Faculty of Electrical and Electronic Engineering Technology

DEVELOPMENT AN ORDERING SYSTEM USING THE ODOO APPLICATION SYSTEM

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Bachelor of Electrical Engineering Technology (Industrial Automation & Robotics) with Honours

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DECLARATION

I declare that this project report entitled "Development an Ordering System using The Odoo Application System" is the result of my own research except as cited in the references. The project report has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

Signature : 

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Date : 29 / 12 / 2021

APPROVAL

I hereby declare that I have checked this project report and in my opinion, this project report is adequate in terms of scope and quality for the award of the degree of Bachelor of Electrical Engineering Technology (Industrial Automation & Robotics) with Honours.

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Date :

Signature :

Co-Supervisor :

Name (if any)

Date :

DEDICATION

Specially dedicated to my dearest parents, Mr Ahmad Sazilee B. Abdul Khairi and Mrs Roziah Hani Bt. Othman, thank you very for help and support me much during this project. To my supervisor Dr. Aliza Bt. Che Amran for her guidence, and lastly to my friends and family members, who strongly strengthen and supported me during my whole journey of learning.

ABSTRACT

Since time immemorial, waiters, pens, and papers have been used in restaurants especially for the need of taking orders, yet it is quite burdening for the restaurants. Regardless of that, up till now, most restaurants are still using this method to make any transaction that involved the process of recording food orders. The goal of completing this project is to describe and design an integrated online purchasing system for dine-in and takeaway purchases using the Odoo application system. The project also intends to solicit feedback from various restaurant owners by simulating the application. Furthermore, the project was carried out to compare and analyse the capabilities of the Odoo application system with those existing application systems. The key processes from the beginning till the end of this project had been demonstrated. This project includes dine-in and takeaway methods as well as the design of the system's shape which had been described by using block diagrams and flow charts. The overall results of a survey were conducted on Malaysia's existing food ordering application systems such as Foodpanda and GrabFood. Besides, the overall results of interviews were conducted with ten Tom Yum restaurants owners in Selangor and Putrajaya. Finally, the entire process of Ordering System Development Using Odoo Application System and suggestions to improve and develop the system had been concluded so that it is more efficient for future expansion.

ABSTRAK

Penggunaan kaedah melibatkan pelayan, pen dan kertas dalam pengambilan pesanan makanan di restoran adalah salah satu perkara yang agak membebankan dan masih belum dapat ditangani sejak dahulu lagi. Namun sehingga kini, kebanyakkan restoran masih menggunakan kaedah tersebut untuk membuat setiap transaksi melibatkan proses merekodkan pesanan makanan. Matlamat menyiapkan projek ini adalah untuk menerangkan dan mereka bentuk sistem pembelian dalam talian bersepadu dengan menggunakan sistem aplikasi Odoo untuk pembelian dine-in dan take away. Projek ini juga bertujuan untuk mengumpul pendapat pemilik restoran yang berbeza dengan mensimulasikan aplikasi. Selain itu, projek ini juga dilakukan untuk membandingkan dan menganalisis keupayaan sistem aplikasi Odoo dengan sistem aplikasi yang sedia ada. Semua proses utama yang terlibat dari langkah awal sehingga projek tamat telah ditunjukkan. Kaedah "dine-in" dan "take away"serta reka bentuk sistem ini turut diterangkan menggunakan gambarajah blok dan carta alir. Melalui projek ini, keseluruhan hasil dan rumusan tinjauan telah dibuat terhadap sistem aplikasi tempahan makanan sedia ada di Malaysia khususnya sistem aplikasi Foodpanda dan GrabFood. Selain itu, keseluruhan hasil temu bual bersama sepuluh pemilik restoran tomyam di sekitar Selangor dan Putrajaya turut dibincangkan. Akhir sekali, keseluruhan proses Pembangunan Sistem Pemesanan Menggunakan Sistem Aplikasi Odoo telah disimpulkan dan cadangan untuk penambahbaikan sistem telah disertakan agar pengembangan yang lebih cekap dapat dilakukan pada masa hadapan.

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CHAPTER 1

INTRODUCTION

1.1 Background Project

Nowadays, the relationship between humans and technology is inseparable at all. This is because information technology has influenced human daily needs. This can be shown by the increasing development activities in the field of technology in improving the country's economy. The use of computers today is very superior because it has the ability to process and store data more quickly and accurately.The restaurant is one of the places that supply hot ready -to -eat food. A food business requires highly efficient management in terms of food production, use of space and raw materials as well as labor productivity. This is because all customers who come to the restaurant want a short service time, good food and efficient service. Therefore, restaurant management needs to take early action in promising the best service for customers. There are many online food ordering systems for customers to place orders. For example, the very famous food applications such as Foodpanda and GrabFood. However, this application only focus on take away. Therefore, the Odoo system was introduced.

Overall, this project is to develop an ordering system using the Odoo application system. The ordering system is an online food ordering method. Food is ordered online and delivered to customers. Through this method, an online payment system may be used. The payment can be made via credit card, debit card and online banking. Therefore, in this project, the researchers designed a dine-in and take away system that allows customers to go online and place orders for their food. The Odoo application system can be known as open ERP or Enterprise Resource Planning. Open source ERP is a software system whose source code is available to the public. In this project Odoo application system has been used as the main system.

1.2 Problem statement

There were many new developments in food ordering technology. However, there were several restaurants still using traditional methods for the food ordering process. It is a manual process involving a waiter, pen, and paper. Most restaurants still use this method to make each food order transaction recorded on a piece of paper and the waiter sends the order paper to the kitchen for further processing. This method will have a negative impact on the restaurant because the food order paper may be interchangeable with another food order paper. It will cause most restaurants unable to serve customers in order and according to customer orders, especially during peak hours. Customers will feel less satisfied and will complain to the restaurant management. This can affect the relationship between the customer and the restaurant management.

Besides, restaurant operating costs will also experience economic inflation. When economic inflation occurs, the cost of each fresh ingredient used to support the daily operations of the restaurant will also be affected. Restaurants need to make changes to food prices accordingly so that they can maintain their profits. When food prices change by the restaurant, the cost of printing menu cards will also increase. Management will not know how often the restaurant experiences inflation in the economy. Information that has been printed on the menu card is very important because it will encourage customers to make different orders to the restaurant based on menu card information given to the customer. If every detail of food and drink changes, but the restaurant management did not update the menu card. This will lead to customer dissatisfaction against restaurants and conflicts will occur in the payment process.

Therefore, the effects described above have been led to the development of an ordering system using the Odoo system. This project explains an integrated online purchase system by using the Odoo application for dine-in and takeaway purchases. This project is also to design an

integrated online purchase system by using the Odoo application for dine-in and takeaway purchases. Besides, gathering the opinions of different restaurant owners has also been created by simulating this application to them.

1.3 Project Objective

In this study, few objectives will archive.

1) To explain and design an integrated online purchase system by using Odoo application system for dine-in and take away purchase.
2) To collect the opinion of different restaurant's owners by simulating the application.
3) To compare and analyze the capability of the Odoo application system with the existing application system.

1.4 Project Scope

In order to achieve the objective of this project, several important criteria need to consider:

1. The ordering system is explained that can accept orders data, send orders data to the restaurant kitchen and store data.
2. The ordering system is designed that can accept orders, send customer orders to the restaurant kitchen and store data by using the Odoo application system for dine-in and takeaway purchases.
3. Conduct a survey of user feedback and opinions on the level of user comfort, the level of system capabilities to users, and the level of confidence in existing systems in the Malaysian industry, particularly the Food Panda application system and the Grab Food application system.
4. This ordering system will simulate with 10 different Tom Yum restaurant owners to get their opinion about information from restaurant owners regarding the differences between

the Odoo application system and existing application system especially the Foodpanda application system and GrabFood application system in terms of their comfort of use, differences in system capability level, and their level of trust in capabilities of the Odoo application system.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This section discusses and summarizes overall an ordering system using the Odoo system concept and theory of the project. This chapter's main proposal was to explain past research and existing research. This chapter discussed the theory and concept used to solve this project's problem. Journals, articles and case studies are the main sources of information. These sources have been selected based on the project scope similarity.

2.2 Food ordering system

Online Food Ordering System is a method of ordering various foods and beverages from local restaurants and hotels via the internet while sitting at home or anywhere else. In addition, the order is delivered to the specified address. Nowadays, everyone is living their hectic schedules, whether they live in the city or in rural. However, when it comes to urban areas, particularly big cities, people are so busy with their lives that they do not have enough time to properly eat their meals. In today's world, women or men are equal in every field. Therefore, in big cities, even wives are working people, so most small families order their food from somewhere because they can lack tired[1].

Besides, the internet is widely used everywhere. People use the internet to perform their tasks every day, such as chatting with family and friends, communicating with colleagues, search information and many more. Internet is very convenient for people as almost everything can be done by internet. The telecommunication and internet have grown rapidly. There are some industries starting to apply this technology to their business. This will help their business be more efficient[2].

Finally, it is also extremely difficult to start a new small-scale business and live through the competition from the well-established and settled owners. In today's fast-paced world, where everyone is pressed for time, most people are meticulous when it comes to placing a food order. Customers today are drawn because not only placing an order online is very convenient, but also because they have visibility into the items offered, the price, and extremely simplified order navigation. The online ordering system that the researcher proposes greatly simplifies the ordering process for both the customer and the restaurant. The system displays an interactive and up-to-date menu with all available options in a user-friendly format. Customers can choose one or more items to place an order that will land in the Cart. Before checking out, customers can view all of their order details in the cart. Finally, the customer receives order confirmation information. Once the order is placed, it is entered into the database and retrieved in real-time. This enables restaurant employees to quickly review orders as they arrive and process all orders efficiently and effectively with minimal delays and confusion[3].

2.3 Food Ordering System Based on Research

2.3.1 Foodpanda

Foodpanda was founded in 2012 in Berlin, Germany, and has since expanded into a mobile food delivery marketplace that is now available in 11 countries. Since 2018, Foodpanda has expanded its operations in Malaysia. It provides cuisines from over 115,000 restaurants around the world. Users can use the service to order foods from local restaurants and place orders through the website or mobile application. Foodpanda's mission is to connect chefs and customers while providing delicious food. Foodpanda's food portal includes various food categories and restaurant menus, allowing customers to order food via applications or the website. The order will then be processed and sent directly to the partner restaurants. Following that, the employees will deliver

the food and remind customers to pick up their orders via SMS or phone call. The customer may pay with cash on hand or through online banking[4].

In the hustle and bustle of city life, customers prefer to spend their time working or studying rather than eating at restaurants. As a result, Foodpanda began operating its mobile commerce application business in a number of countries, allowing customers to order and enjoy their meals in just a few seconds using their magic fingers [13].

2.3.1.1 The Strength of Foodpanda

One of the benefits of using Foodpanda is that the number of eateries or restaurants available is greater than that of other convenient food delivery services. It has a large selection of restaurants to choose from that can meet the needs of a wide range of customers. Furthermore, users can order meals not only through the phone application, but also through the computer. If users are working in front of a computer, this can help them order food faster. Besides, users do not need a Foodpanda account to order food. While there are some advantages to having an account, such as saving users address so users do not have to fill it out again, keeping track of users food, and so on. Users can place orders as a "Guest" on Foodpanda. For anyone who needs to order food quickly, this can save a lot of time.

2.3.1.2 The Weakness of Foodpanda

Foodpanda has many advantages over other convenient food delivery services, but it also has some drawbacks in certain areas. Foodpanda, for example, rarely offers coupons when using their services when compared to other convenience food delivery services. People may be drawn to delivery services because of this different food. Next, anyone who selects "Cash on Delivery" as a payment method may run into a problem in which the food deliveryman does not have enough

cash to provide the balance. This is inconvenient if you only have RM20, RM50, or RM100 in your wallet and force the customer to pay more than they should.

2.3.2 GrabFood

GrabFood is an application menu provided by the Grab application that is used for food delivery and ordering. GrabFood offers a variety of pictures of the food menu as well as the prices for the food. Additionally, GrabFood offers a manual ordering system that allows users to order food based on their needs, allowing consumers to easily compare prices as well as the food menu they are going to. buy, whereas GrabFood will automatically calculate the cost of shipping to consumers based on the distance between the consumer and the shop or restaurant. By ordering food from the GrabFood application menu, the buyer or user avoids having to go to the shop to buy food or drinks. seller's shops, outlets, cafes, and even seller restaurants, because the transaction process will be handled by Grab couriers. The order will then be delivered to the buyer's or Grab user's address, and payment can be made in cash or with the Grab application user's balance[5].

2.3.2.1 The Strength of GrabFood

There are several advantages to using this GrabFood service. If the user uses the Grab application, which is available on smartphones. It makes it simple for users to order food from the comfort of their own homes. This is due to the fact that users are not required to leave the house in search of food. Users can enjoy the food they want simply by using GrabFood. Furthermore, users can save time because GrabFood will help you get food so that you can use your time for other things. It is easier for users to use vouchers because they can be used to order food, reducing delivery costs as well as the cost of the food itself [14].

2.3.2.2 The Weakness of GrabFood

Aside from the numerous benefits of GrabFood, there are some drawbacks, the most notable of which is the scarcity of restaurants. Because there are still few restaurants or places to eat that work with the Grab application, it's not uncommon for what you're looking for to be unavailable on GrabFood. Furthermore, the promotions available are still limited, which may be due to a lack of cooperation with other parties [14].

2.4 Odoo application system

Enterprise Resource Planning [ERP] is a term that is commonly used in large corporations. However, its widespread acceptance leads to the use of such systems in both medium and small-scale businesses. ERP systems are high-level systems that integrate the various business processes and information associated with a company. The primary goal of implementing an ERP system is to analyses and assist its users in making real-time decisions about its business processes.

SAP, Oracle, Microsoft, Sage systems, and other market leaders in developing and implementing ERP systems are listed below. These vendors offer a comprehensive ERP solution to their customers at a high cost. Specifically, they have a proprietary ERP software package that they customize based on the needs of the client. This approach made it difficult for small and medium-sized businesses to invest in an ERP system. This resulted in the introduction of open source-based ERP systems, which are less expensive than proprietary ERP systems and allow compatibility across different platforms, tools, plugins, and so on[6].

2.4.1 Open Source ERP System

Regardless of the size of the organization, open source ERPs are currently popular. This is primarily due to the high success rate of implementation in recent years, as well as the additional

benefits users will receive when compared to commercial ERP systems. Some of the primary advantages of an open source ERP system are listed below[7].

2.4.1.1 Cost-effective

As previously stated, open source ERP, systems reduce an organization's long-term business costs. To put it another way, an open source ERP system does not require a license to run. There are no maintenance costs associated with open source ERPs because the majority of them provide community-based support. Furthermore, these ERPs use open source databases, operating systems, and so on for their implementation, which are freely available and less expensive than commercial ERP systems [7].

2.4.1.2 Flexibility

In comparison to proprietary ERP systems, open source ERP systems offer greater flexibility. In many cases, when implementing an open source ERP system in a large company, a new interface is developed to meet the organization's business needs, making it less complex in nature. Generally, this interface will be in line with current business processes and will be removed from the system's framework. However, in a commercial ERP system, the existing interface must be customized, which complicates the system, and the end-user must sometimes adjust to the features already present in the commercial system, causing unwanted resistance from the user. When compared to commercial ERP systems, this flexibility allows open source ERP systems to easily upgrade to newer versions [7].

2.4.1.3 Complete Ownership

Another advantage of open source ERP systems is that organizations have complete control over the system and source code. Everything (both technical and domain information) about open source ERP systems is available online, and open source communities can provide additional

information. This reduces the client's reliance on the vendor and gives the client more flexibility in how the implementation is carried out. Having technical and domain expertise, the organization can implement the system itself or hire a vendor[8].

2.4.1.4 Quality Control

When compared to commercial ERP systems, open source ERP systems place a premium on system quality. This is due to the fact that the existence of open source ERP systems is based on the contributions and enhancements provided by passionate and independent developers who are obligated to provide unending support to open source technologies. As a result, a competition will emerge among these developers, prompting them to become active in the community, criticizing the code developed and providing valuable contributions to the community. Furthermore, unlike commercial ERP systems, open source ERP systems are built on other open source technologies, database models, and so on. This provides a solid foundation and flexibility to the open source system. This is not the case with commercial systems; if one of the technologies associated with the commercial ERP system becomes obsolete, the users who are associated with that system are isolated [8].

2.4.1.5 Simple to Upgrade

As previously stated, open source ERP systems are easier to upgrade than commercial systems. Customization in open source ERP systems is mostly done at the interface level, with no changes to the system's framework. Because the framework is unchanged, upgrades can be performed without disrupting the production server. OpenERP, OpenBravo, XTuple, ADempiere ERP Business Suite, and other open source ERP systems are available on the market today. OpenERP and OpenBravo stand out as the leading ERP solution providers among these systems. In a careful comparison of these two solutions, researchers discovered that OpenERP has an advantage over OpenBravo [7].

2.4.2 A Clearer Understanding of Open ERP

OpenERP has emerged as one of the most significant enterprise resource planning systems. OpenERP has grown tremendously since its inception in 2005, establishing itself as a leader in the small to medium-sized business community. As previously stated, OpenERP provides all of the advantages of open source ERP systems, including lower costs, flexibility, absolute ownership, quality assurance, and ease of upgradability[9].

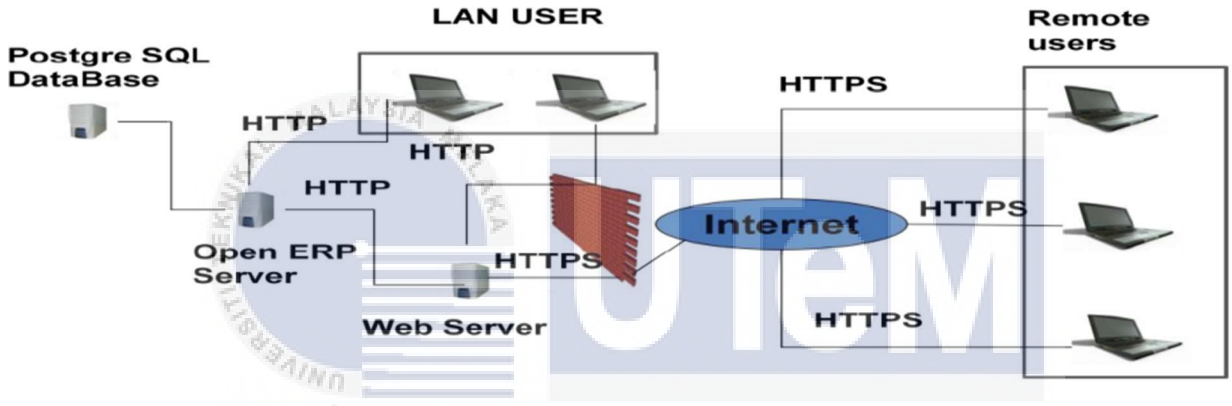


Figure 2.1: Architecture of OpenERP [9]

Based on 2.1, this section describes the architecture of the OpenERP system. For its ERP system, OpenERP makes use of open source technologies. The following are some of the key open source technologies used in the OpenERP system:

2.4.2.1 Python is a scripting/programming language

Python is a new and powerful dynamic programming language that is being used in a wide range of application domains. Python can be found everywhere. Python is compatible with the majority of operating systems, including Windows, Linux/Unix, and others. Python is a free and

open programming language that anyone can use. In other words, it is freely available for commercial use[10].

The following are some of the key features of the Python programming language [15]:

1. Python's structure is straightforward, with well-defined syntax and a small number of keywords.
2. Python source code is extremely simple to maintain.
3. Ensures platform compatibility across all platforms.
4. Python's interpreter is easily extendable, allowing users to efficiently customise their tools by adding low level modules.
5. Scalable, as it offers improved structure and support for large programmes.
6. Python supports graphical user interface (GUI) applications that can be linked using system calls and libraries.

2.4.2.2 PostgreSQL is a database server

PostgreSQL is a free and open source database system that supports object-relational mapping. It is a freely available and highly scalable technology, both in terms of storing large amounts of data and the number of users it can accommodate. Some active production environment systems can store and manage more than 4 terabytes of data. Aside from these features, it ensures the dependability, data integrity, and correctness of the data stored. PostgreSQL is compatible with nearly all major operating systems, including Linux, UNIX, Mac OS X, Solaris, and Windows. It supports C/C++, Java, .Net, Perl, Python, Ruby, Tcl, ODBC, and other programming languages through native programming interfaces. Yahoo, Facebook, Skype, Sony Online, and others are among PostgreSQL's most prestigious clients[11].

Item	Upper Limit	Comment
database size	unlimited	
number of databases	4,294,950,911	
relations per database	1,431,650,303	
relation size	32 TB	with the default `BLCKSZ` of 8192 bytes
rows per table	limited by the number of tuples that can fit onto 4,294,967,295 pages	
columns per table	1600	further limited by tuple size fitting on a single page; see note below
field size	1 GB	
identifier length	63 bytes	can be increased by recompiling PostgreSQL
indexes per table	unlimited	constrained by maximum relations per database
columns per index	32	can be increased by recompiling PostgreSQL
partition keys	32	can be increased by recompiling PostgreSQL

Figure 2.2: PostgreSQL Limitations [11]

2.4.2.3 Model View Controller (MVC) Framework

Model View Controller [MVC] is the framework that OpenERP uses. It is because ERP systems are complex information systems, it is always best to separate data (model) and user-interface (view) when developing a framework. This separation allows for the interface to be modified without affecting the data tables, and the data to be restructured without impacting the interface. MVC introduced the controller as an intermediate component to achieve this separation, which separates data access and business logic from data presentation and user interface [16].

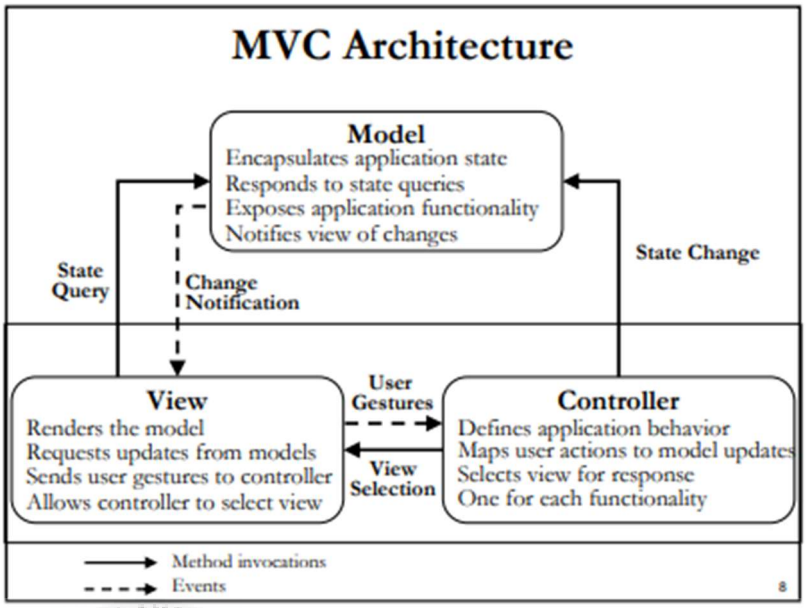


Figure 2.3 Architecture of Model View Controllers [16]

2.4.3 Odoo Is a New Brand for OpenERP

OpenERP fulfils its promise as an ERP system for all types of users, ranging from small to large-scale organisations. However, the OpenERP developers have expanded their vision far beyond the ERP system. Along with traditional ERP system features, they want to add more features such as a Content Management System for building interactive website solutions, an integrated E-Commerce for a robust online transaction service, and business intelligence efficient project management. Currently, the three new features function independently to form three distinct business entities in the corporate world. OpenERP is taking ERP systems to a new level by combining three powerful standalone features, and they call it Odoo (OpenERP 15.0).

