# E-WAITER SYSTEM

NURUL IZZAH BINTI PUNIRAN

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

**BORANG PENGESAHAN STATUS TESIS**

JUDUL: E-WAITER SYSTEM

SESI PENGAJIAN: 2011/2012

Saya NURUL IZZAH BINTI PUNIRAN

mengaku memberikan tesis (PSM) ini disimpan di Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dengan syarat-syarat kegunaan seperti berikut:

1. Tesis dan projek adalah hakmilik Universiti Teknikal Malaysia Melaka.
2. Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan untuk tujuan pengajian sahaja.
3. Perpustakaan Fakulti Teknologi Maklumat dan Komunikasi dibenarkan membuat salinan tesis ini sebagai bahan pertukaran antara institusi pengajian tinggi.
4. ** Sila tandakan (/)

| | | |
|---|---|---|
| ____ | SULIT | (Mengandungi maklumat yang berdarjah keselamatan atau kepentingan Malaysia seperti termaktub di dalam AKTA RAHSIA RASMI 1972) |
| ____ | TERHAD | (Mengandungi maklumat TERHAD yang telah ditentukan oleh organisasi/badan di mana penyelidikan dijalankan) |
| __/__ | TIDAK TERHAD | |

(TANDATANGAN PENULIS)

Alamat tetap: No 12 Jalan Desa Mawar 2/11, Seksyen 2 Desa Mawar, Kampung Sungai Yu, Tanjong Karang, 45500,Selangor.

Tarikh: 15 JULY 2011

(TANDATANGAN PENYELIA)

Puan Ummi Rabaah Binti Hashim

Tarikh: 15 JULY 2011

# E-WAITER SYSTEM

NURUL IZZAH BINTI PUNIRAN

This report is submitted in partial fulfillment of the requirements for the Bachelor of Computer Science (Software Development)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2011

# DECLARATION

I hereby declare that this project report entitled

**E-WAITER SYSTEM**

is written by me and is my own effort and that no part has been plagiarized without citations.

STUDENT: _____ Date: _____

(NURUL IZZAH BINTI PUNIRAN)

SUPERVISOR: _____ Date: _____

(UMMI RABAAH BINTI HASHIM)

## DEDICATION

Dedicated to my beloved family especially my father, Puniran bin Saleh and my mother, Munah Mat Yah who has been supported and encourage me all this times. Your love and support always make me enthusiastic and courageous facing all challenges. I also dedicated this project to my friends that already help a lot in accomplishing this Projek Sarjana Muda.

## ACKNOWLEDGEMENTS

I would like to thank all that had helped me through and complete this project. Thanks to my supervisor, Madam Ummi Rabaah binti Hashim for guiding me and giving assistant to complete this project.

I also wish to say millions of gratitude to both my parents, Puniran bin Salleh and Munah binti Mat Yah because give fully support and motivation to me.

I give my appreciation also to all lectures that have guiding and teaching me. I also want thanks my friends that has been supported and gives encouragement and inducement when in distress.

## ABSTRACT

E-Waiter system is made to improve the current process of ordering menu in the restaurant. This project is focusing on the replacement of waiter service for ordering process. It will provide more systematic and time consuming process for customer and also to restaurant's staff. E-Waiter system will solve the problem of current system such as unfriendly service and menu that not updated. Using this system, restaurant can easily updated the menu by adding new menu that available. Meanwhile customer can take their time making ordering and directly choose the menu on the system that installed the customer table. The ordered menu will be directly sent to the kitchen to be prepared. This project is using agile methodology for develop the system. Agile methodology is suitable for this project because it respond to the changes of requirement and resulted software that meets customer's expectation. From the fact finding activities, the current system is analyze and identified the problem. The proposed system is also been analyze to make sure the problem that faced using current system can be solve. The design is derived from the analysis made, all diagram related to the system are produced. Once the design is done, project is proceed to the implementation of the system where the system is setup and configure. Testing is done according to components of test plan.

