Faculty of Computer Science and Information Technology

Food Ordering and Drive Thru Mobile Application

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(Information System)

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ABSTRACT

The Food Ordering and Drive Thru (FOADT) mobile application is an android application that allow the food seller to do business with the customer using the mobile application. This thesis describes the development of the android application that allow the food seller to do their business and buyer order food using mobile android application. A survey is taken place to understand the needs of food ordering mobile application among food hawkers. From the survey, we can know that the food hawkers think the efficiency in doing their business can be improved by using mobile application in doing their business. The time can be reduced by having payment and order earlier using mobile application. Hence, there is a need to develop a mobile application to support the food hawker to get the order and doing payment early from customer with this mobile application, it allows the process of business to be reduced and hence increase the efficiency of the business. In the proposed mobile application, the mobile application will recommend the food stall that is suit their liking and then they can chose from it and then order the food from the preferred food stall and then go to the food stall's location by follow the map shown in the mobile application in order to retrieve the food. This project still have flaw in online payment and can have some improvement in the future.

ABSTRAK

Food Ordering and Drive Thru (FOADT) adalah aplikasi android yang membolehkan penjual makanan melakukan perniagaan dengan pelanggan dengan menggunakan aplikasi mudah alih. Tesis ini menerangkan perkembangan aplikasi android yang membolehkan penjual makanan melakukan perniagaan dan pembeli memesan makanan menggunakan aplikasi android mudah alih. Satu tinjauan telah dilakukan untuk memahami keperluan yang kena ada pada pesanan aplikasi android makanan di kalangan penjual makanan. Dari tinjauan itu, kita dapat mengetahui bahawa pendapat penjual makanan tentang kecekapan dalam melakukan perniagaan mereka boleh diperbaiki dengan menggunakan aplikasi mudah alih dalam menjalankan perniagaan mereka. Masa process perniagaan dapat dikurangkan dengan melakukan pembayaran dan pesanan terlebih dahulu menggunakan aplikasi mudah alih. Oleh itu, terdapat keperluan untuk membuat aplikasi mudah alih untuk menyokong penjual makanan untuk mendapatkan pesanan dan membuat bayaran terlebih dahulu daripada pelanggan dengan aplikasi mudah alih ini supaya dapat membolehkan proses perniagaan dikurangkan dan dengan itu meningkatkan kecekapan perniagaan. Dalam aplikasi mudah alih yang dicadangkan, aplikasi mudah alih akan mencadangkan gerai makanan yang sesuai dengan keinginan pembeli dan kemudian mereka boleh memilih dari cadangan itu dan kemudian memesan makanan dari gerai makanan pilihan dan selepas itu pergi ke lokasi kedai makanan dengan mengikut peta yang ditunjukkan dalam aplikasi mudah alih untuk mengambil makanan itu. Projek ini masih ada kecacatan dalam pembayaran atas talian dan boleh ada peningkatan pada masa hadapan.

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1.0 Introduction

Sarawak is a state that has various races living together such as Malay, Chinese, Iban, Bidayuh, Melanau, Orang Ulu, Kayan Kenya and more which mean Sarawak have many different kind of food can be found from different kind of races that live at here. (Nading, N. , 2015). Some of these foods can be found at the food stall that operate at the roadside or inside a village. The food that are normally being sell is nasi lemak, kuih, burger, some finger food and drinks. They normally wait for the customer to come and then sell their food to them. However, there is some issue and problem in this way of operating their business. Hygiene is also become an issue when selling the food by having them exposed to outside environment for too long. It is better to have them packed early for the customer to buy it. Having a lot of car parking nearby the food stall may cause some problem such as traffic jam if they did not park it properly.

This thesis introduces the Food Ordering and Drive- Thru Mobile Application (FOADT). The FOADT is a mobile application that allow the people to look for the food stall and see the food that is being sold at there and can order the food through FOADT. Once ordered, the buyer can just drive to the place and take the food when it is ready. In addition, FOADT mobile application will recommend the food stall that has high reputation to the customer so they can have better choice to choose from. With the help of FOADT mobile application, it can help to solve those problem that every food stall that is normally facing and facilitate the customer in ordering the food.

1.1 Problem statement

Normally when people want to buy some food from the food stall that operate nearby the roadside, they will need to wait for the food stall owner to cook and pack their food before pay for it and take it away. This will take some of the time for the customer to wait and may disturb the traffic if the car is not properly park at the roadside. Although there exists mobile application for food ordering, it has not been used by the hawker. Hence, there is a need to investigate the potential usage of mobile application to improve the ordering process and business of the hawker.

1.2 Scope

This FOADT mobile application can be used by the people around the Bau area which has a lot of people doing the business nearby the roadside in a food stall. This mobile application can only be used for people that stay around these areas, whether it is the customer or the seller. This mobile application will allow the food stall seller to display the food that they are currently sell to the customer through the app and allow the customer to order and pay the food online. This mobile application also has map that allow the customer to see the map so they can drive to the food stall location to retrieve their food. In addition, FOADT can recommend food based on the rating of the buyers.