Some of the most important features of Odoo (OpenERP 15.0) are:

1. Faster, more user-friendly, and much easier to configure

2. Significant enhancements to the existing applications by adding 732 tasks covering the majority of the applications.
3. A powerful Content Management System [CMS] and robust tools for creating interactive websites.
4. IPad/Android-based Point of sale is now available with full hardware vendor support compatibility, as well as a new Warehouse Management System [WMS] and CMS. As a frontend application, various user-oriented features such as online job postings, event booking, quotation generator, and electronic signature are provided.
5. A significant amount of framework tuning is done by introducing new API. Allow current OpenERP 7.0 users backward compatibility with older versions.
6. Obsolete and undesirable features of the previous version have been removed.

2.5 Summary

The Foodpanda and GrabFood systems have been clearly described based on previous theory and research. Previous researchers have also discussed the strength and weakness of the Foodpanda and GrabFood application systems. Based on previous research, the Odoo application system has been described. All of the benefits described show that the Odoo application system is extremely beneficial and can be used in any restaurant. The project as a whole can assist restaurant owners in efficiently managing their restaurants and simplifying the food ordering process for customers.

CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter describes the method used throughout this project entitled Development an Ordering System Using the Odoo Application System. In this chapter, the detailed description of the methods used in collecting information is also displayed. The applications used in the Odoo system are clearly described. The methodology involves the method of dine-in and take away and designing the form of this system is also explained using block diagram and flowchart so that the methodology can be understood based on each step that has been done by the researcher.

To ensure project objectives can be achieved as planned, the process of block diagram has been considered. All the key processes involved are shown, from the initial steps until the project ends. The elements listed below are outlines of the process, so if one of them cannot be met, the course of the project may not be able to realize the objectives of the project as stated in the proposal.

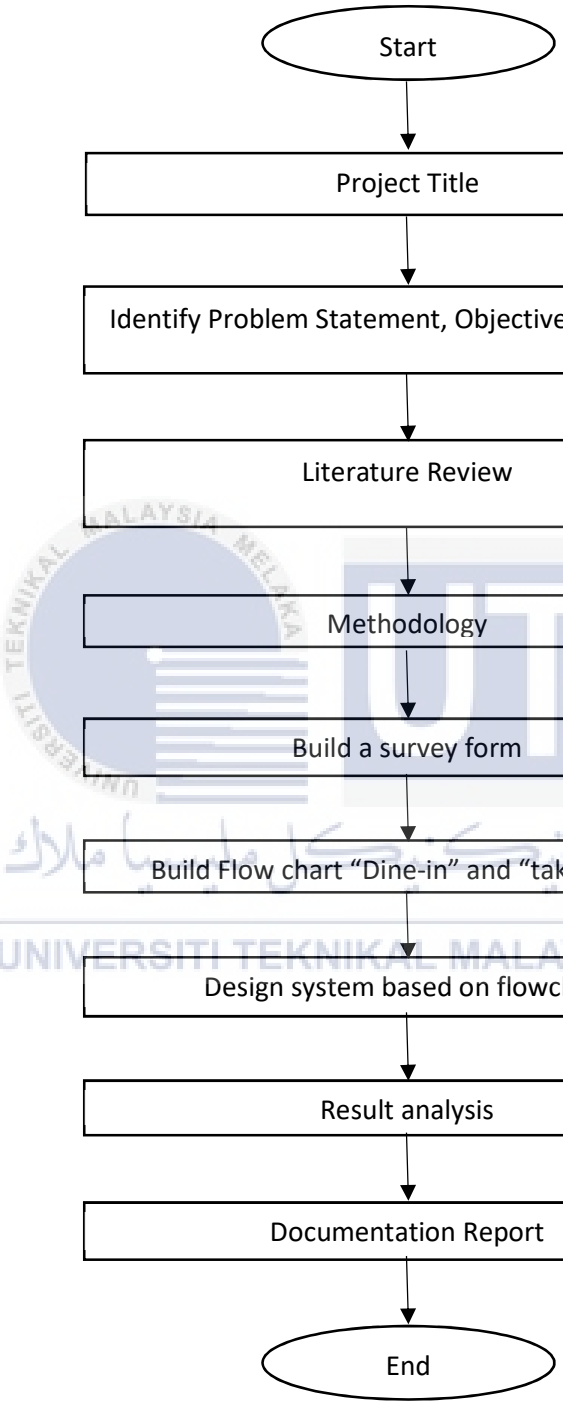


Figure 3.1: Overall Flowchart of Project

3.2 Survey Method

This project was implemented using data collection methods. The instrument used was through a survey. This survey aims to obtain information on user views related to the level of user comfort, the level of system capabilities to users, and the level of confidence about the existing system, especially the Foodpanda application system and GrabFood application system. The survey was conducted in the form of Google Form and was distributed to users using social media application such as WhatsApp, Instagram and Facebook.

In addition, interview instruments have also been used with restaurant owners. This interview aims to obtain point of view information from different restaurant owners regarding the differences between Odoo application system and existing application system especially Foodpanda application system and GrabFood application system in terms of their comfort of use, differences in system capability level, and their level of trust to see the capabilities of this system by running Odoo application simulations alongside them.

3.3 Project Sampling Method

Sampling method were used to collect data from the respondents. They have been selected to collect data based on the views of users and restaurant owners. Due to the large number of respondents for the researcher to collect data, the sampling method was done and selected using the method of Probability Sampling. In this method, there are several forms of techniques such as Simple Random Sampling (SRS), Stratified Sampling, Cluster Sampling, Systematic Sampling, Multistage Sampling and so on[12].

The method chosen in this project is a form of Simple Random Sampling (SRS) method. It aims to identify the level of user comfort, the level of system capability to users, and the level of confidence about the existing system especially the Foodpanda application system and the

GrabFood application system. It also aims to identify information from the point of view from different restaurant owners related to the differences between Odoo application system and other existing application systems especially Foodpanda and GrabFood systems from the many aspects. Among of the aspects are their comfort of use, differences in system capability levels, and their level of trust to see the capabilities of these systems by running Odoo application simulations with them.

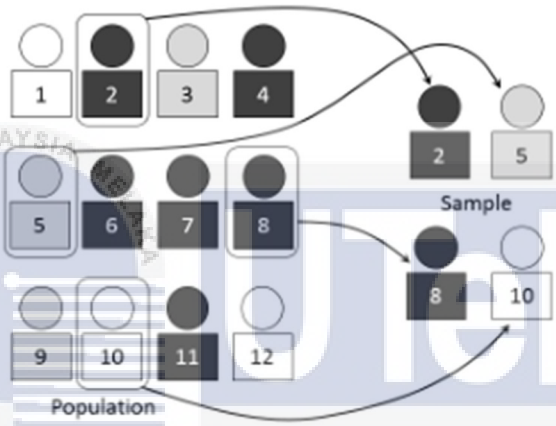
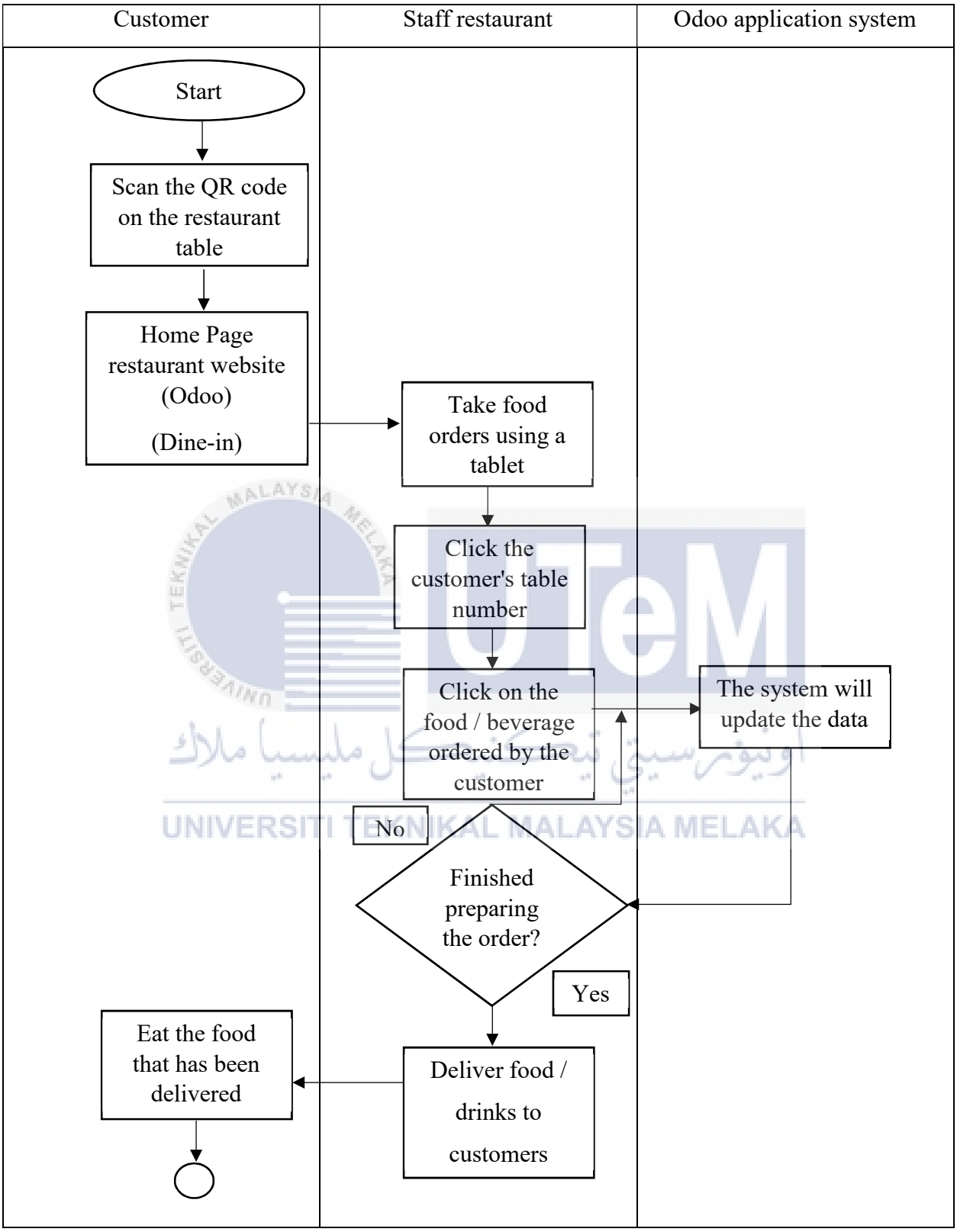


Figure 3.2: 'Simple Random Sampling' (SRS) [12]

3.4 Flowchart project

Flowchart is built to ensure that the process of food ordering system and receiving food by dine-in and take away using the Odoo application system can be implemented according to the sequence that has been planned.

This process is divided into two, there are dine-in and take away. Figure 3.3 shows the entire journey of ordering food and receiving food on a Dine-in basis. Based on figure 3.4, it shows the entire journey of ordering food and receiving food on a take away basis in this project. Flowcharts were used to explain the planned routes and processes of this system.



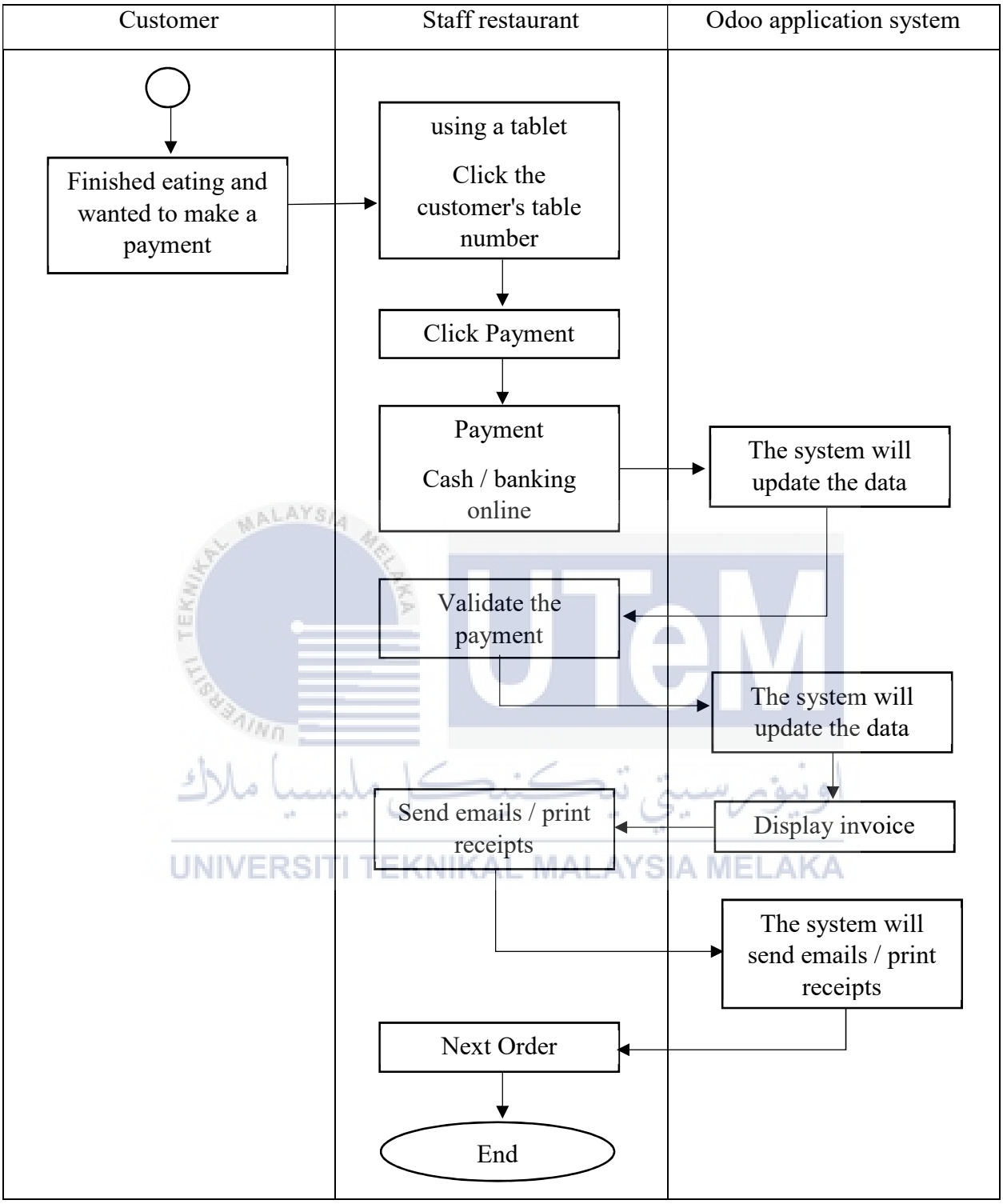
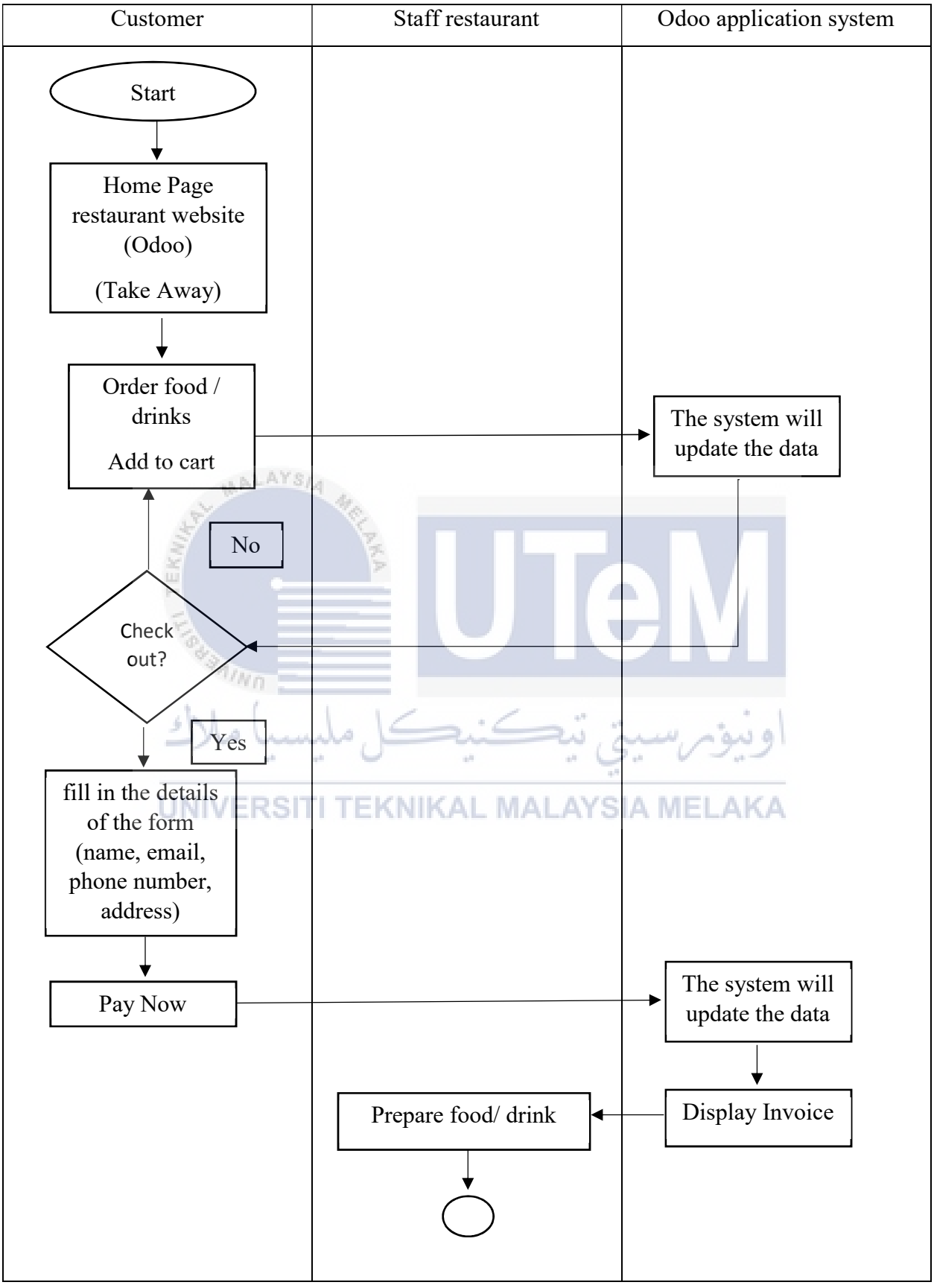


Figure 3.3: Flowchart of the 'Dine-in' process at the restaurant



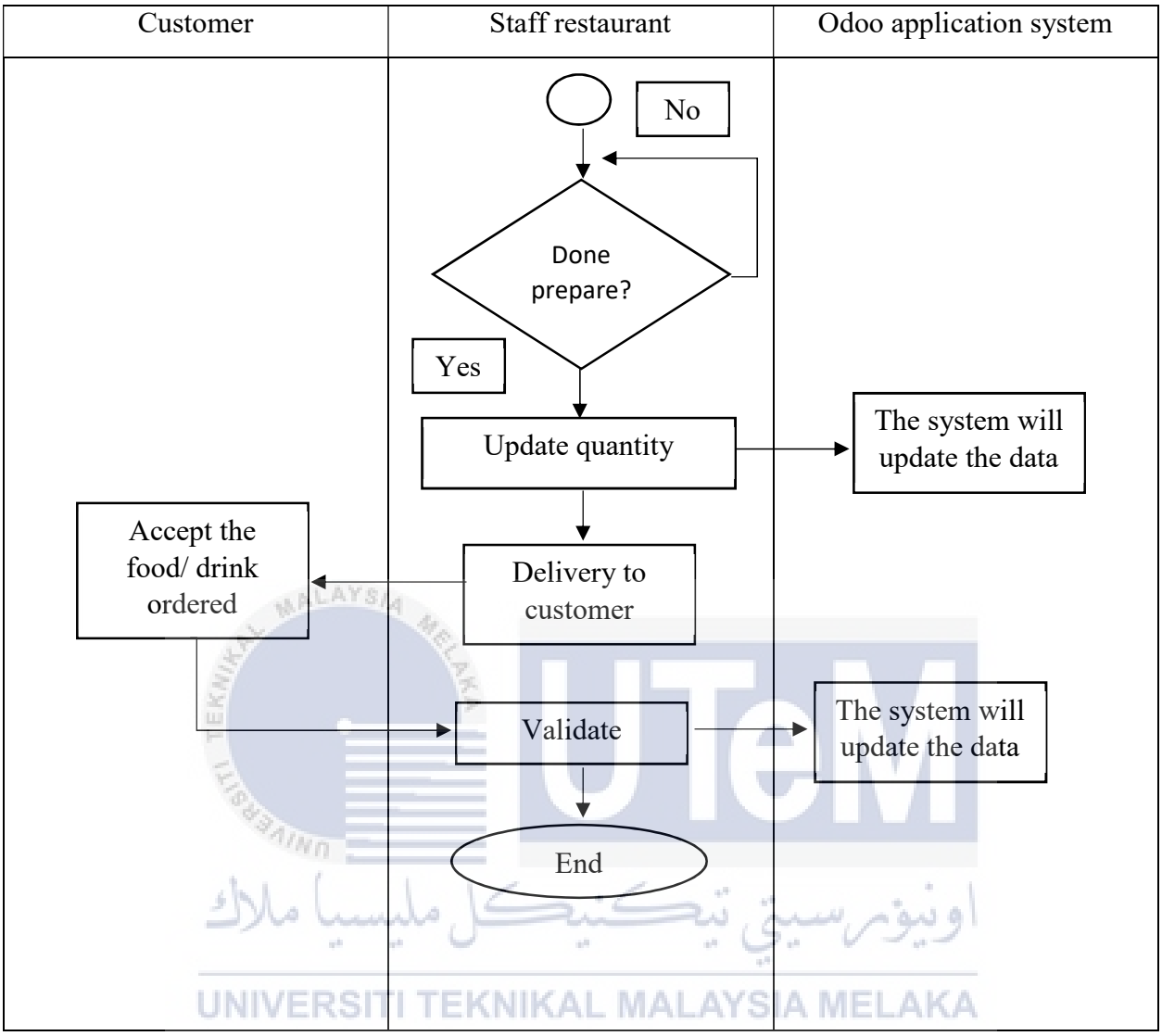


Figure 3.4: Flowchart of the takeaway process at the restaurant

3.5 System application used

This section describes each application in the Odoo application system that used to design this application. This project is also divided into 4 categories, there are inventory and material requirements planning (MRP) that's include Inventory application, Purchase application, and Manufacturing application. The next categories are sales category including Sales application and Point of Sales application. Other than that, it also uses finance category which is accounting

application and invoicing. The last category that have been used was website categories which include the website applications.

3.5.1 Inventory and Material Requirements Planning (MRP)

3.5.1.1 Inventory Application

Inventory applications are applications that can be used in warehouse management. Through this application, the management of sales between restaurant owners and suppliers in larger quantities can be simplified. In addition, the unit of measurement for each product in the transaction between restaurant owners and suppliers can be determined in this application. in this project, the inventory application configuration is updated as shown in figure 3.5.

Figure 3.5: Inventory application configuration

After the inventory application configuration is completed, the menu information is updated by category i.e. raw material, beverage category and food category as shown in figure 3.6.