# ABSTRAK

Sistem E-Waiter dibuat bagi memperbaiki proses memesan menu di restaurant. Projek ini focus pada pengantian servis pelayan bagi process pemesanan menu. Ia akan menyediakan process yang lebih sistematik dan menjimat masa keda pelanggan dan juga pekerja restauran. Sistem E-Waiter akan menyelesaikan masalah yang dihadapi menggunakan proses yang sedia ada seperti service yang tidak mesra dan menu yang tidak diperbaharui. Menggunakan sistem ini, pihak restauran dapat memperbaharui menu dengan lebih mudah. Manakala pelanggan dapat meluangkan lebih masa untuk membuat pesanan dan memilih menu terus dari sistem yang dipasang pada meja pelanggan. Pesanan menu akan terus dihantar ke dapur untuk disediakan. Project in menggunakan metodologi *agile*. Metodologi *agile* sesuai dengan project ini kerana ia bertindak balas dengan perubahan keperluan dan menghasilkan perisian yang memenuhi jangkaan pelanggan. Daripada aktiviti mencari fakta, process yang sedia ada dianalisa dan dikenal pasti masalah. Sistem yang dicadangkan juga dianalisa bagi memastikan masalah yang dihadapi dapat diselesaikan. Rekabentuk adalah susulan daripada analisa yang telah dilakukan, semua gambarajah yang berkaitan dengan sistem dihasilkan. Apabila rekabentuk selesai, projek akan terus ke perlaksanaan sistem dimana sistem disediakan serta dikonfigurasi. Ujian dilakukan mengikut komponen perancangan ujian.

# TABLE OF CONTENTS

# LIST OF TABLE

# LIST OF FIGURE

# CHAPTER I

# INTRODUCTION

## 1.1. Project Background

Electronic ordering system has become new trend to attract a lot of customer especially teenagers who love experimental with technology. Some restaurants in Europe, United State and Japan have started using this system to improve their sales. Company like Microsoft Surface, Conceptic and Aska T3 has discovered and explore this technology which has high potential to be market. For example, in Israel, private company called Conceptic has distributed and installed the technology in sushi bars, pubs and family restaurants in Israel and other country. Their customer has agreed that the system has helped their sales increased.

This technology is targeting the restaurants that wish for uniqueness and need to reduce employee wages. Normally, restaurant will hired a lot of employee (such as

cook, waiter or cashier) to carry out business transaction. But some of worker might have unfriendly, sometime impatient due to stress or bad attitude. This not only might affect the restaurant performance, but also might make the customer feel uneasy and disappointed. If there are limited employees to serve the customer at the peak time, the customer might have to wait longer.

Using this system, customer can seat at their table and browsing the menu which are included with the picture of the menu. They can view the menu suggestion and other customer comment to help them choose their menu. After they have decided for the menu, the system will send the menu to kitchen to be prepared. The customer can also leave their comment about the menu. For the payment, customers need to go to the counter and employee will check the table number of the customer to display the menu ordered.

Restaurant owner might feel reluctant because of installing cost but they can save a lot of expenses for the long term rather than hiring inconsistent employee. This system can also become practical strategies to expand their business market.

## 1.2. Problem Statement

Usually, restaurant will hire employee to serve the customer but employee's attitude and manner respectively were different. Some of employee are unfriendly and undisciplined which make customer unsatisfied with the services. The restaurant might lose their potential customer if this situation happens. At peak hours such as lunch time, employee might not be able to serve customer nicely and customers are forced to wait longer. If the customer is impatient, they might leave the restaurant and find other restaurant with better and faster service. Restaurant owner also might face with

underemployment problem if some employee suddenly resigned. Restaurant owner also need to spend large amount of money to pay the employee's salary.

By using this system, customer doesn't need to face with bad attitude waiter that serves them. They also can take their time making ordering without feels rushed. The customer did not have to wait for waiter to take their order, they can choose the menu on the screen and ordered menu will be directly send to the kitchen to be prepared. Meanwhile restaurant owner doesn't need to spend a large amount of money to pay many employees, this will save a lot of business expenses. The performance of the employee will also be increased. This system also might increase the sales by attracting younger customer.

### 1.3. Objective

This project's objective are:

- Restaurant's staffs are able to upload, update make changes of menu or delete menu.
- Customer can view the menu which include with tempting picture from the screen.
- Customer can directly make the order using the system that attach to the customer table.
- Provide time efficient process where customer doesn't need to wait for the waiter for make an order.
- Restaurant can increase and decrease the number of table that wish to using the system.
- Give unique, self service and time efficiency environment compared conventional restaurant using waiter to serve customer.

