDAs as learning tools including using them for reading course materials and use as a communication tool for supporting activities such as real-time conferencing. In this work, the main purpose is to expedite and increase the service efficiency. Waiters take orders by ticking the menu on the PDA and send to the kitchen via web-based wireless application. The order then is displayed on a computer screen. After the food is ready, staff in kitchen can confirm it is ready and refresh the list using control panel button in a computer. This would also inform the waiter through PDA to deliver the food to the respective table. This system eliminates the need for a waiter to take an order using paper.

Advantages associated with the adoption of wireless technologies in restaurants include increased efficiency, greater speed of service, enhanced usability, improved accuracy, increased productivity and higher business profile.

2.2.4 (b) Case Study2: Ezee Launched New Online Food Ordering System

Author:Nevin

An innovative and ingenious new solution for the hospitality and retail F&B industry, eZee Foodie has been designed to meet and exceed the expectations of restaurant owners. The new system goes beyond just online food ordering through the restaurant' website and actually smoothens the entire food ordering process. As a complete restaurant ordering system eZee Foodie offers a variety of web-based modules that are easy to use, can be quickly implemented with an restaurant's website, and deliver unparalleled performance with minimal training requirements.

The user-interface of the software is highly intuitive and extremely user-friendly, and makes online food ordering a cake walk for the restaurant's customers. The online food ordering system in eZee Foodie is perhaps the most comprehensive one currently available in the market.

Fully scalable, the solution is equally effective for single restaurants, restaurant chains, pizza parlors, and restaurant portals. It can just as easily be implemented at take-way delis. The depth of the system covers everything from online food orders to customer records, food items with images, different food categories, and discounts and coupons.

Restaurant owners have the benefit of multiple administrative modules including one-click food item modification, multiple languages and currencies, variety of payment options and gateways, and simple and quick integration with their existing restaurant software. The best part about eZee Foodie is that is offers complete web-based access so that owners can view all online food ordering details for the restaurant remotely.

Sharing his excitement about the launch of the innovative new solution for the hospitality industry, eZee CEO Hitesh Patel has this to say, "For us, the restaurant industry is an intensely spirited one and the difference between a successful restaurant and a not-so-successful one is the swiftness of its service. While developing eZee Foodie, the only thought in our mind was, 'How do we make it simpler for the end-user and restaurant admin or owner? What would I need if I was the restaurant owner or customer who wants to place food order, or the restaurant

manager, or any one of the various restaurant executives using this system?' This allowed us to focus exactly on what is required in today's competitive market. We believe that in eZee Foodie, we have developed a very creative and winning solution for the restaurant industry."

2.2.5(A). Methodology that being used and the comparison in the system

I. Techniques that being used

Based on the technique observe in the system above, the design and implementation data access points for food ordering based on web based application or Internet. While for the current developing system is based on Graphical User Interface developing using Java. It provides standard windows object and graphic user interface that will make the program become user friendly. This software was installed in the PC that can function as a server to this application. This server will be located at the kitchen of the restaurant. Staff in the kitchen can operate that system to make the order.

For the Application Wireless Food Ordering System above, it uses PDA's as a client interface. This application did not contain any database since they only need to write the menu into the given space in the user interface. However for the current developing system uses only Desktop PC as communication or a client interface. For this system, clients have to check on the menu in the user interface. These applications contain a database that will stores the information and send to the server located in the kitchen.