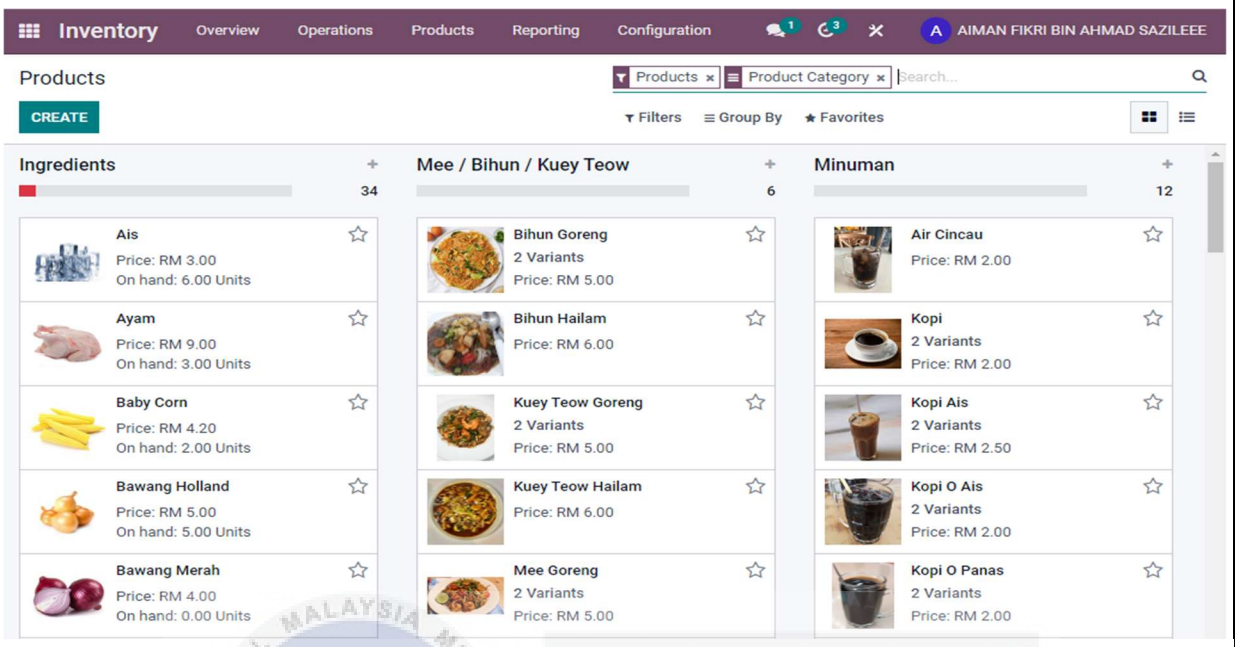


Figure 3.6: Beverage category and food category

This application also has a smart button where restaurant owners can view and update product variants, the number of incoming and outgoing products, the number of products that have been sold, and the number of ingredients (recipes). In the product information section, there are 2 categories, there are the can be purchased category and the can be sold category. Restaurant owners can select and specify the information of each updated product.

In this project, all the information required such as product name, general product information, product attributes and variants, purchase, inventory, and accounting are updated according to product requirements and categories as planned as per figure 3.7.

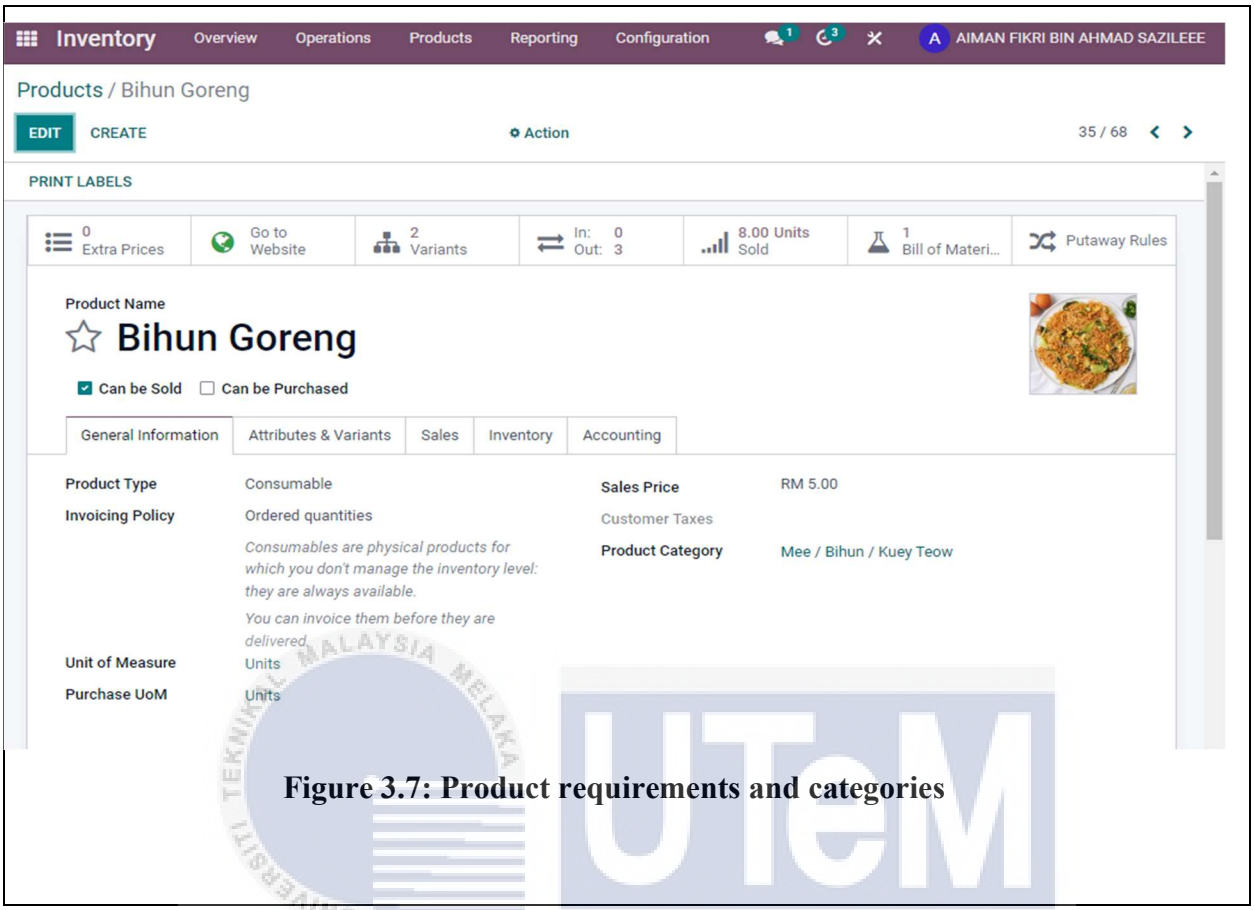


Figure 3.7: Product requirements and categories

3.5.1.2 Purchase Application

The purchase application in this project is to help restaurant owners keep track of purchase agreements, product prices and purchase orders with suppliers. When the quantity of product required has been reduced to minimum level of product quantity, the restaurant owner can create a new request quotation and specify the supplier company, product name, quantity of product required by the restaurant through product category as per shown in figure 3.8. The restaurant can also fill in additional information as per figure 3.9 to the supplier about the purchase representative, delivery, incoterm, payment term of the restaurant with the supplier.

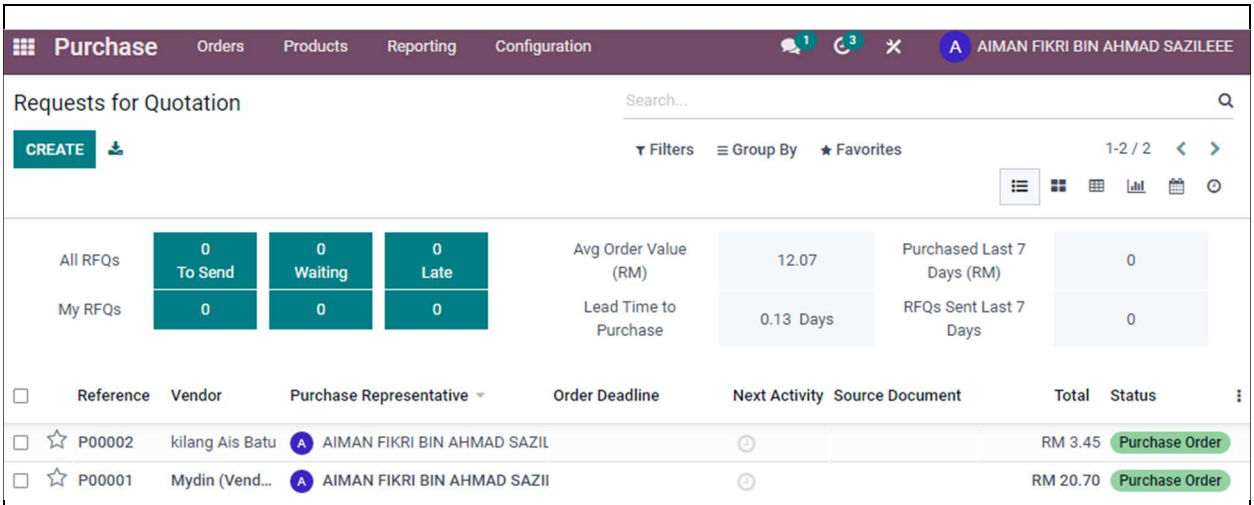


Figure 3.8: Request quotation

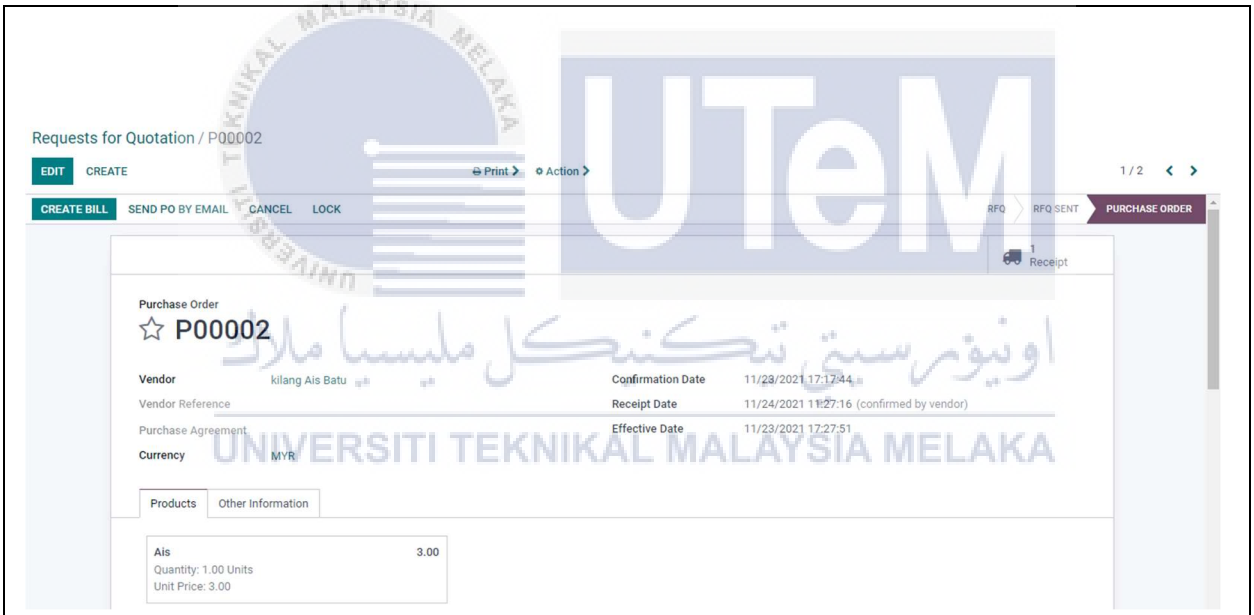


Figure 3.9: Additional information

3.5.1.3 Manufacturing Application

The manufacturing application in the Odoo application system serves to help restaurant owners schedule, plan, and process raw material orders to suppliers. This application used to create a bill of materials from the restaurant owner to the supplier. All minimum quantities and maximum

quantities of each product in this project can update in the inventory application. After that, the system automatically generates a manufacturing order if the product available by hand is less than the minimum value as per figure 3.10.

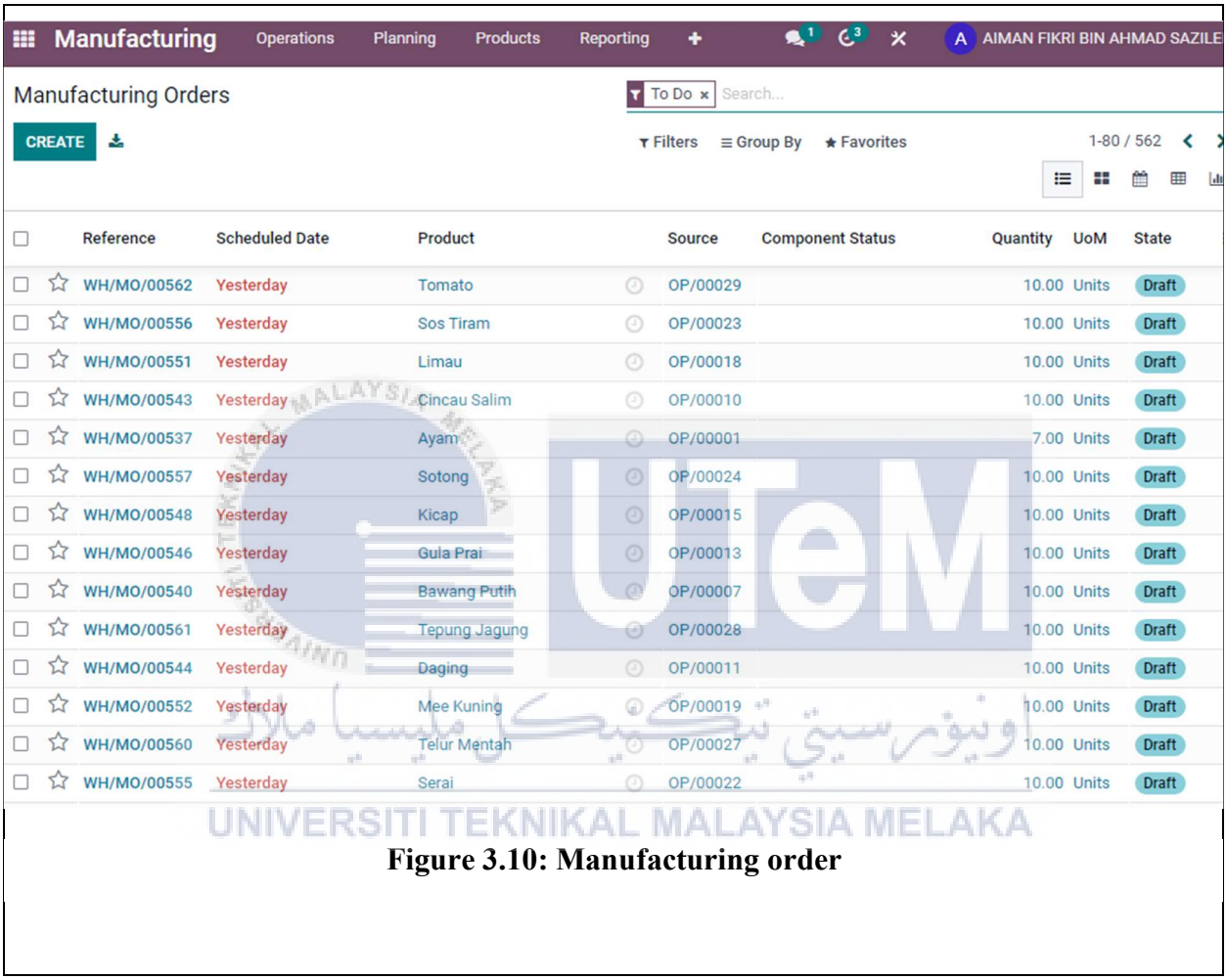


Figure 3.10: Manufacturing order

3.5.2 Sales Category

3.5.2.1 Sales Application

In this project, all configurations related to the sales application have been updated as shown in figure 3.11 to suit the suitability and continuity needs of this project.

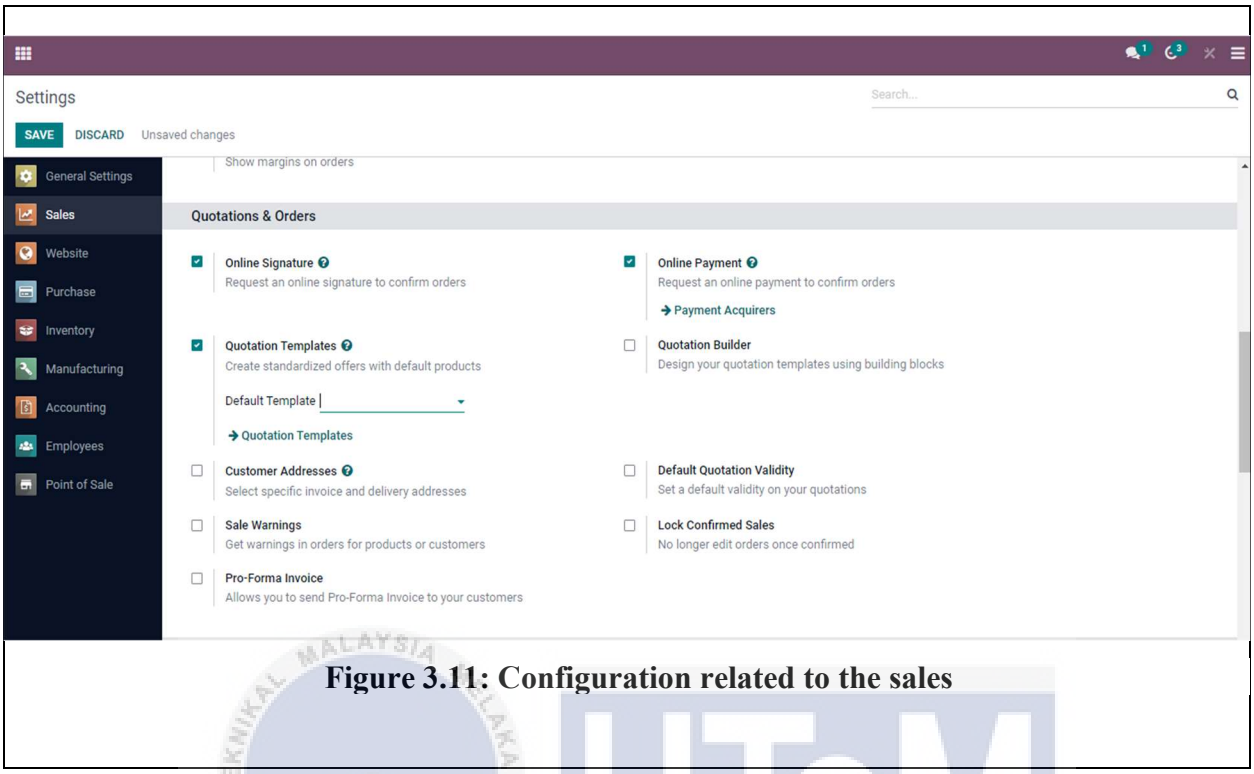
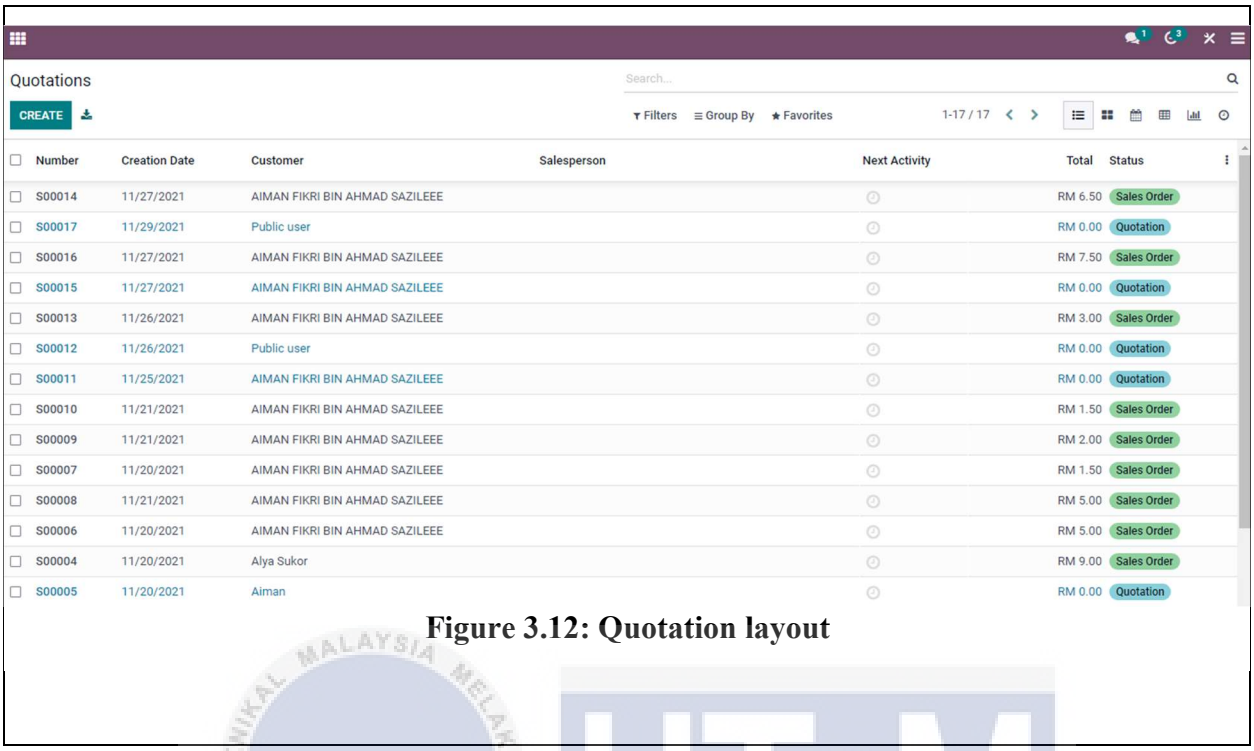


Figure 3.11: Configuration related to the sales

Before this application can be used, restaurant owners need to update company data, quotation layout and payment set so that the product payment process either from customers or suppliers can be implemented. Throughout this application all orders that have been ordered by customers will be automatically included in this application.

In this project, all data has been set as test mode for the payment process. This application will display the order number, date, customer name, the amount to be paid by the customer, and the status of the order.



Number	Creation Date	Customer	Salesperson	Next Activity	Total	Status
S00014	11/27/2021	AIMAN FIKRI BIN AHMAD SAZILEEE			RM 6.50	Sales Order
S00017	11/29/2021	Public user			RM 0.00	Quotation
S00016	11/27/2021	AIMAN FIKRI BIN AHMAD SAZILEEE			RM 7.50	Sales Order
S00015	11/27/2021	AIMAN FIKRI BIN AHMAD SAZILEEE			RM 0.00	Quotation
S00013	11/26/2021	AIMAN FIKRI BIN AHMAD SAZILEEE			RM 3.00	Sales Order
S00012	11/26/2021	Public user			RM 0.00	Quotation
S00011	11/25/2021	AIMAN FIKRI BIN AHMAD SAZILEEE			RM 0.00	Quotation
S00010	11/21/2021	AIMAN FIKRI BIN AHMAD SAZILEEE			RM 1.50	Sales Order
S00009	11/21/2021	AIMAN FIKRI BIN AHMAD SAZILEEE			RM 2.00	Sales Order
S00007	11/20/2021	AIMAN FIKRI BIN AHMAD SAZILEEE			RM 1.50	Sales Order
S00008	11/21/2021	AIMAN FIKRI BIN AHMAD SAZILEEE			RM 5.00	Sales Order
S00006	11/20/2021	AIMAN FIKRI BIN AHMAD SAZILEEE			RM 5.00	Sales Order
S00004	11/20/2021	Alya Sukor			RM 9.00	Sales Order
S00005	11/20/2021	Aiman			RM 0.00	Quotation

Figure 3.12: Quotation layout

3.5.2.2 Point of Sales Application

The Point of sale application is a fully integrated application that allows all transactions to be performed. In addition, this application also registers products, transfers product data into restaurant stock automatically and provides restaurant owners with real -time statistics. All configurations of this application have been updated by the researcher according to the needs of the project.