## 1.4. Scope

This project focus on the replacement of waiter service for ordering process to more systematic and time consume using e-Waiter. This system will be use in the restaurant that looking for uniqueness and wish to attract more customers. There are two main users that will be using this system which are the customer and the authorized restaurant's employee which handle the menu. The authorized employee responsible to upload or change the menu list to the system. This menu will be soon display in e-Menu at the customer's table.

When the customers sit at table, they able to order food directly off screens at their tables, instead of depending on the employee to serve them. The menu list is attached with tempting picture to attract customer. Once the customer is decided for the menu, the menu will be send to kitchen to be prepared.

Once the customer ready to make payment, they need to go to the counter. The employee will check the table number and the system will display the menu that had been ordered included with the price. This system will be used only in the restaurant using Local Area Network (LAN).

## 1.5. Project Significant

- This system allowed the restaurant to change and update the menu list which provide customer with latest list of menu.
- Customer will have their own private space and able to choose the menu without feels rushed.

## 1.6. Expected Output

The new proposed system, e-Waiter system contains eight main modules that will be developed. The main modules are Login, My Account, Register New Account, Manage Menu, Table Settings, List of Menu, Menu Order and List of Menu Order. The current system is using manual method that using waiter to serve the customer. Modules in e-Waiter system will allow menu to be view, choose and order by customer.

## 1.7. Conclusion

The proposed project is to develop new system called e-Waiter system that improves the manual ordering process. The eight main modules will be developing which are Login, My Account, Register New Account, Manage Menu, Table Settings, List of Menu, Menu Order and List of Menu Order. The new system is taking advantages of technologies to change unexciting process to more attractive activities. The methodology approach that is used to develop e-Waiter system will be explained in the next chapter.

# CHAPTER II

# LITERATURE REVIEW AND PROJECT METHODOLOGY

## 2.1. Introduction

In the literature review, research about restaurant ordering system is made to have deeper knowledge on the process. The existing system using manual ordering system is defined and study. The agile methodology used for the development of the project is define and explain. It is important to ensure the development of the project is according to plan. All requirement like software, hardware and network requirement must be stated.

## 2.2. Fact and findings

Fact and finding is the method used to state the technique which are related to past research, references and other finding that related to the new system.

### 2.2.1. Domain (http://localhost)

The proposed new system is using local host as the system domain. The local host is suitable to displaying the html file used in the system, especially when use a server-side language such as PHP. The domain is right for the system because E-Waiter is only used for small area such as area of the restaurant where it is connected using Local Area Network (LAN). The advantages of using local host is there are no fee charges, it is more simply and easy to used.

### 2.2.2. Existing System

There is no same system like e-waiter use in Malaysia yet. But some restaurants in Europe, United State and Japan have started using this system. Company like Microsoft Surface, Conceptic and Aska T3 has discovered and explore this technology.

In Malaysia, most restaurant using the manual process for ordering. The current system operation manually done by the restaurant's staff called waiter. When customers enter the restaurant, they have to wait to be served. All customers are served by waiter where they will physically circulate the menu. Meanwhile waiter has to wait until the customers have made their decision on want they want. The customer order later send to the kitchen to be cooks.

Even though there are restaurant that using computerized system for example Pizza Hut restaurant, but the waiter still need to physically take the customer order. Then waiter needs to insert the customer order in the system to sent the order to kitchen to be prepare. There are also restaurant that using hand held ordering system such as Subaidah restaurant located near MITC, Ayer Keroh, Melaka.

## 2.3. Project Methodology

Methodology used for this project is agile methodology which consist four components. The components are scope, define, develop and evaluate. Agile methodology is suitable for this project because it respond to the changes of requirement and resulted software that meets customer's expectation.

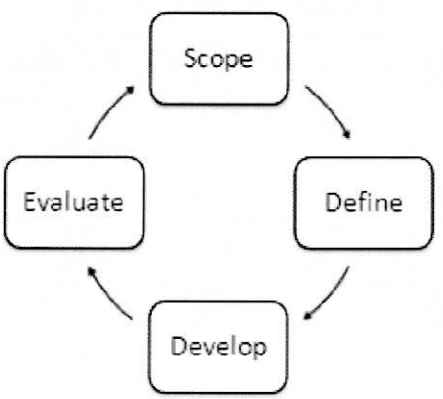


**Figure1 Agile method component**