1.3 Objectives

The project will mainly focus on the following objectives:

1. To design and develop the FOADT mobile application.
2. To evaluate the effectiveness of the proposed system.

1.4 Methodologies

The methodology used to design and develop the FOADT mobile application is agile methodology. This methodology uses the iterative and incremental process models that put more concern on process adaptability and customer satisfaction by rapid delivery of software product. This model consists of 6 iterative phases that is Planning, Requirements analysis, Design, Implementation, Unit Testing and Acceptance Testing.

The project scope, schedule and method for implementation is decided in the planing phase. A list of activities is planned and listed in the Gantt chart. Several food POS system is being reviewed to plan and determine the methodology to be used.

In requirement analysis phases, a survey about the taking food order and some question about related on daily calculation, analysis and making decision on business will be conducted among the food stall and small restaurant inside UNIMAS.

The user interface is required in the next phase that is design phase. The functional and non- functional requirement will be included in the UI interface. The designing system flow is also create to show the procedure of FOADT and its output. Use cases is also will be create to describe the activities of the system between the different users.

During the implementation, android studio is used as the main platform for creating the GUI for the FOADT mobile application and for the back-end is the PHP. Python is used for implement the recommendation system. Mobile application is build using android studio by using Java and XML, therefore the programming language used is Java, XML and python.

A unit testing will be used to test whether the FOADT mobile application have fulfilled the requirement after the implementation phase is completed. In this phase, the program will be tested with several input and compare with the expected output. If the output is consistent with the expectation output, it is consider as pass and will consider fail if it is not consistent

according to Agile Alliance. If the result is negative, the iteration process will start again until its show positive result.

1.5 Significant of the project

This project will help people to be able to order the food through the mobile application to save the time for the customer to wait for the food stall owner to cook or pack the food and just need to drive to the food stall and take it away. People able to know the food stall rating is good or bad and know which one is recommended by the system. People able to enjoy good quality food because of the food is packed in time before it is exposed too much to the outside environment. The food stall owner able to get the credit, reputation and profit that they are supposed to earn and at the same time increase the satisfaction of their customer.

1.6 Project schedule

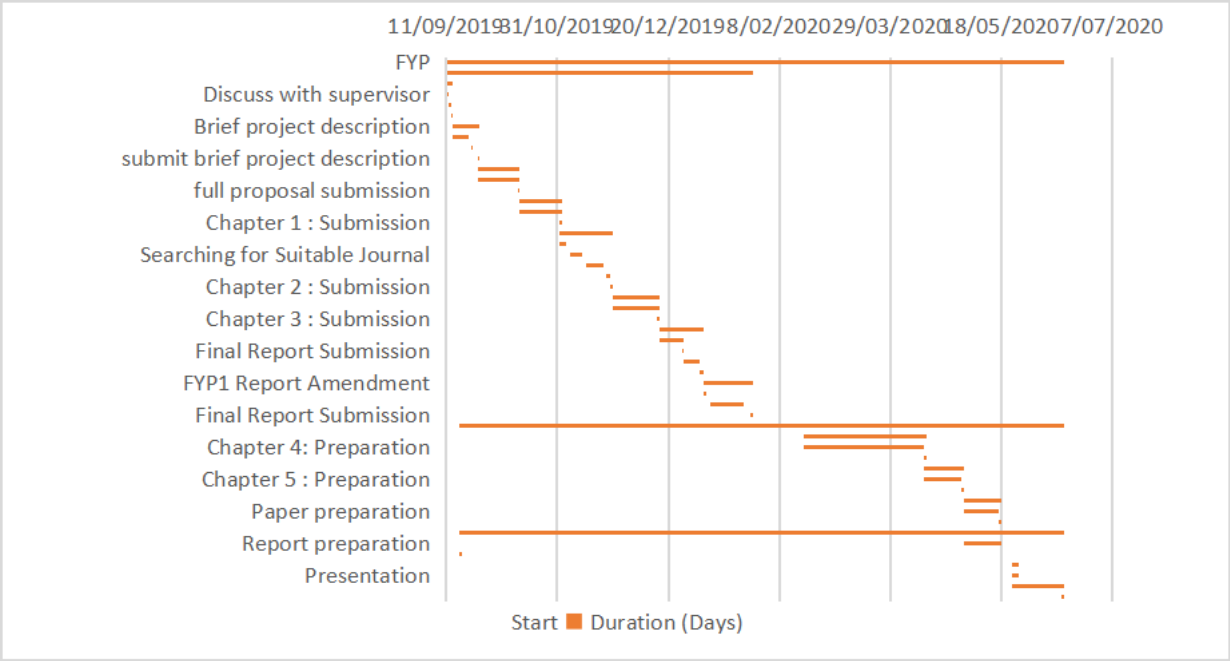

Figure 1.6.1 Gantt Chart