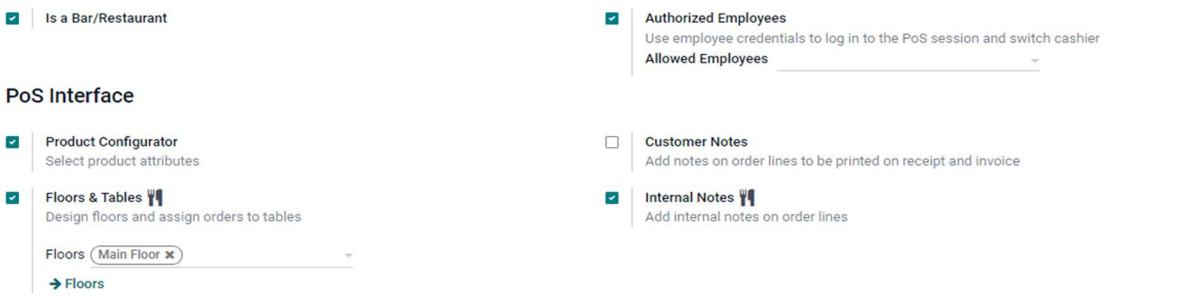


Figure 3.13: Point of sales

In this project, the point of Sales application serves as a customer who comes to the restaurant as a dine-in. By using this application as well, restaurant owners can design the position of the table according to the suitability of the restaurant floor plan. This function makes it easier for restaurant staff to work more effectively as shown in figure 3.14. by simply using a tablet, staff can select the customer's desk number and need to enter orders received from customers. After the customer's table number has been dialed, all dining menus will be displayed as per figure 3.15.

Figure 3.14: Table layout

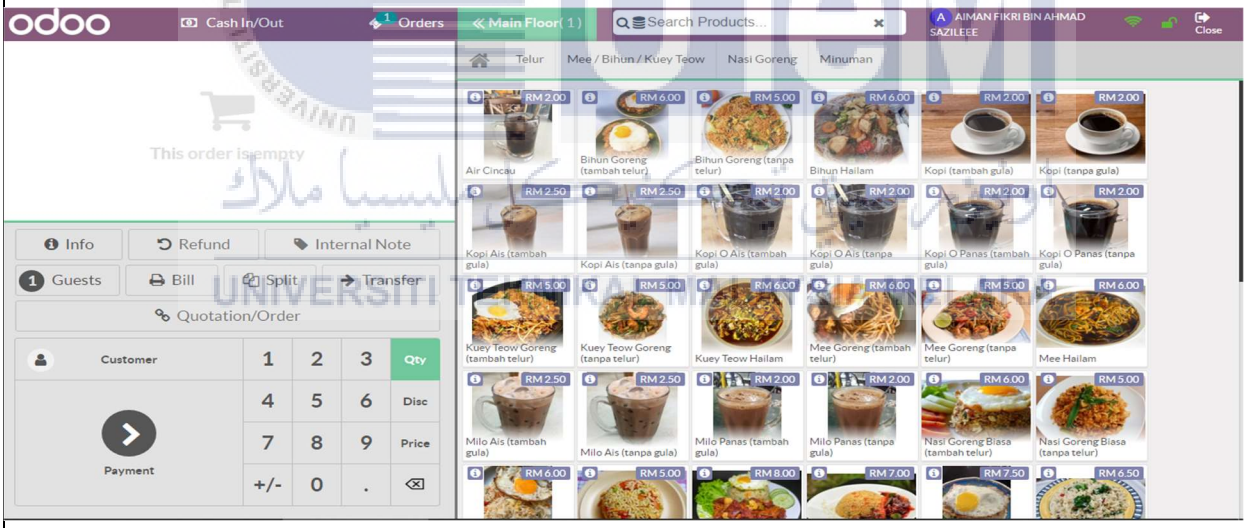


Figure 3.15: Menu

3.5.3 Finance Category

3.5.3.1 Accounting and Invoicing Application

In this project, the accounting application automatically creates behind -the -scenes journal entries of each restaurant owner's accounting to the transaction such as customer invoices, point of sales, expenses, and inventory transfers as shown in figure 3.16. In addition, this application also supports both accrual and cash basis reporting. Therefore, all transactions regarding expenses or income can be reported to the restaurant owner. Through this application, each transaction can be recorded in various currencies. In this project, the currency used is Ringgit Malaysia.

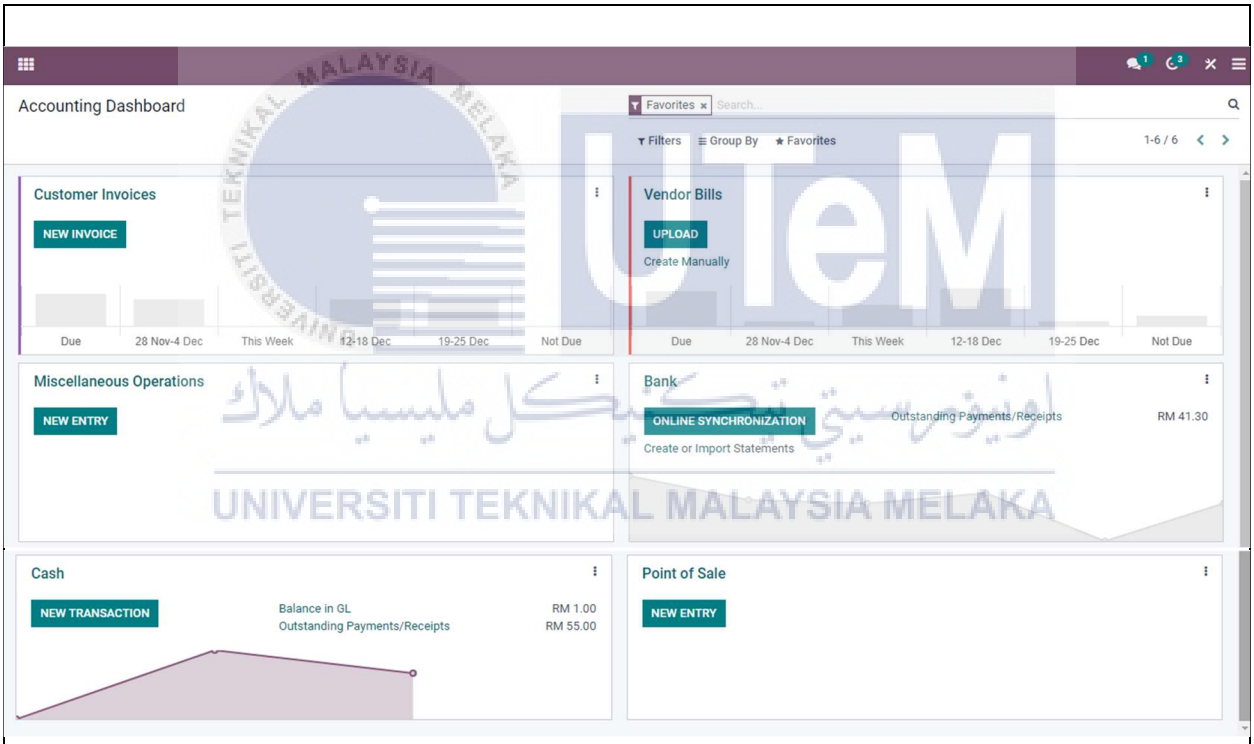


Figure 3.16: Accounting dashboard

3.5.4 Website Category

3.5.4.1 Website Application

Basically, the Odoo online instance and website application system has the name domain.odoo.com, for both emails. In this project, the domain name was change to edu-

hometown.odoo.com/. The website application in the project serves as a middleman in the process of customers ordering food by dine in or even by take away.

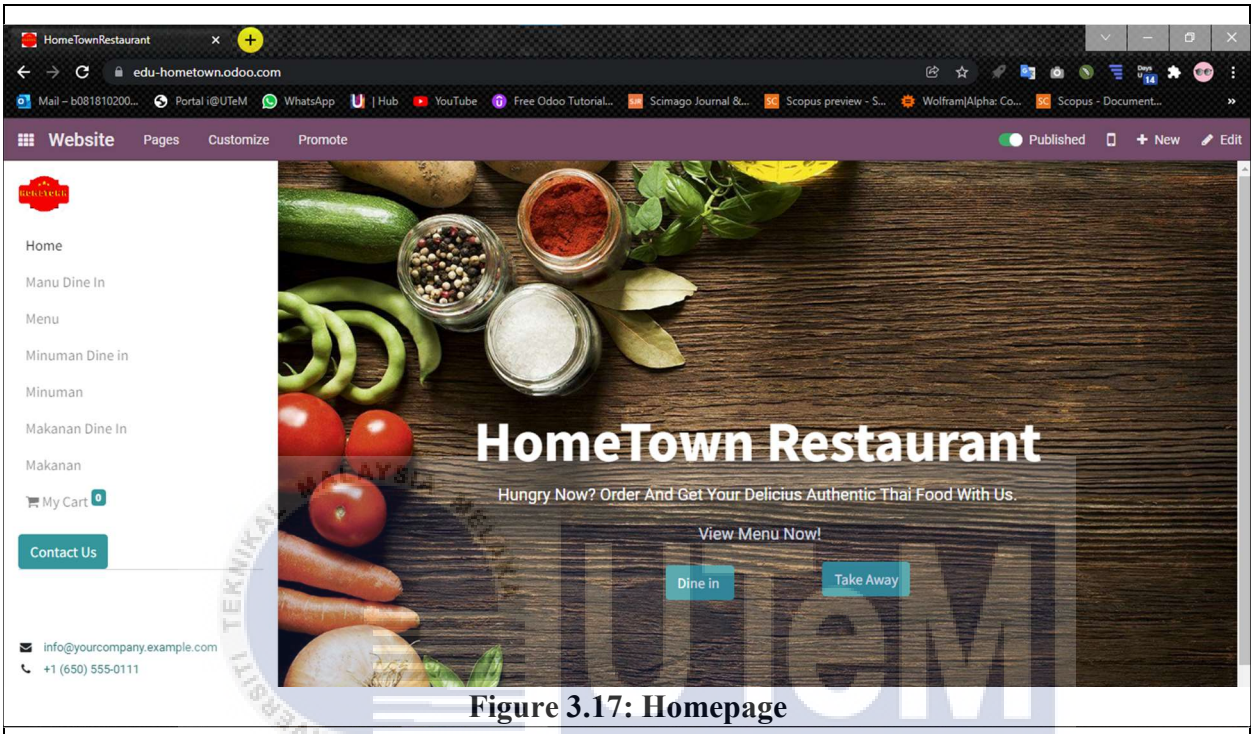


Figure 3.17: Homepage

Figure 3.18: QR code

In this project, a QR code is also created to make it easier for customers to scan and bring it directly to this website. If the customer clicked the dine in button, the customer will continue to be taken to the menu category and the customer will have to place an order through the restaurant staff. For customers who want to order food by take away, customers only need to press the add to cart button to save the order.

Figure 3.19: Add to cart

If the customer has decided to select the order, the customer needs to click on the add to cart category. This application will display the quantity of product that has been ordered by the customer, the price of the product and the amount that the customer has to pay. The customer needs to click the process checkout button if the customer confirms to order the food.

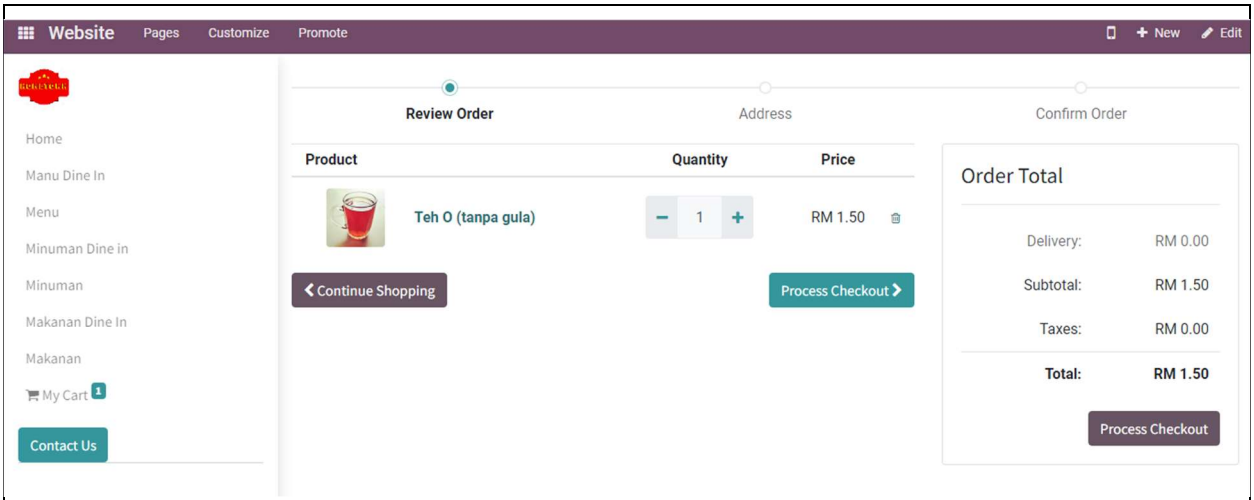


Figure 3.20: Process checkout

Once confirmation is made by the customer, the customer needs to fill in all the information such as name, email, phone number, and shipping address. All this information makes it easier for the restaurant to keep track of customers for the delivery process. The customer needs to press the confirm button to go to the next step.

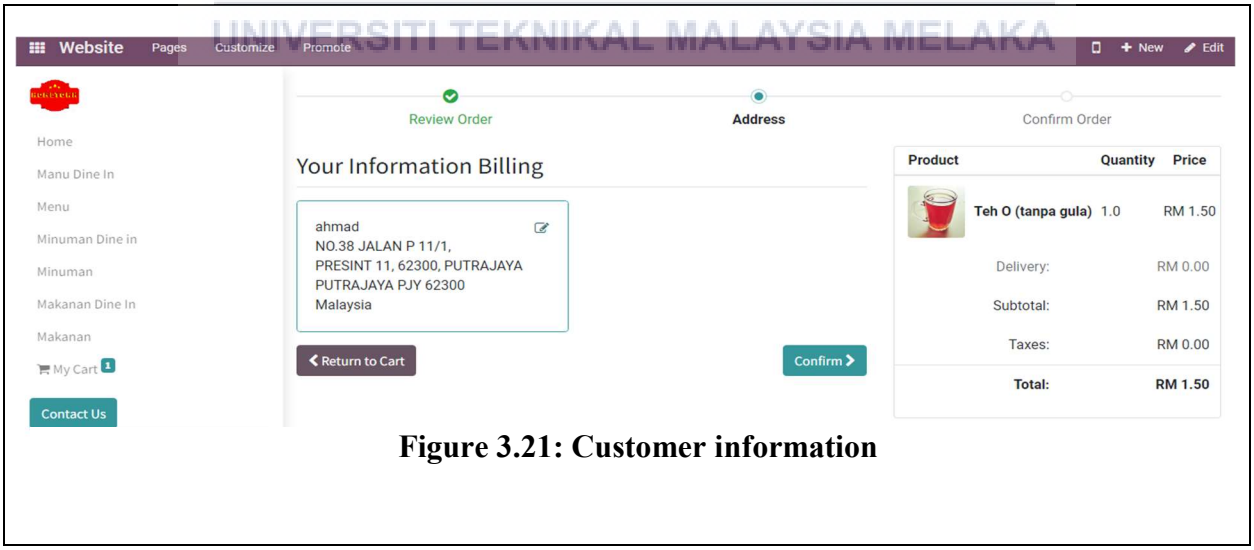


Figure 3.21: Customer information

Through this application, customers have to choose the payment method according to the available restaurant methods. In this project, the method used is wire transfer (test mode) and test method (test mode) because in this project it is still in the experimental stage.

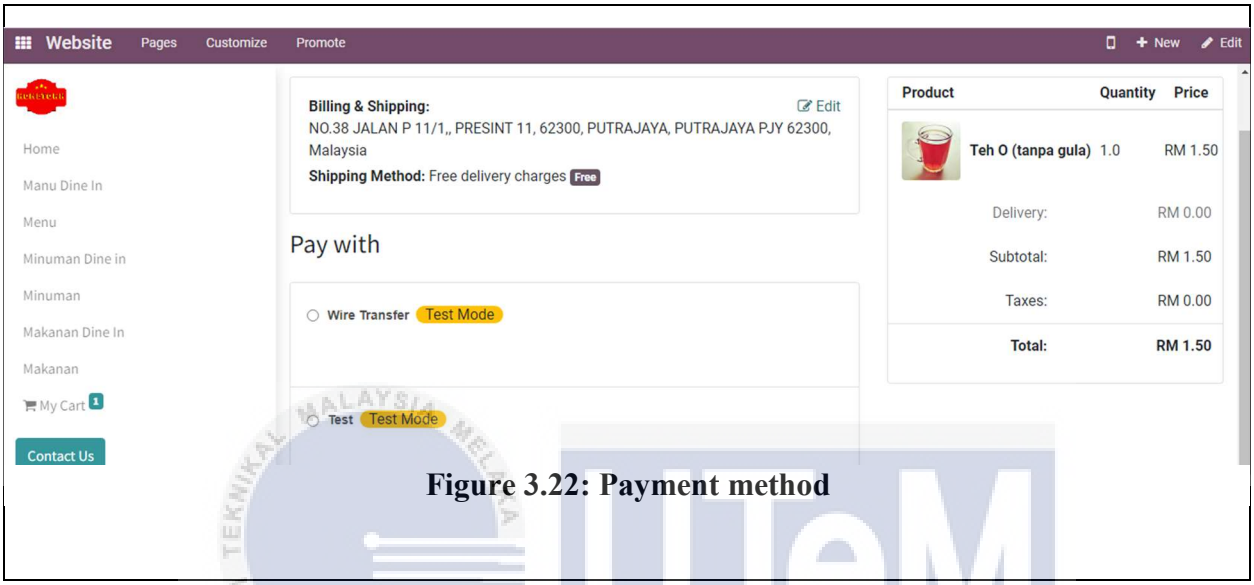


Figure 3.22: Payment method

After successful payment is made by the customer. The application will display invoices and order numbers to customers. This invoice is intended to inform the customer that the restaurant has received the order that has been placed by the customer.

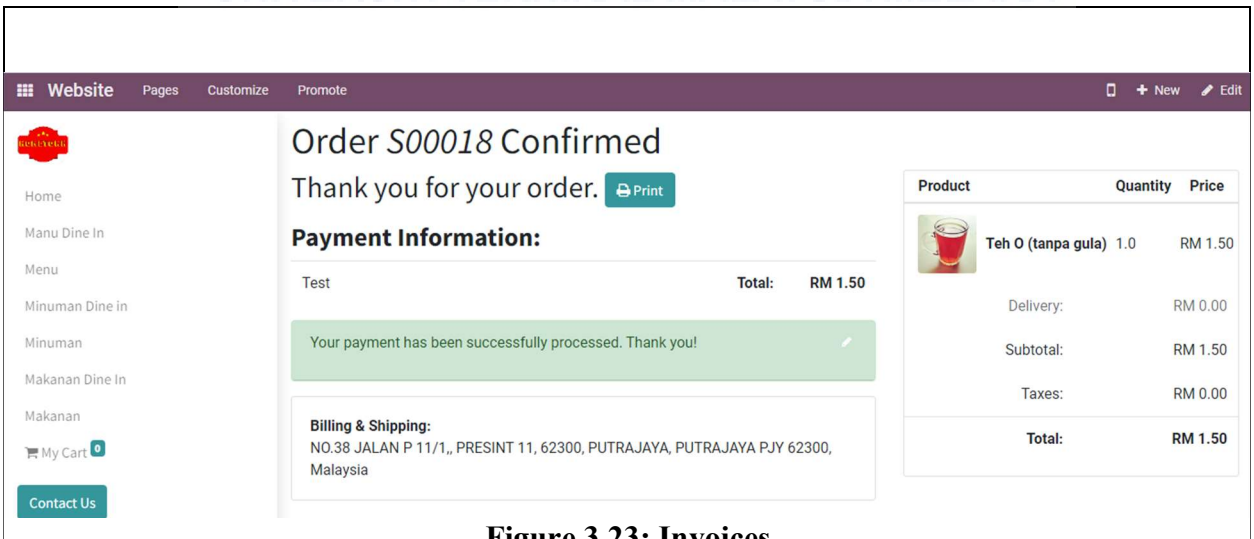


Figure 3.23: Invoices

3.6 Summary

The methodology that was follow in order to complete this food ordering system using Odoo application system is well explained. The description of the survey method and sampling method has also been explained so that it is easy to understand. In order to make sure everything going as planned, the flowcharts project have been explained. For the system application that have been used also have been explained according to their categories which is Inventory applications, Sales application and Accounting application and Invoicing. This chapter is a must to ensure everything goes on write flow and order.

CHAPTER 4

RESULT AND DISCUSSIONS

4.1 Introduction

This chapter discusses the overall and summary of the survey made on the existing food ordering application system in Malaysia, especially Foodpanda and GrabFood application system. This survey aims to obtain information on user views related to the level of user comfort, the level of system capabilities to users, and the level of confidence about the existing system, especially the Foodpanda and GrabFood application system. Only 60 respondents managed to return the survey form. This survey form has been distributed to users who have used the Foodpanda and the GrabFood application system through the medium of WhatsApp, Instagram, and Facebook. This survey form has also been open for 4 days from 22 October 2021 to 25 October 2021.

Apart from that, this chapter also discusses the overall results of interviews with 10 tomyam restaurant owners around Selangor and Putrajaya. This interview aims to obtain point of view from different restaurant owners regarding the differences between Odoo application system and existing application system especially Foodpanda and GrabFood application system in terms of their comfort of use, differences in system capability level, and their level of trust in capabilities of this system by running Odoo application simulations alongside them.

The Best Worst method was also used in this project, ratings 1 to 4 were used to describe respondents 'reactions such as very bad, bad, good, and very good based on the opinions and comfort of respondents who answered this survey and interview.

4.2 User Survey Results

4.2.1 User Background

All variables were analyzed using frequency and percentage as in figure 4.1 which is the table of respondents by age. This variable has 6 aspects, which are aged 18 years and below, 19 years to 23 years, 24 years to 28 years, 29 years to 33 years, 34 years to 38 years, and 39 years and above. Based on figure 4.1, the majority of respondents are users in the group of 24 years to 28 years, which is a total of 34 people equivalent to 56.70%. While the second highest for those aged 39 years and above is 11 people equivalent to 18.30%. followed by respondents aged 34 to 38 years as many as 6 people equivalent to 10%. Respondents aged 29 to 33 years as many as 5 people equivalent to 8.30%. the least age group of respondents to answer this survey form is the age group of 19 to 23 years a total of 4 people equivalents to 6.70% and and the group aged 18 years and below did not participate in this survey form.

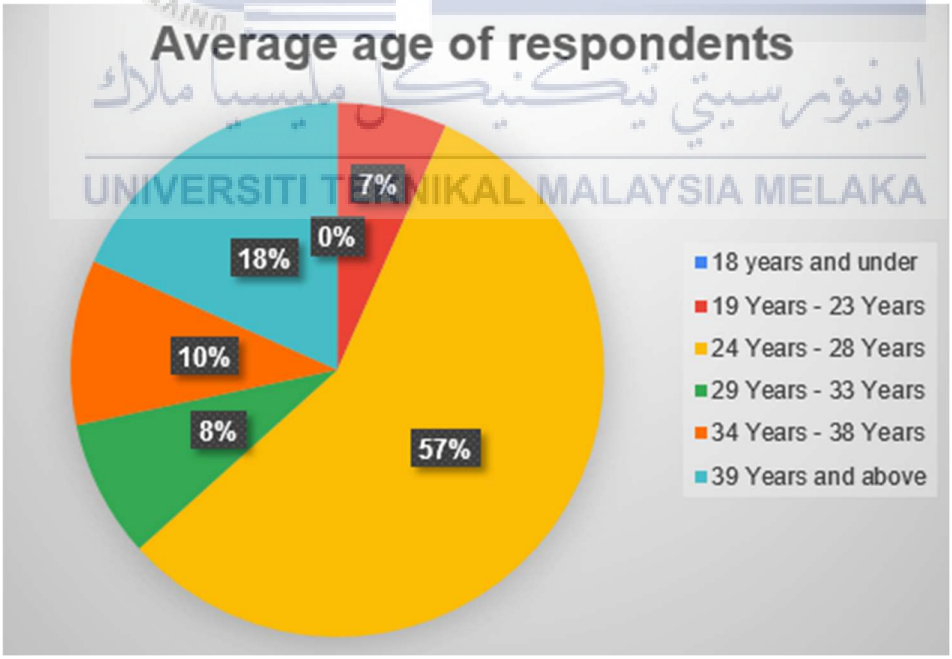


Figure 4.1: Average age of respondents

Figure 4.2 shows that respondents from the Federal Territory of Putrajaya are the most likely to reply to this survey, accounting for 20 persons or 33.33 percent of the total. Selangor had the second greatest number of respondents, with 9 individuals, or 15%. Respondents from Terengganu accounted for six people, or ten percent, of the total. A total of 5 individuals, or 8.33 percent, live in the Federal Territory of Kuala Lumpur. Kelantan and Pahang both had the same number of respondents (4 persons, or 6.67%), while Sarawak and Melaka both had 3 people, or 5%. For Johor and Penang, they recorded the same total value of respondents, which is 2 people equivalent to 3.33%. Finally, Kedah and Sabah recorded the lowest number of respondents which is 1 person equivalent to 1.67%.

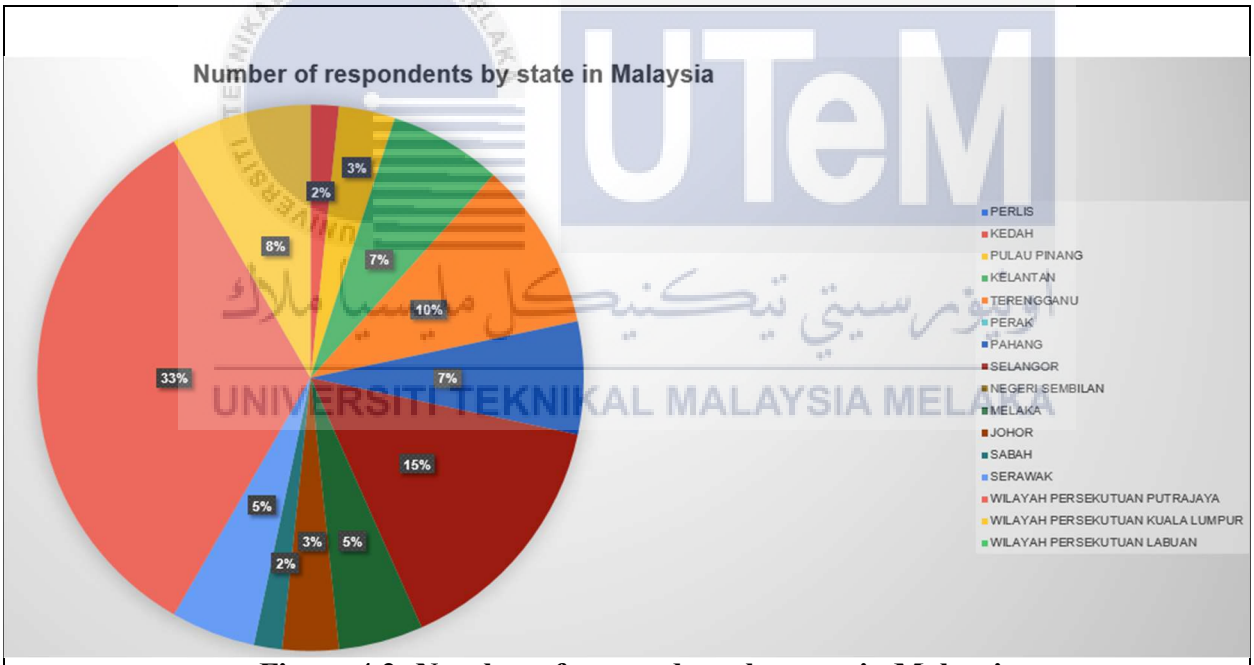


Figure 4.2: Number of respondents by state in Malaysia

Based on figure 4.3, respondents who live in city areas are the highest in answering this survey question which is 53 people equivalent to 88.33%. While the respondents who live in rural

areas as many as 7 people equivalent to 11.67%. Overall, the digital gap of respondents answering this survey is low.

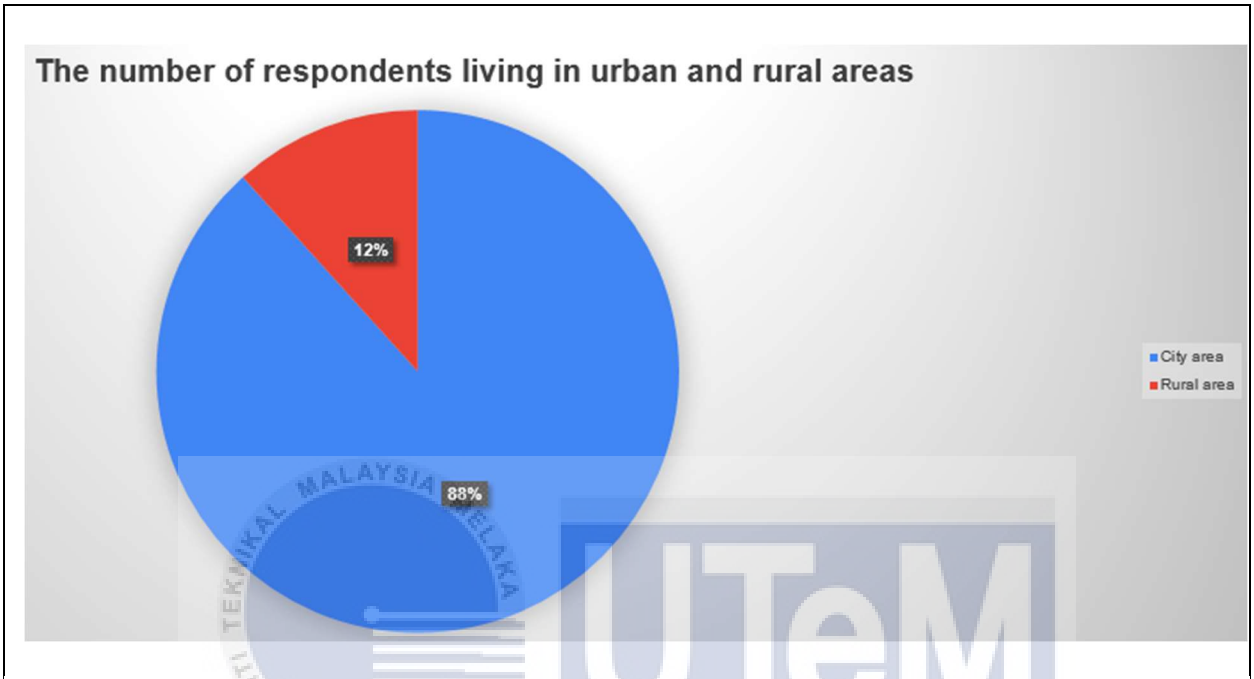


Figure 4.3: The number of respondents living in city and rural areas

4.2.2 Respondents' opinion feedback on the Foodpanda and GrabFood application system

Based on the Best Worst method, it contains ratings from 1 to 4 ratings that respondents have to choose according to each question posed in this survey. The survey is divided into 3 parts, which are 7 questions on Foodpanda application system, 7 questions on GrabFood and 7 questions on comparison of Foodpanda application system and GrabFood application system as well as recommendations of existing application systems that benefit users. Questions posed need to be answered by the respondents. The questions that have been posed in the survey to users are as follows:

Questions about the Foodpanda application system:

1. In your opinion, do you feel that the Foodpanda application system is convenient for you?

2. Do you think you need the support of a technical person to use the Foodpanda app system?
3. Did you find the functions in this Foodpanda application system well integrated?
4. Do you think there are too many problems in the Foodpanda application system?
5. Do you think that the Foodpanda application system is very difficult to use?
6. Do you feel confident when using the Foodpanda application system?
7. Do you think you need to know more information about Foodpanda before you can use the Foodpanda application system?

Questions about the GrabFood application system:

1. In your opinion, do you feel the GrabFood application system is convenient for you?
2. Do you think you need the support of a technical person to use the GrabFood app system?
3. Did you find the functions in this GrabFood application system well integrated?
4. Do you think there are too many problems in the GrabFood app system?
5. Do you think that the GarbFood application system is very difficult to use?
6. Do you feel confident when using the GrabFood application system?
7. Do you think you need to know more information about GrabFood before you can use the Foodpanda application system?

Question on comparison of Foodpanda and GrabFood application system:

1. Which application system are you comfortable use to order food?
2. Which application system do you feel is more worthwhile for ordering food?
3. Which application system do you often use to order food?
4. Your satisfaction level using the Foodpanda application system?
5. Your satisfaction level using the GrabFood application system?

6. Suggestions for application systems other than Foodpanda and GrabFood that you feel are worthwhile for users to order food online.

4.2.2.1 Users think that the Foodpanda application system and the GrabFood application system provide convenience to users.

Figure 4.4 depicts an evaluation chart for the Foodpanda application system's level of user convenience. Customers will find the Foodpanda application system to be quite convenient. This is the highest rating given by the respondents, with 35 people giving it a score of 58 percent. Next, rating 3 was the second most popular option among respondents, with 11 persons (or 18.33 percent) opting for it. Then came the rating 2 (a little tough for response), which was given to a total of 8 respondents, or 13.33 percent. Finally, rating 1 (very tough for users) received the lowest score of 6 respondents, or 10%.

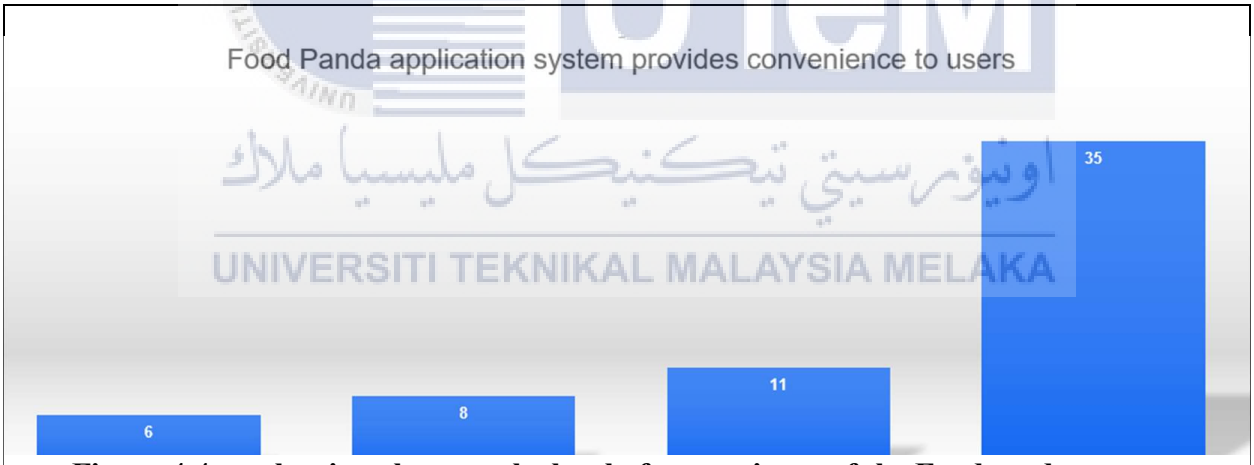


Figure 4.4: evaluation chart on the level of convenience of the Foodpanda to users

Based on figure 4.5, it shows a rating of 4 which is very convenient for users is the highest. It can be seen that the majority of respondents chose it, which is 30 people equivalent to 50%. While rating 3 recorded the second highest choice chosen by the respondents which is 20 people

equivalent to 33.33%, followed by rating 2 (complicated to user) recorded a total of 7 people equivalent to 11.67%. Finally, rating 1 which is very complicated for users recorded as 3 people equivalent to 5%.

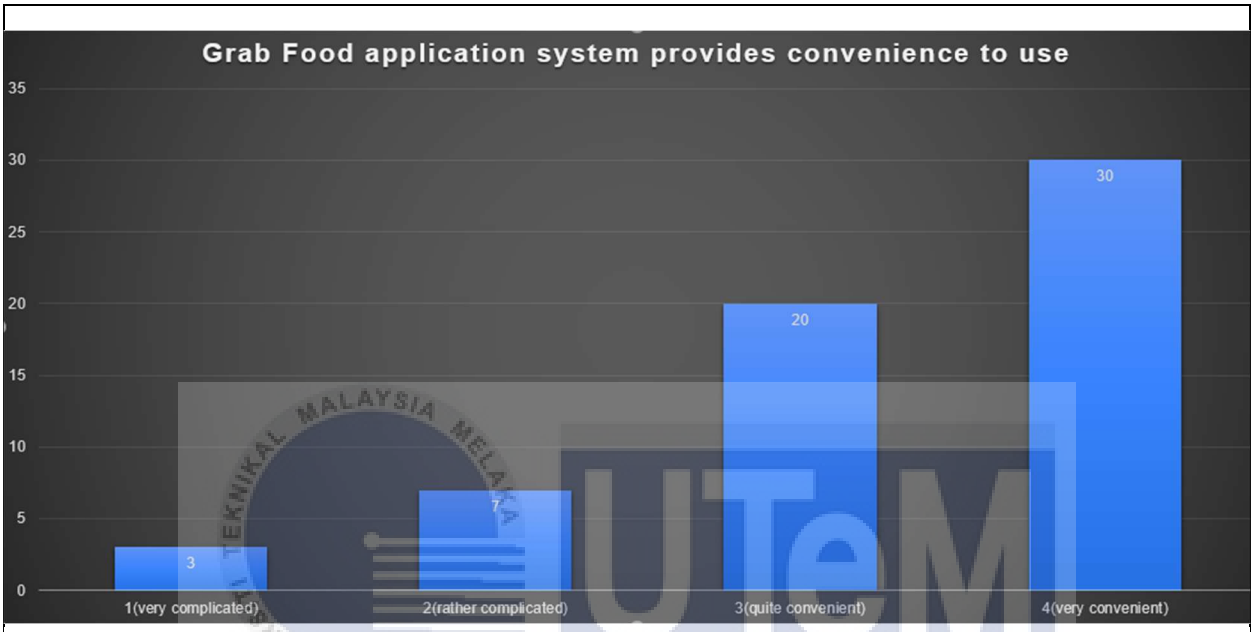


Figure 4.5: level of convenience of the GrabFood application system to users

4.2.2.2 Users need the support of technically knowledgeable people to use the Foodpanda and the GrabFood application system

According to figure 4.6, the highest selection is rating 4, which does not require technical skills to utilise the Foodpanda application system. It can be seen that it was chosen by the majority of respondents (26 people, or 43.33 percent). Furthermore, the second highest grade (does not require any assistance) had 18 people, or 30% of the total. Finally, customers selected the same and lowest rating 2 (needs support) and rating 1 (really require support), which was 8 persons, or 13.33 percent.

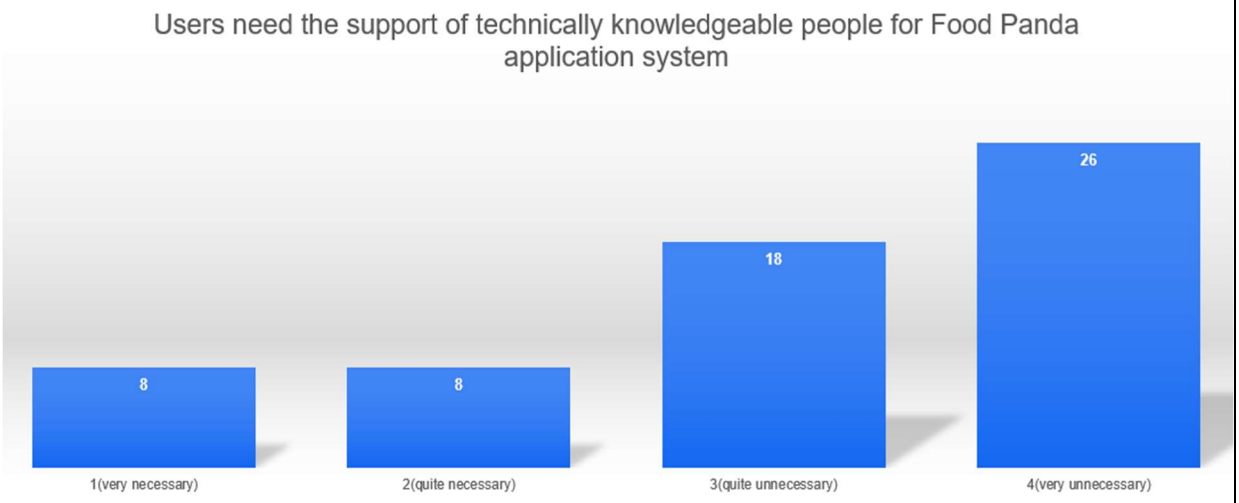


Figure 4.6: evaluation on consumers that require technically knowledgeable people to use the Foodpanda application system

According to figure 4.7, the respondents chose rating 4 (extremely does not require a technically skilled person) as the highest option. It can be seen that it was chosen by the majority of responses (27 people, or 45 percent). Rating 3 (does not require any assistance) is the second highest of 18 people, accounting for 30% of the total. Rating 2 (need assistance) attracted a total of 10 people, or 16.67 percent. Finally, the lowest choice by users was rating 1 (very in need of assistance), which received 5 votes, or 8.33 percent.

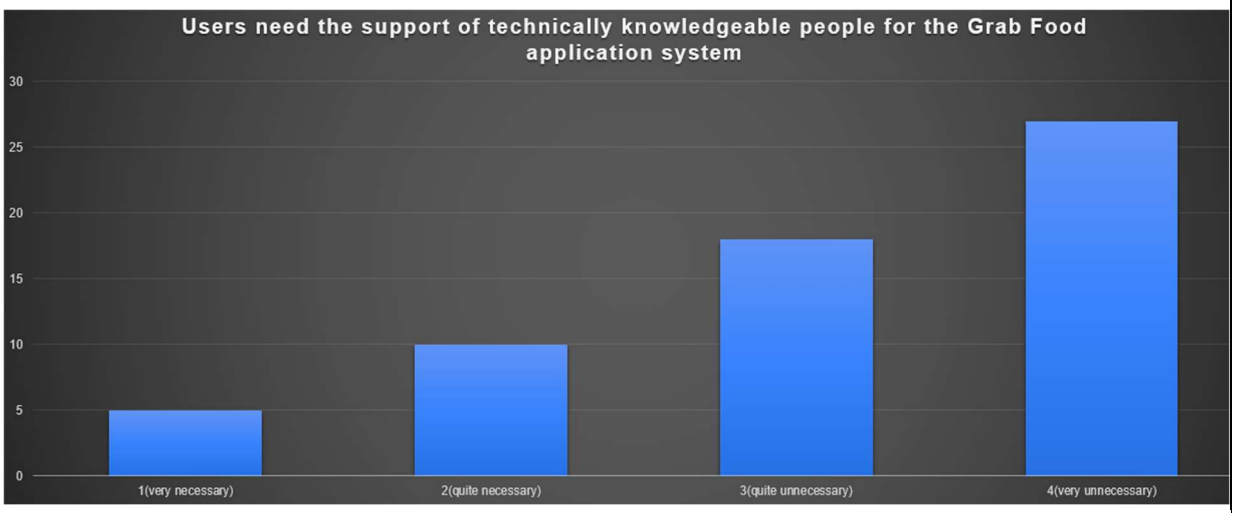


Figure 4.7: evaluation on consumers that require technically knowledgeable people to use the GrabFood application system

4.2.2.3 Users find the functions in Foodpanda application system and GrabFood application system are well integrated

Figure 4.8 gives a rating of 3, indicating that the Foodpanda application system's functionality is well integrated. It can be seen that the majority of respondents chose it (25 people, or 41.67 percent). While the second highest rating of 4 (excellent) was given by 23 persons, or 38 percent. Following that, a rating of 2 (quite poor) was reported by a total of 9 persons, or 15%. Finally, rating 1 was chosen by the respondents as the lowest, with 3 people equaling 5% of the total.

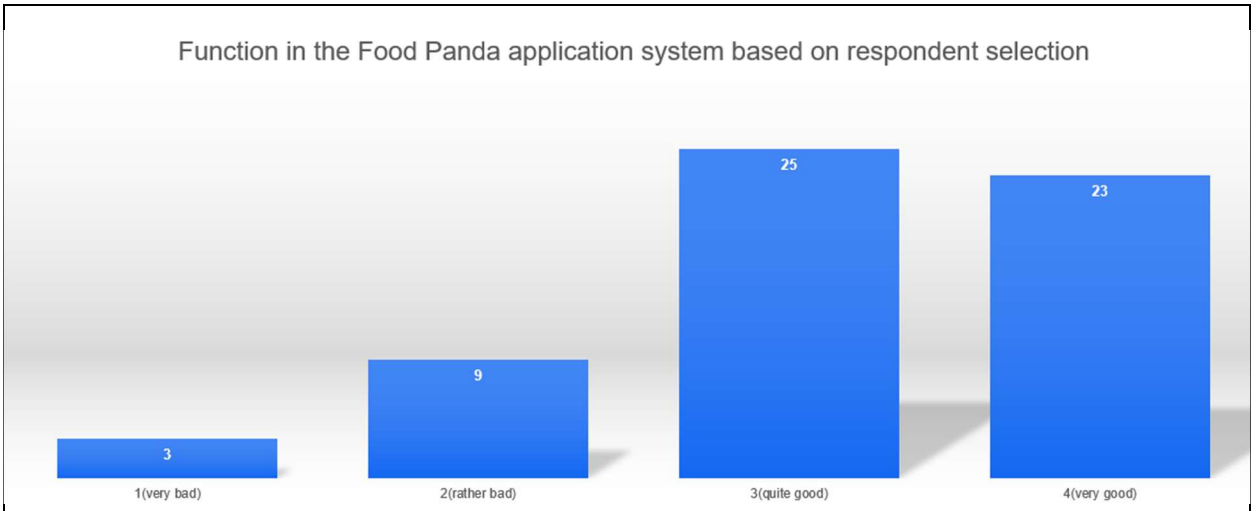


Figure 4.8: Assessments of functionality are integrated into the Foodpanda application

The highest rating is 4, which indicates that the GrabFood application system is very well integrated (see Figure 4.9). It can be seen that the majority of responses chose it (27 people, or 45 percent). The second highest rating of 23 persons (38.33 percent) was given to the rating of 3 (very good). While persons with a rating of 2 (very poor) accounted for 6 people, or 10% of the total. Finally, the lowest of four people, 6.67 percent, received a grade of 1 (extremely bad).

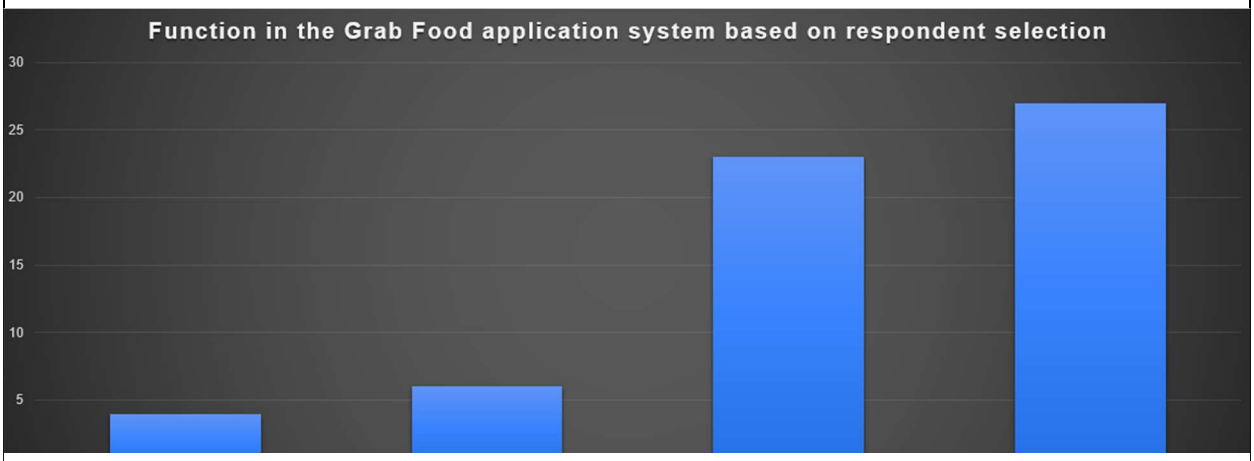


Figure 4.9: Assessments of functionality are integrated into the GrabFood application

4.2.2.4 Users find many problems in Foodpanda and GrabFood application system

According to figure 4.10, the grade of 3 indicates that the Foodpanda application system is relatively unproblematic for consumers. It can be seen that it was chosen by the majority of respondents (25 people, or 41.67 percent). Furthermore, rating 4 (very not difficult) came in second with a total of 20 individuals, or 33.33 percent, while rating 2 received a total of 8 people, or 13.33 percent. Finally, with a total of 7 people, or 11.67 percent, the rating of 1 (very difficult) was the lowest.

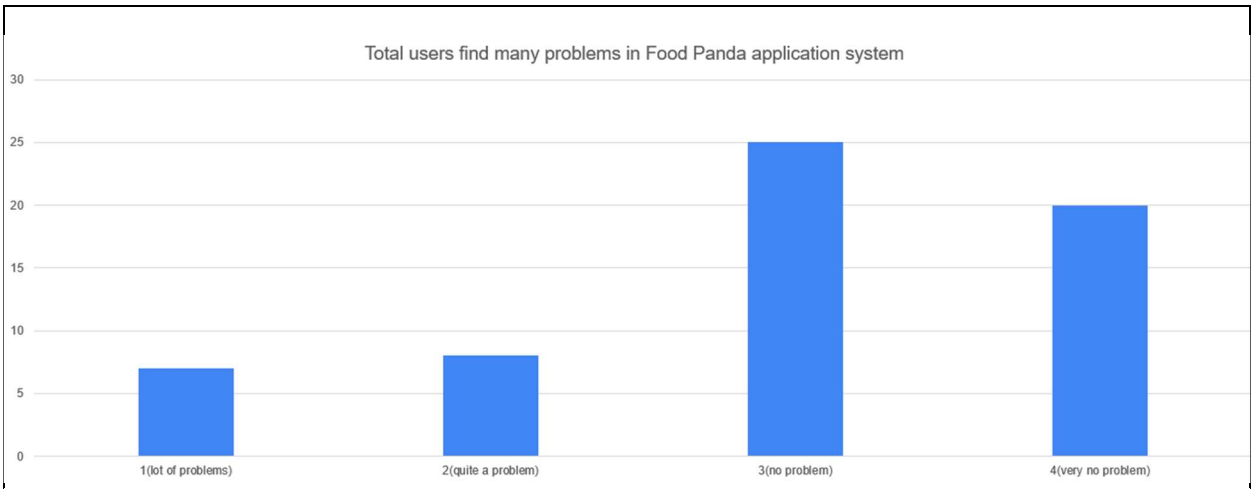


Figure 4.10: User opinions on existing problems in the Foodpanda application system

According to figure 4.11, the highest raating is 3, which indicates that the GrabFood application method is relatively trouble-free. It can be seen that it was chosen by the majority of respondents, 31 people, or 51.67 percent. Next, respondents chose rating 4 (extremely non-problematic) as the second highest option, accounting for up to 30% of the total. Following that, rating 2 found a total of 7 persons, or 11.67 percent. Finally, rating 1 (very troublesome) yielded the lowest score of the four people, 6.67 percent.

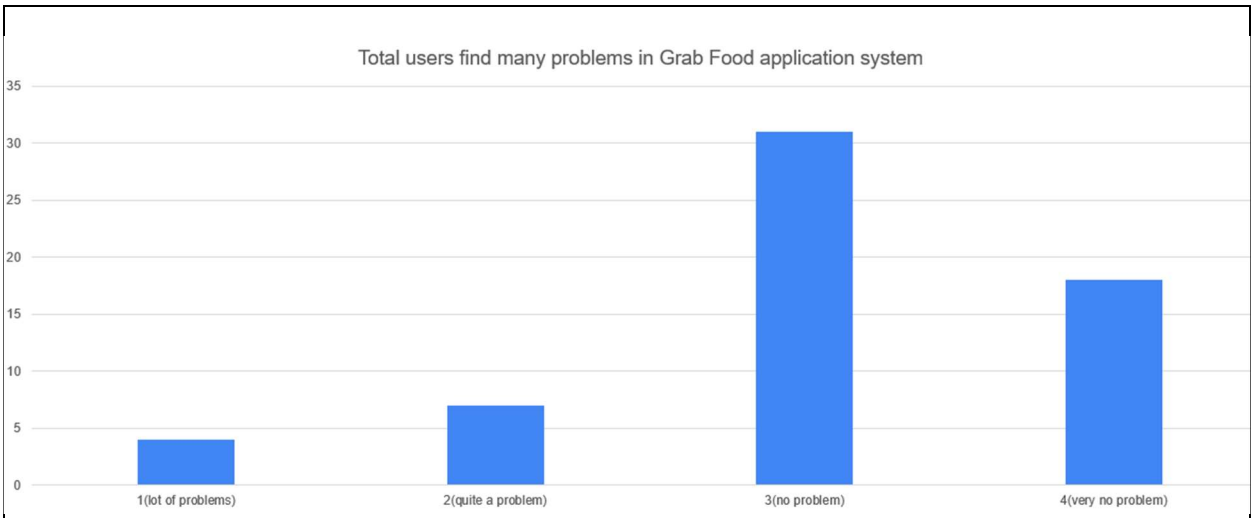


Figure 4.11: User opinions on existing problems in the Garb Food application system

4.2.2.5 Users believe the Foodpanda and GrabFood application systems to be extremely difficult to use

Figure 4.12 depicts a grade of 4, indicating that the Foodpanda application system is very user-friendly. It can be seen that it was chosen by the majority of respondents, 32 people, or 53.33 percent. Furthermore, rating 3 (which is pretty simple to use) recorded the second greatest number of 22 people, or 36.67 percent. While rating 2 (moderately difficult) and 1 (very difficult to use) both had the same number of respondents, with the lowest of 3 people accounting for 5% of the total.

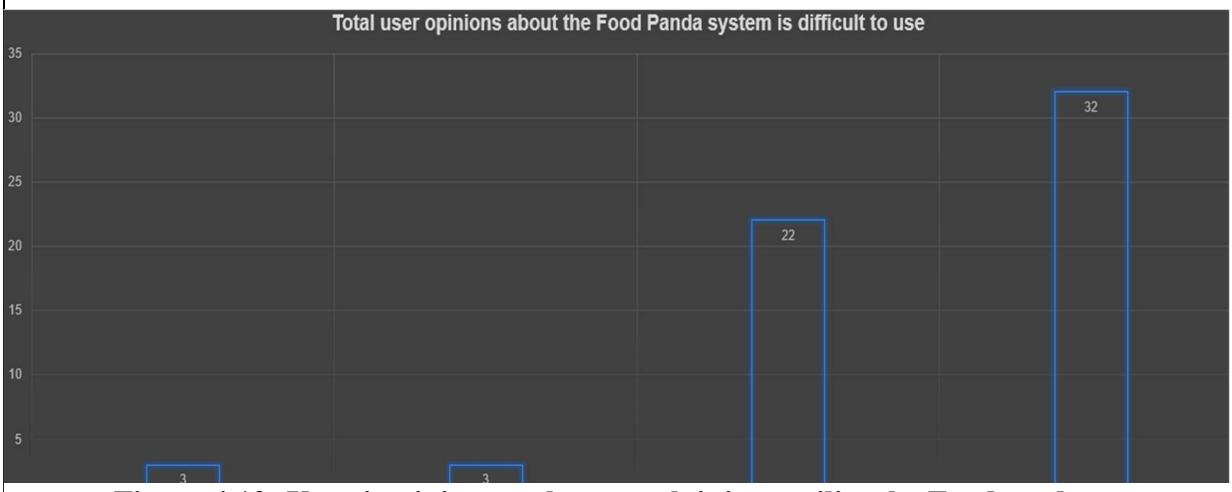


Figure 4.12: Users' opinions on how tough it is to utilise the Foodpanda app

Figure 4.13 depicts the maximum score of 4, indicating that the GrabFood application system is very straightforward to use by consumers. It can be seen that it was chosen by the majority of respondents (26 people, or 43.33 percent). Next, rating 3 (very simple to use) received the second greatest number of votes (40%) from 24 participants. Following that, rating 2 (which was rather difficult to use) recorded a total of 6 participants, or 10%. Finally, the lowest rating of 1 (very difficult to use) was reported at 4 people, or 6.67 percent.

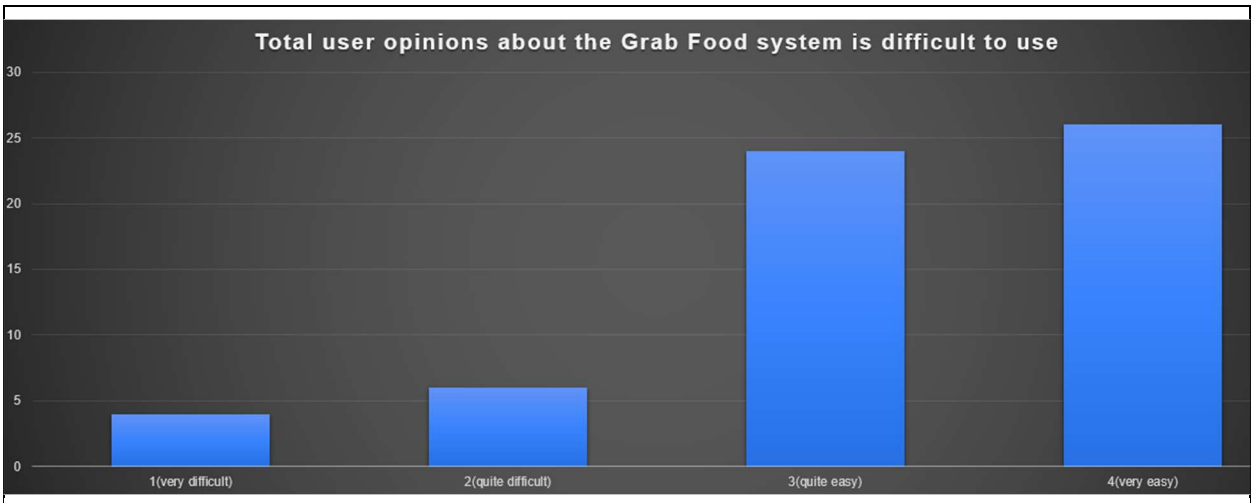


Figure 4.13: Users' opinions on how tough it is to utilise the GrabFood app

4.2.2.6 Users are confident when using Foodpanda application system and GrabFood application system

According to figure 4.14, the respondents chose the fourth rating, which states that users have a high level of confidence in the Foodpanda application system. It can be seen that it was chosen by the majority of respondents, 31 people, or 51.67 percent. Furthermore, the number of persons who gave the rating of 3 (very confident) was the second largest, with 23 people (38.33%). Following that, a rating of 2 (somewhat doubtful) was given to a total of 4 respondents, or 6.67 percent. Finally, the lowest of two people, 3.33 percent, received a grade of 1 (extremely doubtful).

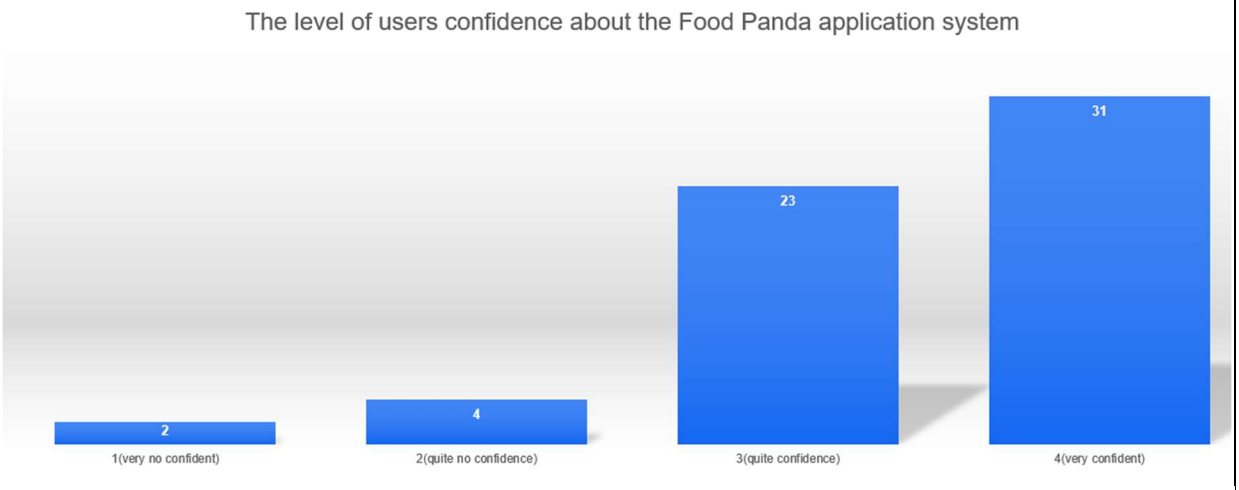


Figure 4.14: Level of consumer confidence using the Foodpanda application system

Figure 4.15 shows that the maximum rating is 4 (very confident). It is clear that the majority of respondents chose it, with 30 people equaling 50% of the total. Following that, rating 3 (somewhat confident) had the second highest score of 19 participants, or 31.67 percent. Following that, rating 2 (somewhat doubtful) documented 7 persons, or 11.67 percent. Finally, rating 1 (very doubtful) was picked by the fewest persons, accounting for 6.67 percent of the total.

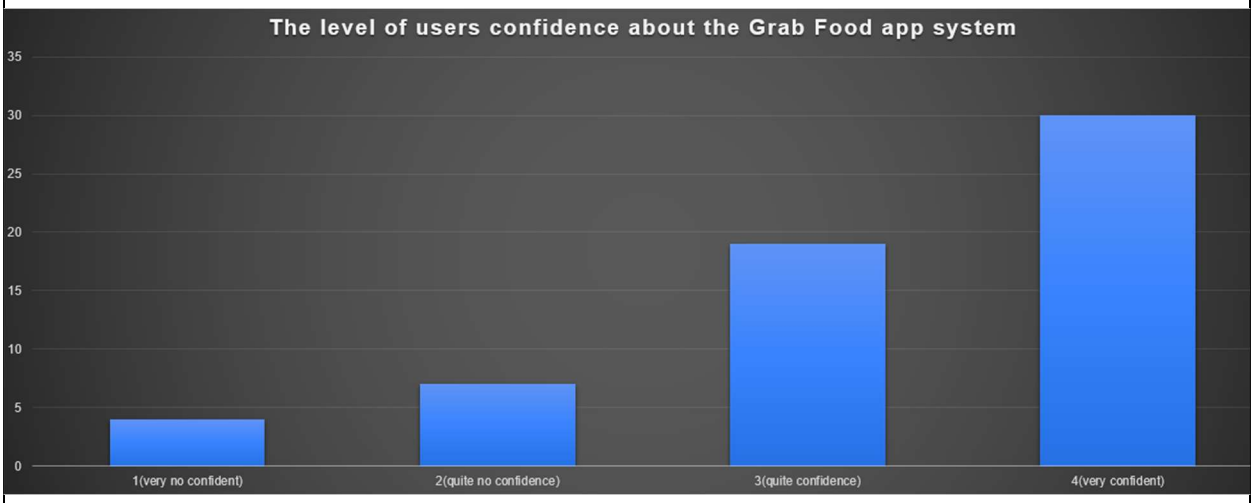


Figure 4.15: Level of consumer confidence using the GrabFood application system

4.2.2.7 Users need additional information about Foodpanda application system and GrabFood application system

Users do not require any additional information to use the Foodpanda application system, as shown in Figure 4.16. It is clear that the majority of respondents, 20 persons, or 33.33 percent, chose it. The second highest rating, a 3 (slightly unneeded), was given by 15 users, or 25%. Meanwhile, rating 2 (which was absolutely necessary) recorded a total of 13 people, or 21.67 percent. Finally, the lowest rating is 1 (very necessary), which means that as many as 12 people, or 20%, were documented.

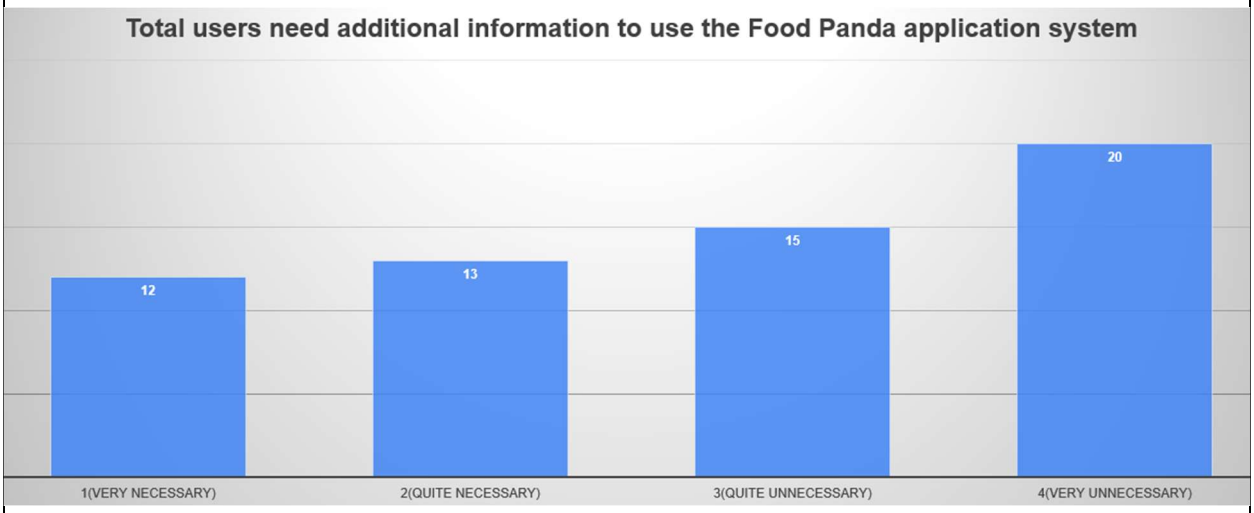


Figure 4.16: Users require additional information to use the Foodpanda application system

Figure 4.17 provides a rating of 4, indicating that it does not require any further information about the GrabFood application system to utilise. It can be observed that it was chosen by the majority of respondents, with 22 persons (36.67%) choosing it. While rating 2 (somewhat necessary) is the second highest, with 17 people (28.33 percent) participating. Following that, rating 3 (which was relatively unneeded) yielded a total of 12 participants, or 20%. Finally, rating 1 (very important) was picked by the fewest number of responses (9 persons, or 15%).

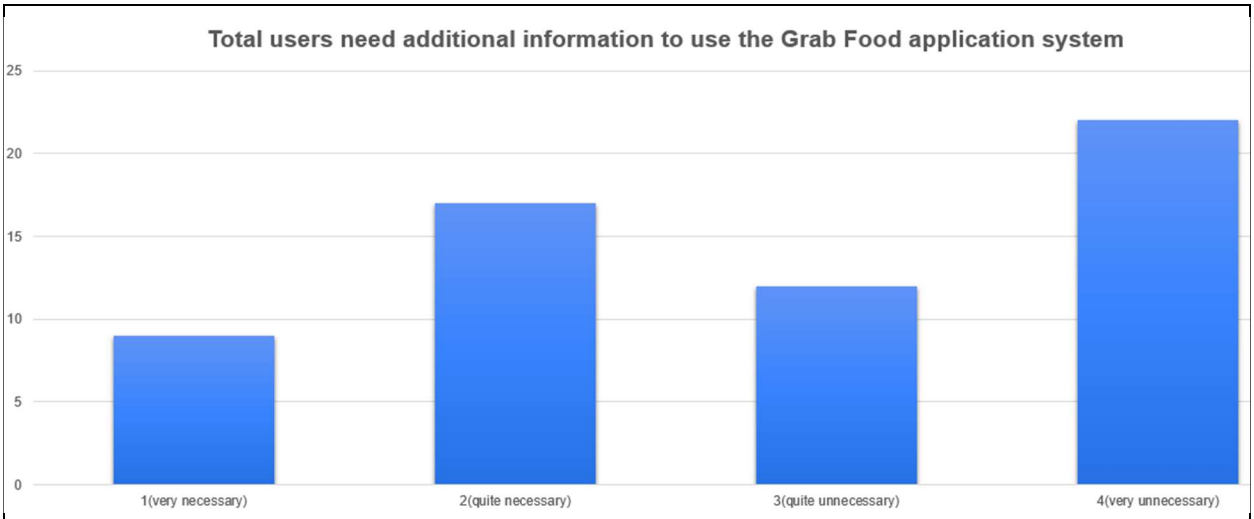


Figure 4.17: Users require additional information to use the GrabFood application

4.2.2.8 User satisfaction using the Foodpanda and the GrabFood application system

According to figure 4.18, the maximum rating is 3, which indicates that the Foodpanda application system is extremely pleasing to consumers. It can be seen that it was chosen by the majority of responses (27 people, or 45 percent). Meanwhile, 26 persons, or 43.33 percent, gave a 4 (very satisfactory) rating, which is the second highest. A total of 5 people (equal to 8.33 percent) received a rating of 2 (quite poor). Finally, the lowest of two people, 3.33 percent, received a rating of 1 (extremely bad).

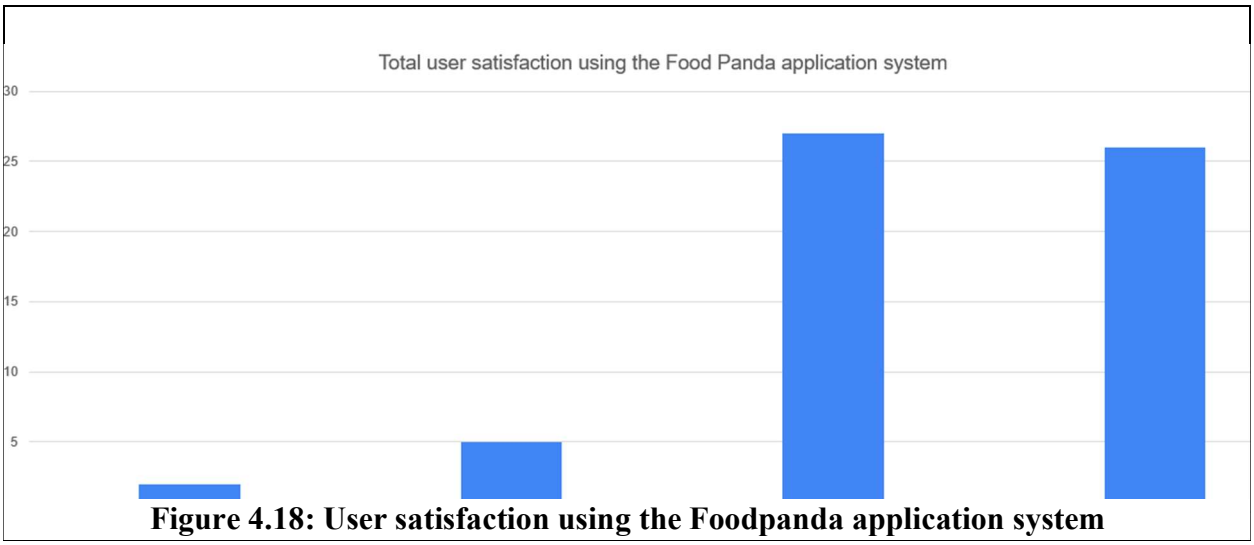


Figure 4.18: User satisfaction using the Foodpanda application system

According to figure 4.19, the maximum rating is 3, which indicates that the GrabFood application system is quite satisfying to consumers. It can be seen that it was chosen by the majority of respondents (29 people, or 48.33 percent). Meanwhile, 22 persons, or 36.67 percent, gave a 4 (very satisfactory) rating, which was the second highest. A total of 6 persons, or 10% of the population, received a rating of 2 (quite unsatisfactory). Finally, the lowest rating is one, which was given to three people, or 5% of the population.

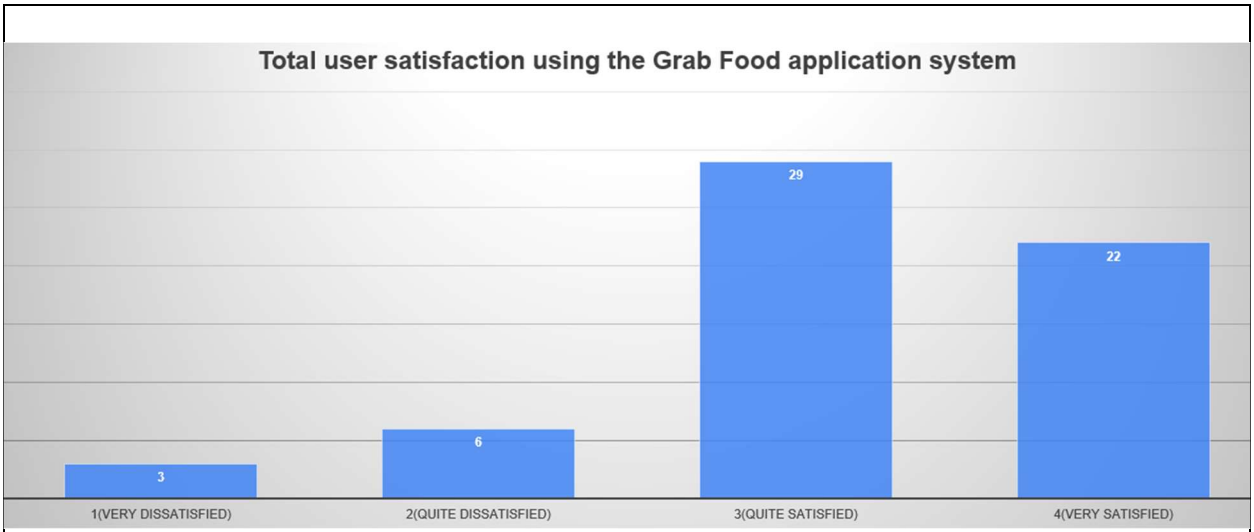


Figure 4.19: User satisfaction using the GrabFood application system

4.2.2.9 Comparison between Foodpanda and GrabFood application system to consumer

Figure 4.20 shows that the Foodpanda application system is the most user-friendly for placing food orders. It can be seen that it was chosen by the majority of respondents, 35 people, or 58.33 percent. While the GrabFood application system received a total of 25 responses, or 41.66 percent, in terms of consumer convenience in placing food orders. Respondents believe the Foodpanda application system is more worthwhile, as seen in figure 4.21. It can be seen that it was chosen by the majority of respondents, 31 people, or 51.67 percent. The GrabFood application system, on the other hand, recorded 29 people, or 48.33 percent. The Foodpanda application system has the highest frequency of users placing food orders, as shown in figure 4.22. It can be seen that it was chosen by the majority of respondents, 37 people, or 61.67 percent. The GrabFood application system, on the other hand, reported 23 people, or 38.33 percent.

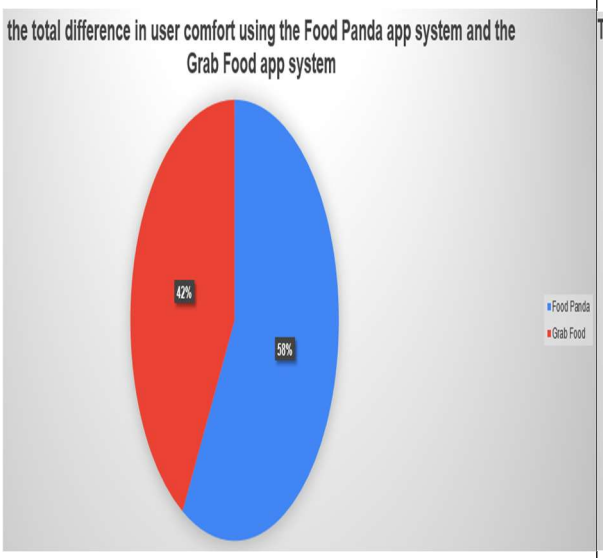


Figure 4.20: the difference between the Foodpanda and GrabFood application system in the convenience of the user

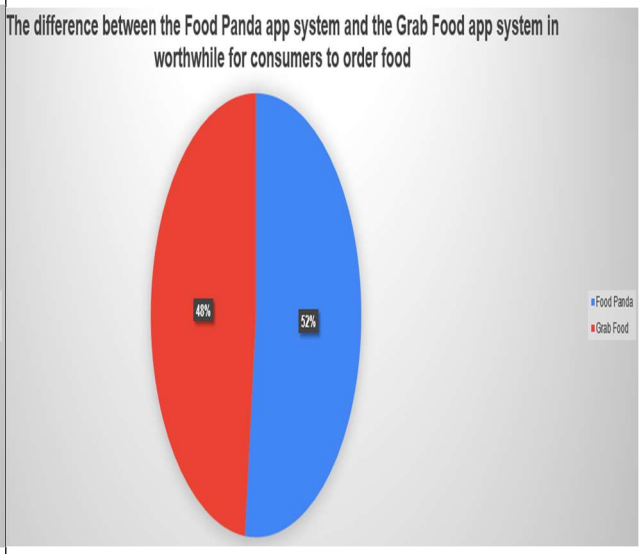


Figure 4.21: the difference between the Foodpanda application system and the GrabFood application system in worthwhile to order food

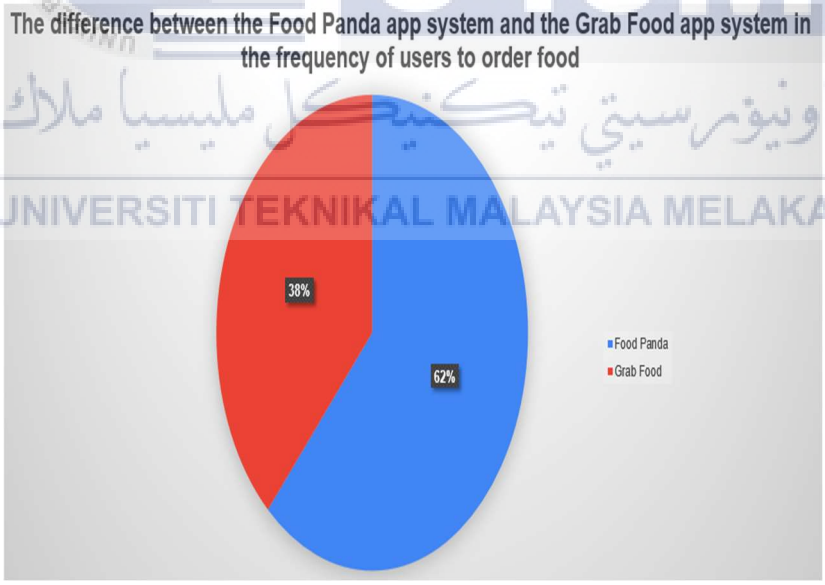


Figure 4.22: the difference between the Foodpanda application system and the GrabFood application system in the frequency of users ordering food

4.3 Results of interviews with restaurant owners

4.3.1 Restaurants that have been interviewed

Figure 4.23 depicts the name of the restaurant and the number of employees who were interviewed to aid in the completion of the project's objectives. A total of ten different restaurant owners were interviewed in order to explain the Odoo application system and execute a simulation with them. The objectives of this project, flowcharts for dine-in and take-away clients, the function of each programme employed, and simulations and demonstrations of this system working based on dine-in and take-away flowcharts have all been explained to them.

Restaurant Name	Number of employees
Tomyam Kung Ayer Thai Restaurant@8 (Putrajaya)	7
Medina Tomyam Restaurant (Putrajaya)	7
Restaurant A Raa Thai Tomyam (Putrajaya)	5
D'Rahmat Tomyam Restaurant (Bangi)	7
Family Tomyam Restaurant (Bangi)	6
Restaurant Pokchek Tomyam (Dengkil)	6
Y Tom Yam Restaurant (Dengkil)	7
Mawar Tomyam Restaurant (Dengkil)	5
Arinee Grilled Fish, Tomyam & Seafood Restaurant (Seri Kembangan)	5
Azlan Tomyam Restaurant (Seri Kembangan)	6

Figure 4.23: The name of the restaurant interviewed and the number of employees working in the restaurant

4.3.2 Store owner feedback on the Odoo application system

It has a rating of 1 to 4 that must be provided by the restaurant owner according to the questions presented once the project description session is completed, using the same Best Worst method as before. The following were the questions that were asked to the restaurant owners during the interview session:

1. Do you agree that the Odoo app system has the potential to assist restaurant merchants like you in systematically organising food orders in restaurant kitchens?
2. Do you think the Odoo app system has the ability to assist restaurant owners promote their businesses more extensively online?
3. Do you agree that the Odoo app system has the potential to facilitate restaurant merchants in managing the day -to -day operations of a restaurant?
4. Do you believe the Odoo application system has the capacity to help restaurant merchants handle and store all restaurant-related data (such as order information, customer information, supplier information, employee information, and so on) in an organised manner?
5. Do you believe the Odoo application system has the capacity to assist restaurant merchants in systematically reviewing financial data (such as profit and loss information, inflows and outflows, and so on)?
6. Do you believe the Odoo app system has the ability to assist restaurant merchants in lowering operating costs (such as the cost of using pen and paper)?
7. Did you find that every module (application) used in the Odoo application system is well integrated?

8. Do you believe the Odoo application system has many flaws compared to existing systems such as Foodpanda and the GrabFood application system?
9. Do you think the Odoo app system could make it easier for restaurant owners to receive food orders even when their clients are at home?
10. Do you agree that this Odoo app system has the potential to increase the level of customer satisfaction for ordering food at restaurants online?

4.3.3 The Odoo application system has the potential to assist restaurant merchants in systematically organizing food orders in the kitchen

Figure 4.24 shows that the highest rating is 3, which is highly agreeable. It can be noted that the majority of respondents (7 persons, or 70 percent) chose the Odoo application system, which has the potential to assist restaurants in systematically organising food orders in the kitchen. The respondents that chose evaluation 4 (strong agreement that the Odoo application system has the potential to assist restaurant merchants in arranging food orders in the kitchen) accounted for 3 persons, or 30% of the total.

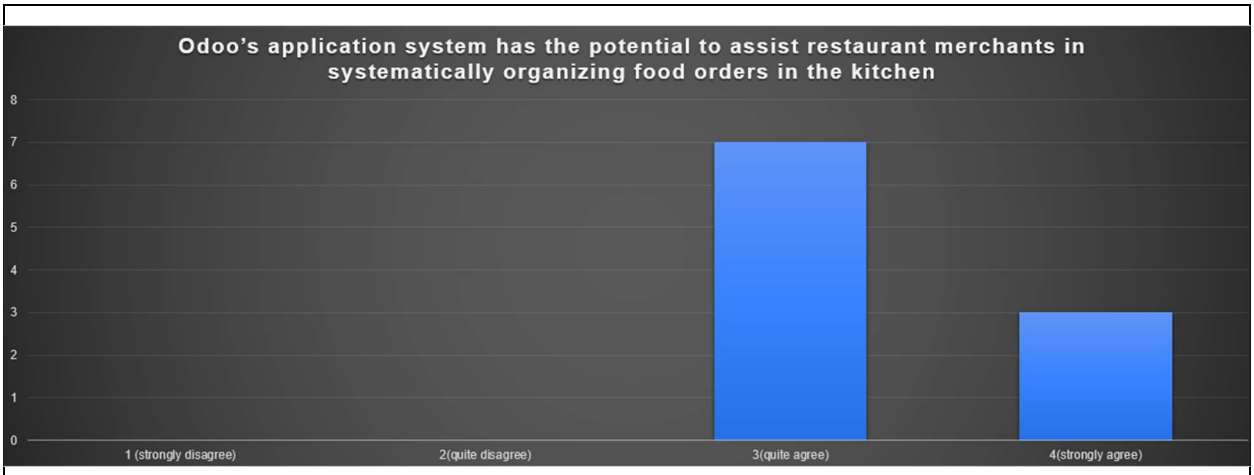


Figure 4.24: The Odoo software system's evaluation results have the ability to help restaurant owners organise food orders in the kitchen more efficiently.

4.3.4 The Odoo app system has the ability to assist restaurant owners promote their businesses more extensively online

Figure 4.25 displays a 3 out of 5 rating, indicating that the app system helps restaurant owners promote their businesses more extensively online. It can be observed that the majority of respondents (eight people, or 80 percent) chose it. While rating 4 indicates that the Odoo application system has the ability to assist restaurant merchants in promoting their restaurants online more extensively, as many as 2 persons, or 20%, agreed.

Figure 4.25: Odoo's app system evaluation results have the potential to help restaurant merchants to promote restaurants online more widely

4.3.5 The Odoo app system has the potential to facilitate restaurant merchants in managing the day -to -day operations of a restaurant

According to figure 4.26, the highest rating is 3, which indicates that the Odoo application system has the ability to assist restaurant merchants in the management of everyday restaurant operations. It can be seen that it was chosen by the majority of respondents, 6 persons out of a total of 60 percent. While the rating of 4 indicates that the Odoo application system has the potential to assist restaurant traders in managing their daily operations, a total of 4 persons, or 40%, gave it that rating.

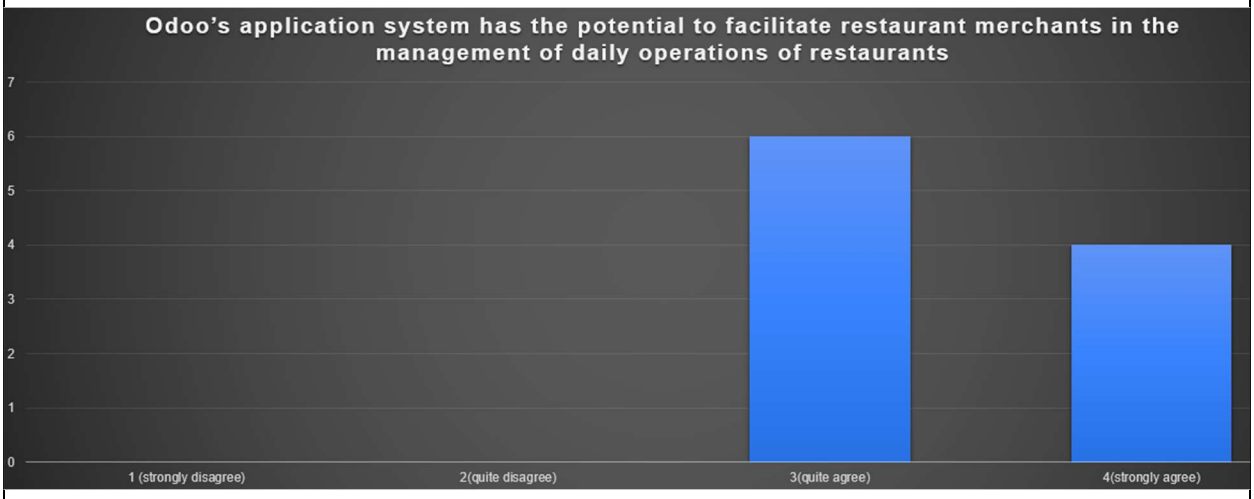


Figure 4.26: the evaluation results of the Odoo application system have the potential to facilitate restaurant merchants in the management of daily operations of restaurants

4.3.6 The Odoo application system has the potential to facilitate restaurant merchants in managing restaurant -related data storage systematically

Figure 4.27 provides a rating of 4, indicating that the Odoo application system has the greatest potential to assist restaurant merchants in the systematic management of restaurant-related data storage. It can be observed that the majority of respondents (eight people, or 80 percent) chose it. While the rating of 3 is pretty agreeable, this application system has the ability to assist restaurant traders in systematically managing the storage of data related to restaurants, only 2 people, or 20%, were recorded.

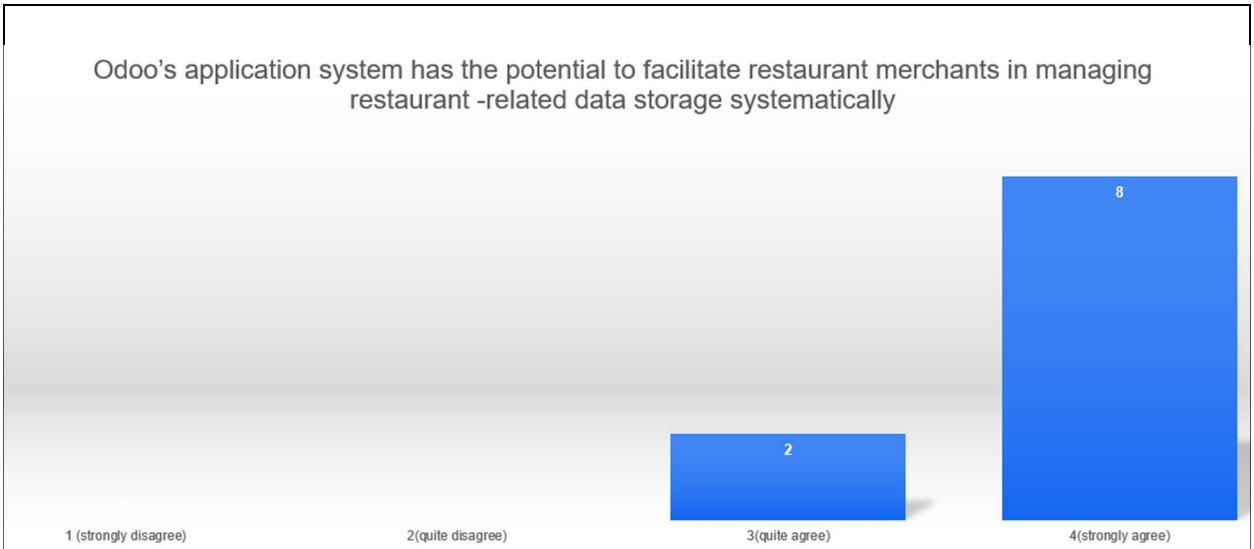


Figure 4.27: The Odoo application system has the potential to facilitate restaurant merchants in managing restaurant -related data storage systematically

4.3.7 The Odoo app system has the potential to help restaurant merchants to systematically review restaurant financial data

The outcomes of rating 3 and 4 are identical, as shown in figure 4.28. According to the third assessment, respondents agree that the Odoo app system has the ability to assist restaurant merchants in conducting a systematic analysis of financial data. In response to question 4, the majority of respondents agreed that the Odoo application system has the ability to assist restaurant traders in methodically reviewing financial data. Rating 3 and 4 counted up to 5 people, or half of the total of 10 people.

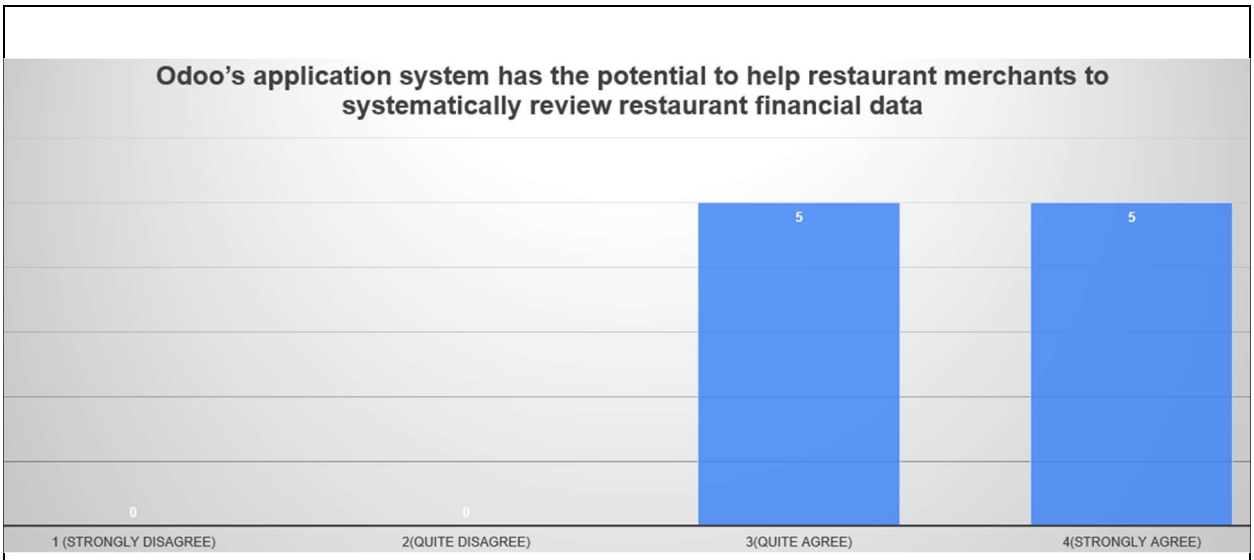


Figure 4.28: Odoo's app system evaluation results have the potential to help restaurant merchants to systematically review restaurant financial data

4.3.8 The Odoo app system has the potential to help restaurant merchants to reduce operating costs at restaurants

Ratings 3 and 4 are the same, as seen in Figure 4.29. According to the third assessment, respondents agree that the Odoo app system has the ability to assist restaurant merchants in lowering operating costs. Meanwhile, respondents overwhelmingly think that the Odoo application system has the ability to assist restaurant merchants in lowering operating costs. Ratings 3 and 4 recorded a total of 5 people, or 50% of the population. There is a total of ten persons in the group.

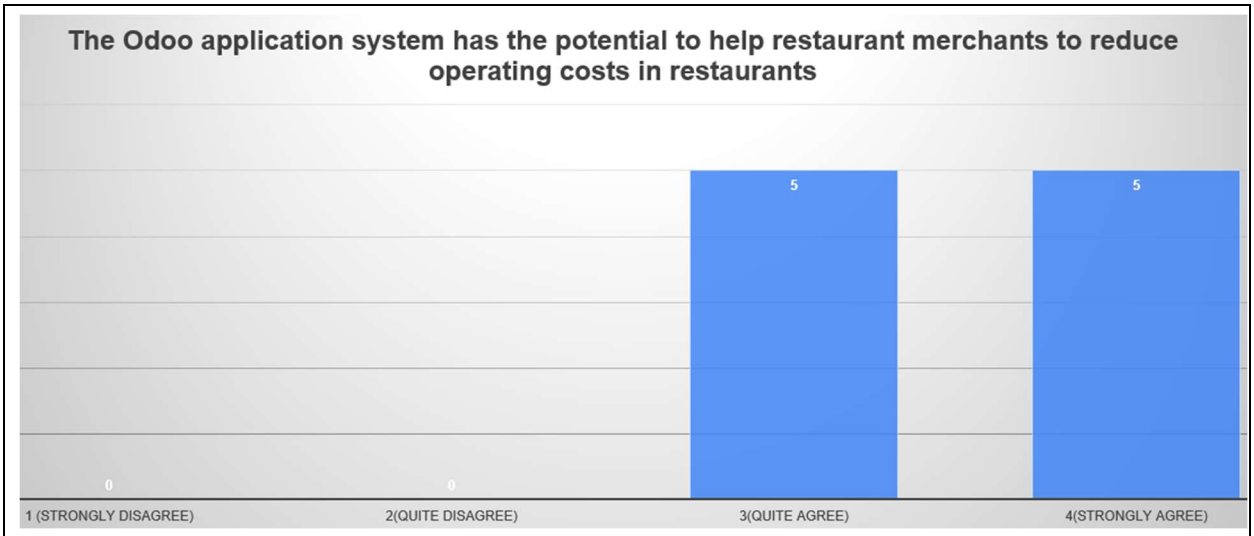


Figure 4.29: Odoo's app system evaluation results have the potential to help restaurant merchants to reduce operating costs at restaurants

4.3.9 Every module in the Odoo app system was well integrated, according to restaurant vendors

According to figure 4.30, each module utilised in the Odoo application system integrates pretty effectively. It is clear that it was chosen by the majority of respondents, with 8 persons (or 80 percent) voting for it. Respondents that chose rating 4, especially restaurant merchants, discovered that each module in the Odoo application system was extremely well integrated, recording 2 people, or 20%.

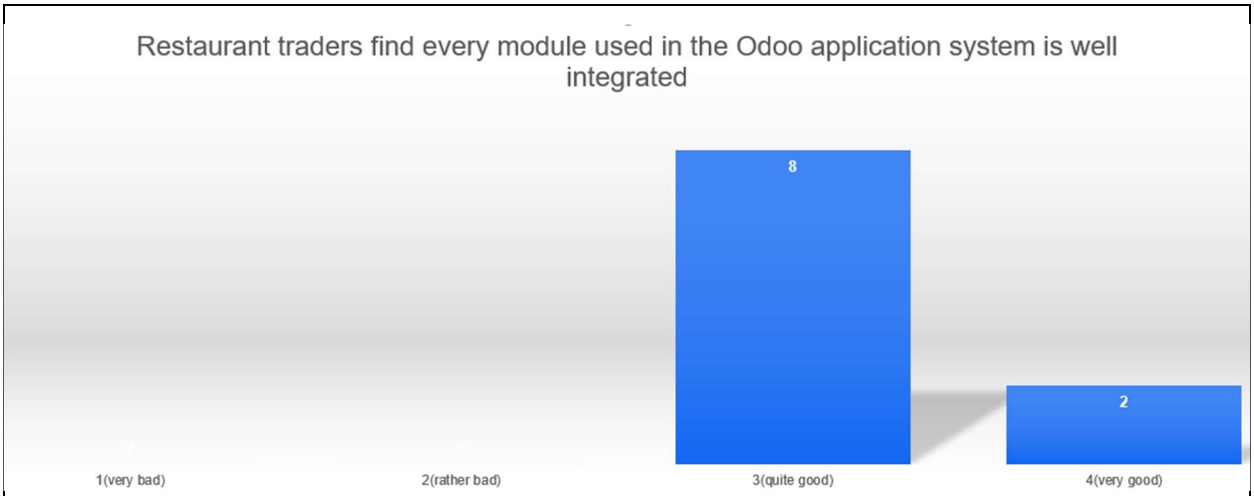


Figure 4.30: the restaurant dealer evaluation results found that each module used in the Odoo application system was well integrated

4.3.10 The Odoo application system has many flaws compared to existing systems

Figure 4.31 illustrates that rating 3, the restaurant trader, believes the Odoo application system has no issues in comparison to the current system. It can be seen that it was chosen by the majority of respondents, 6 persons out of a total of 60 percent. With the rating of 2, the restaurant trader believes the Odoo application system has a flaw when compared to the current system, which recorded 4 people, or 40% of the total.

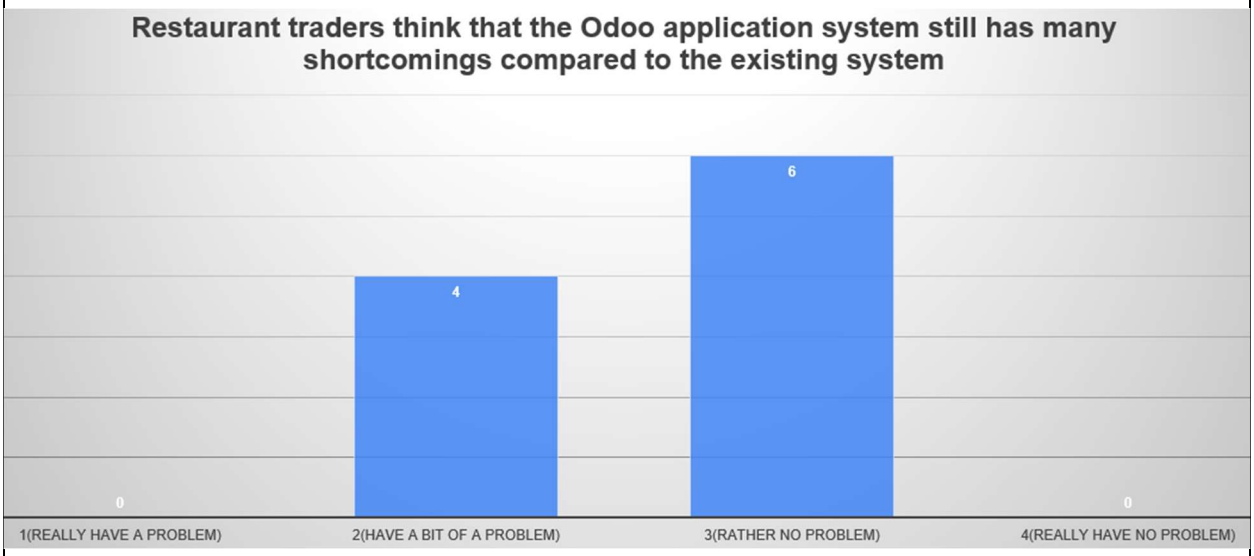


Figure 4.31: The Odoo application system has many flaws compared to existing systems

4.3.11 The Odoo app system has the potential to make it easier for restaurant merchants to take food orders online even when customers are at home

Based on figure 4.32, the majority of respondents (7 persons, or 70 percent) strongly believe that the Odoo application system has the ability to make it easier for restaurant traders to take food orders online even if clients are at home. Despite the fact that clients at home accounted for 3 persons (30%), the respondents partially agreed that the Odoo application system has the ability to make it easier for restaurant merchants to take food orders online.

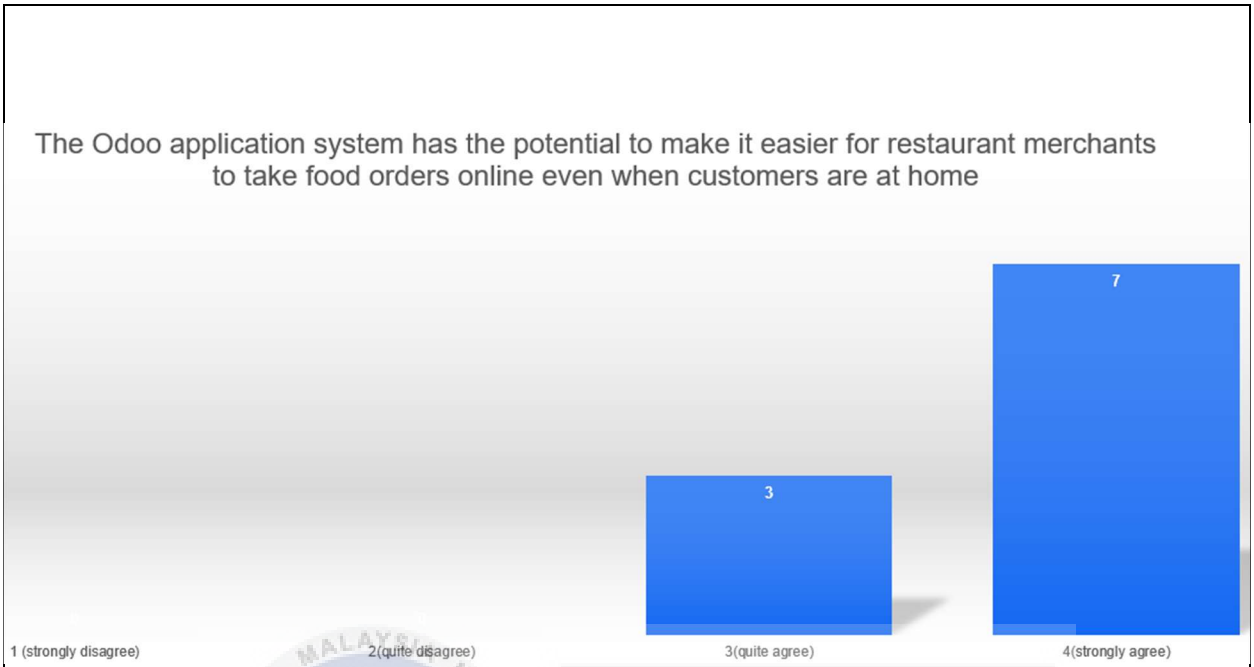


Figure 4.32: The Odoo app system has the potential to make it easier for restaurant merchants to take food orders online even when customers are at home

4.3.12 The Odoo application system has the potential to increase the level of customer satisfaction for ordering food at restaurants online

Figure 4.33 demonstrates that respondents strongly agree that the Odoo application system has the greatest potential to boost consumer satisfaction when ordering food from restaurants online. It can be seen that it was chosen by the majority of respondents, 6 persons out of a total of 60 percent. Meanwhile, respondents with a rating of 3 agree that the Odoo application system has the ability to improve consumer happiness when ordering meals from restaurants online, with 4 persons equaling 40%.

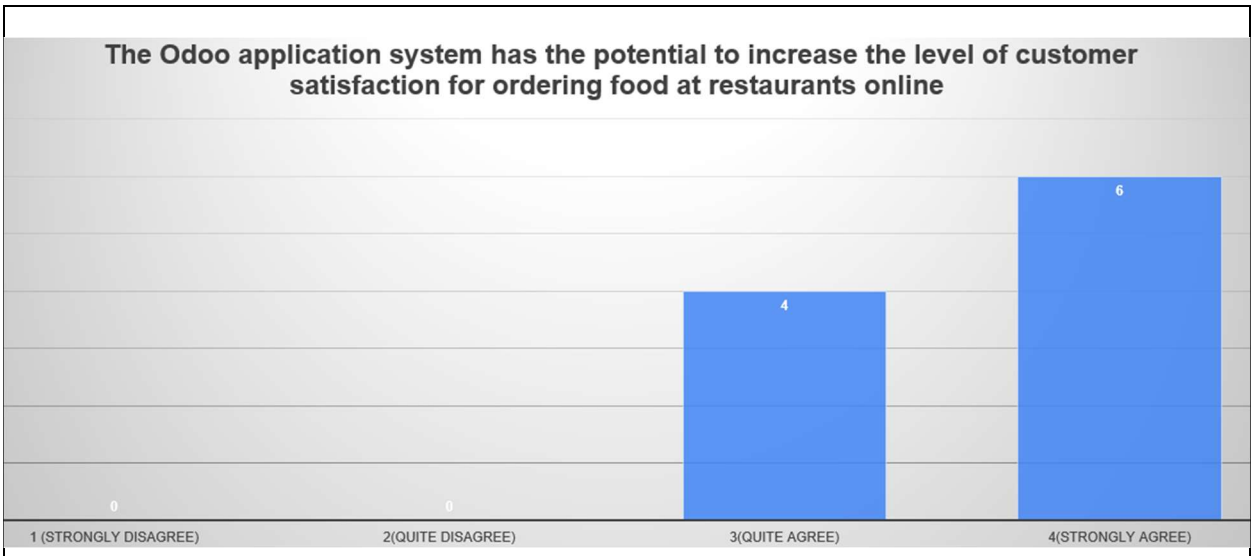


Figure 4.33: The Odoo application system has the potential to increase the level of customer satisfaction for ordering food at restaurants online

4.4 Summary

There are numerous technological breakthroughs in this modern age, particularly in the area of online meal ordering. Foodpanda and GrabFood are two of the most popular systems. The Odoo app system was created to make it easier for restaurant operators to manage their entire establishment. With efficient client order management, this Odoo system may also help save customers' time while also improving the quality of restaurant service. Users will be able to order food online more easily using the Odoo system. This method can also save money on running costs because it eliminates the need for a large number of employees to oversee and assist with the ordering, payment, and other processes. An online food ordering system, such as the Odoo application, will be one of the most important requirements for all levels of society in the future to make ordering easier.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter conclude about the overall process of Development an Ordering System Using the Odoo Application System. Furthermore, the propose of this chapter is to give suggestion and recommendation to improve and develop the system to become more efficient that can be done for the future expansion.

5.2 Conclusion

Finally, this Odoo application system can undoubtedly help customers save time. Besides, it aids in the improvement of restaurant service through quality customer order management. Furthermore, the system will support in ensuring that the customer's dining experience is improved and more comfortable. Delays and longer waiting times can be reduced because of employee engagement. In terms of recovery, the Odoo system allows for better and more efficient order management because every order sent through this system is more securely received. The system will also help to reduce operating costs because there will be no need for staff to take food orders and can assist in other processes such as preparing food, beverages, and food.

5.3 Recommendation

To achieve the project's goal of describing and designing an integrated online shopping system using the Odoo application system for dine-in and takeaway purchases, gathering opinions from different restaurant owners by simulating the application, and comparing and analysing the capabilities of the Odoo application system with the existing application system, a significant amount of time and effort is required. Based on the provided plans and schedules, successful outcomes are obtained, yet there are some suggestions and enhancements for this project in the future. Add functionality to the website application to make it easier for clients to purchase dine-

in. When consumers order food or drinks in a restaurant, they can use the website application. Customers' orders can be directly updated in the Odoo application system's order data without having to wait for the restaurant employees to accept the order. In addition, payment methods can be done through the Odoo application system's online application. Customers can make payment straight on the internet application while purchasing food or drinks, exactly like they can when buying food from a takeaway restaurant, without having to wait and call the restaurant employees to make payment after they have done eating. Furthermore, payment methods can be improved by introducing payment options such as internet banking and credit cards. Finally, the Odoo application system can be applied in real-world restaurants to help them manage their operations.

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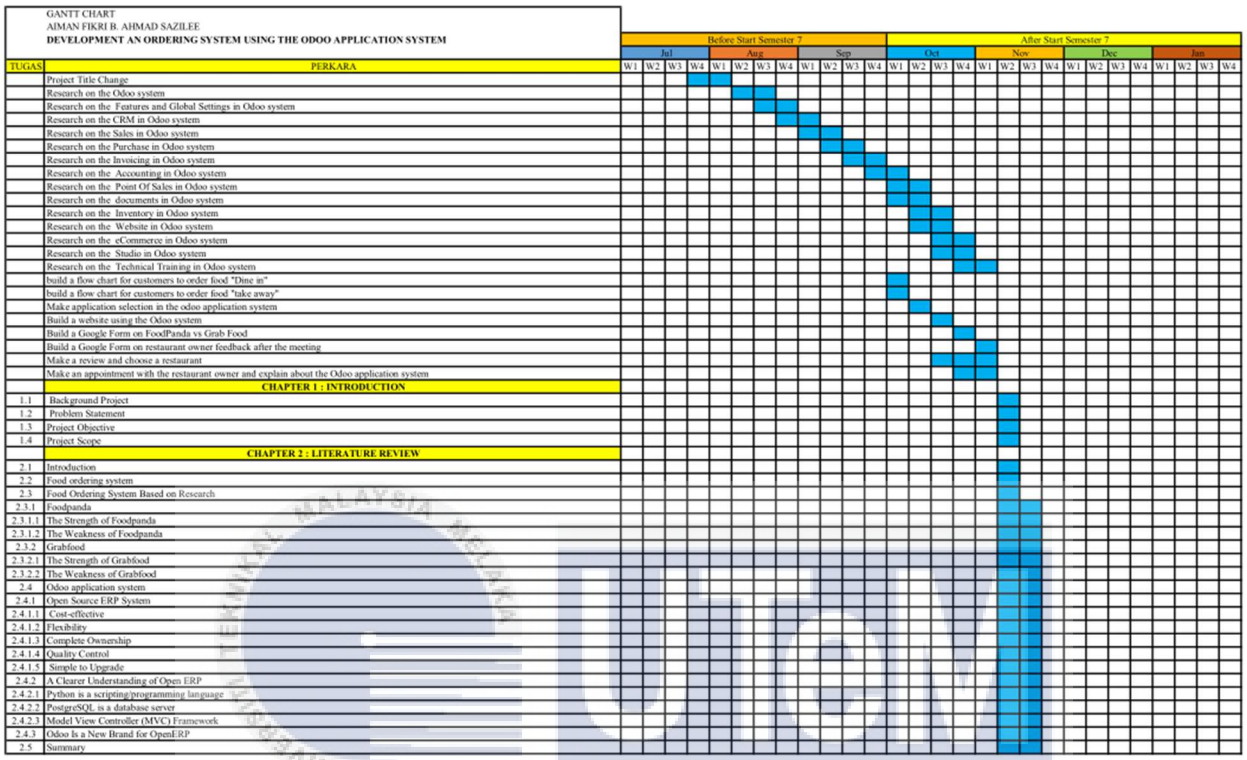
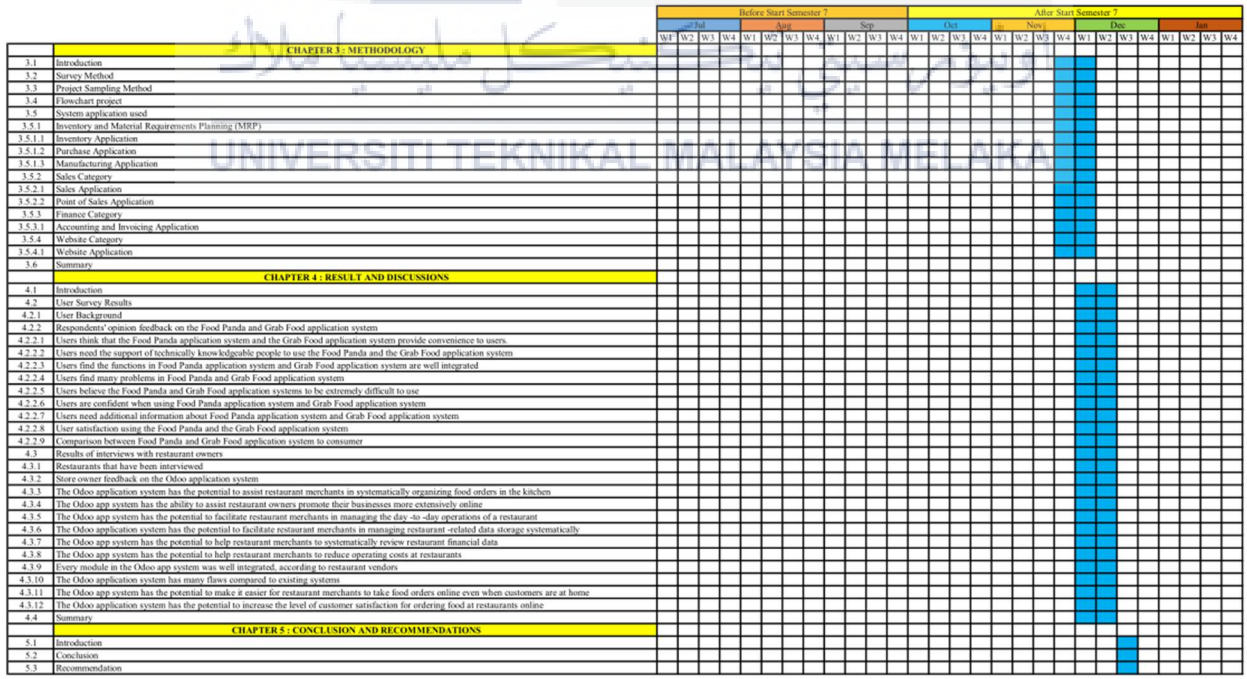
APPENDICES

Gantt chart Final Year Project 2



GANTT CHART
AIMAN FIKRI B. AHMAD SAZILEE
DEVELOPMENT AN ORDERING SYSTEM USING THE ODOO APPLICATION SYSTEM

TUGAS	PERKARA	Before Start Semester 7												After Start Semester 7											
		Jul				Aug				Sep				Oct				Nov				Dec			
		W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
	Project Title Change																								
	Research on the Odoo system																								
	Research on the Features and Global Settings in Odoo system																								
	Research on the CRM in Odoo system																								
	Research on the Sales in Odoo system																								
	Research on the Purchase in Odoo system																								
	Research on the Invoicing in Odoo system																								
	Research on the Accounting in Odoo system																								
	Research on the Point Of Sales in Odoo system																								
	Research on the documents in Odoo system																								
	Research on the Inventory in Odoo system																								
	Research on the Website in Odoo system																								
	Research on the eCommerce in Odoo system																								
	Research on the Studio in Odoo system																								
	Research on the Technical Training in Odoo system																								
	build a flow chart for customers to order food "Dine in"																								
	build a flow chart for customers to order food "take away"																								
	Make application selection in the odoo application system																								
	Build a website using the Odoo system																								
	Build a Google Form on FoodPanda vs Grab Food																								
	Build a Google Form on restaurant owner feedback after the meeting																								
	Make a review and choose a restaurant																								
	Make an appointment with the restaurant owner and explain about the Odoo application system																								
	CHAPTER 1 : INTRODUCTION																								
1.1	Background Project																								
1.2	Problem Statement																								
1.3	Project Objective																								
1.4	Project Scope																								
	CHAPTER 2 : LITERATURE REVIEW																								
2.1	Introduction																								
2.2	Food ordering system																								
2.3	Food Ordering System Based on Research																								
2.3.1	Foodpanda																								
2.3.1.1	The Strength of Foodpanda																								
2.3.1.2	The Weakness of Foodpanda																								
2.3.2	Grabfood																								
2.3.2.1	The Strength of Grabfood																								
2.3.2.2	The Weakness of Grabfood																								
2.4	Odoo application system																								
2.4.1	Open Source ERP System																								
2.4.1.1	Cost-effective																								
2.4.1.2	Flexibility																								
2.4.1.3	Complete Ownership																								
2.4.1.4	Quality Control																								
2.4.1.5	Simple to Upgrade																								
2.4.2	A Clearer Understanding of Open ERP																								
2.4.2.1	Python is a scripting/programming language																								
2.4.2.2	PostgreSQL is a database server																								
2.4.2.3	Model View Controller (MVC) Framework																								
2.4.3	Odoo Is a New Brand for OpenERP																								
2.5	Summary																								



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	CHAPTER 3 : METHODOLOGY																								
3.1	Introduction																								
3.2	Survey Method																								
3.3	Project Sampling Method																								
3.4	Flowchart project																								
3.5	System application used																								
3.5.1	Inventory and Material Requirements Planning (MRP)																								
3.5.1.1	Inventory Application																								
3.5.1.2	Purchase Application																								
3.5.1.3	Manufacturing Application																								
3.5.2	Sales Category																								
3.5.2.1	Sales Application																								
3.5.2.2	Point of Sales Application																								
3.5.3	Finance Category																								
3.5.3.1	Accounting and Invoicing Application																								
3.5.4	Website Category																								
3.5.4.1	Website Application																								
3.6	Summary																								
	CHAPTER 4 : RESULT AND DISCUSSIONS																								
4.1	Introduction																								
4.2	User Survey Results																								
4.2.1	User Background																								
4.2.2	Respondents' opinion feedback on the Food Panda and Grab Food application system																								
4.2.2.1	Users think that the Food Panda application system and the Grab Food application system provide convenience to users.																								
4.2.2.2	Users need the support of technically knowledgeable people to use the Food Panda and the Grab Food application system																								
4.2.2.3	Users find the functions in Food Panda application system and Grab Food application system are well integrated																								
4.2.2.4	Users find many problems in Food Panda and Grab Food application system																								
4.2.2.5	Users believe the Food Panda and Grab Food application systems to be extremely difficult to use																								
4.2.2.6	Users are confident when using Food Panda application system and Grab Food application system																								
4.2.2.7	Users need additional information about Food Panda application system and Grab Food application system																								
4.2.2.8	User satisfaction using the Food Panda and the Grab Food application system																								
4.2.2.9	Comparison between Food Panda and Grab Food application system to consumer																								
4.3	Results of interviews with restaurant owners																								
4.3.1	Restaurants that have been interviewed																								
4.3.2	Store owner feedback on the Odoo application system																								
4.3.3	The Odoo application system has the potential to assist restaurant merchants in systematically organizing food orders in the kitchen																								
4.3.4	The Odoo app system has the ability to assist restaurant owners promote their businesses more extensively online																								
4.3.5	The Odoo app system has the potential to facilitate restaurant merchants in managing the day -to -day operations of a restaurant																								
4.3.6	The Odoo application system has the potential to facilitate restaurant merchants in managing restaurant -related data storage systematically																								
4.3.7	The Odoo app system has the potential to help restaurant merchants to systematically review restaurant financial data																								
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5.2	Conclusion																								
5.3	Recommendation																								