



Faculty of Computer Science and Information Technology

Online LC's Sweet Treats Ordering System

FINAL REPORT

Vielinna Jeoclyn anak Vieny Anthony

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ONLINE LC'S SWEET TREATS ORDERING SYSTEM

VIELINNA JEOCLYN ANAK VIENY ANTHONY

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SISTEM TEMPAHAN LC'S SWEET TREATS DALAM TALIAN

VIELINNA JEOCLYN ANAK VIENY ANTHONY

Projek ini merupakan salah satu keperluan untuk Ijazah
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ABSTRACT

E-commerce is very popular around the world where people enjoy buying things on their fingertip. However, there are lots of business company especially in Food and Beverages field, has not digitalized their business. Business digitalization really helps entrepreneurs in many ways besides facilitate their business journey. This project aims to help this young entrepreneur to go digital. With the current ordering method and business management, the client faced a lot of issue such as overlooked order, lack of manpower and lack of marketing strategies. Furthermore, the target business areas are within Serian and Balai Ringin where most of the residents may have lack of exposure to the world of technology. A digital ordering platform will be proposed and developed with Extreme Programming methodology. The benefits will be more on the client side as they can improve the business management. The outcome of this project is the development of ordering system that contain variety of interesting features, making the business operation running smoothly. The LC's Sweet Treats Ordering System has been developed according to the methodology and design/prototype proposed and has undergone testing process that involved user testing. The outcome of this project is the development of ordering system that contain variety of interesting features, making the business operation running smoothly.

ABSTRAK

E-dagang sangat popular di seluruh dunia di mana orang suka membeli barang-barang di ujung jari mereka. Walau bagaimanapun, terdapat banyak syarikat perniagaan, terutamanya dalam bidang Makanan dan Minuman, yang belum memodifikasi perniagaan mereka. Digitalisasi perniagaan benar-benar membantu usahawan dalam banyak cara selain memudahkan perjalanan perniagaan mereka. Projek ini bertujuan untuk membantu usahawan muda ini untuk pergi digital. Dengan kaedah pesanan semasa dan pengurusan perniagaan, pelanggan menghadapi banyak masalah seperti pesanan yang diabaikan, kekurangan tenaga kerja dan kurangnya strategi pemasaran. Selain itu, kawasan perniagaan sasaran terletak di dalam Serian dan Balai Ringin di mana kebanyakan penduduk mungkin mempunyai kurang pendedahan kepada dunia teknologi. Platform pemesanan digital akan dicadangkan dan dibangunkan dengan metodologi Extreme Programming. Faedah akan lebih pada pihak pelanggan kerana mereka boleh meningkatkan pengurusan perniagaan. Hasil projek ini ialah pembangunan sistem pesanan yang mengandungi pelbagai ciri-ciri menarik, menjadikan operasi perniagaan berjalan lancar. LC Sweet Treats Ordering System telah dibangunkan mengikut kaedah dan reka bentuk / prototipe yang dicadangkan dan telah menjalani proses ujian yang melibatkan pengujian pengguna. Hasil projek ini ialah pembangunan sistem pesanan yang mengandungi pelbagai ciri-ciri menarik, menjadikan operasi perniagaan berjalan lancar.

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LIST OF ABBREVIATIONS

XP	Extreme Programming
UML	Unified Modelling Language
CRC	Class Responsibility Collaborator
ERD	Entity Relationship Diagram
CPU	Central Processing Unit
GPU	Graphic Processing Unit
GB	Gigabyte
FPX	Financial Process Exchange
UI	User Interface
HD	High-definition
API	Application Programming Interface
JSX	JavaScript XML
SQL	Structured Query Language
SSD	Solid-state drive
RAM	Random-access memory
OS	Operating System

1. CHAPTER 1: INTRODUCTION

1.1. Introduction

In this modern era, technology has become parts of our life regardless of age religion and status. Thus, technologies make our daily life more convenient and easier especially buying things just at our fingertip especially when it comes to online food ordering. One of the best methods to turn a website into a client acquisition channel is by implementing an online ordering system, often known as virtual ordering. The Online LC's Sweet Treats Ordering System is a business-to-consumer(B2C) website built for this one young entrepreneur to help her manage her business that selling pizza, pavlova, cakes, drinks, and crepe well in term of daily transaction and catalogue viewing for her customers. This system will have both a user and admin side making things easier for the seller and the customers. This project will use HTML, CSS, PHP, JavaScript, and Bootstrap.

1.2. Problem Statement

As the online client business gets bigger with more products they produce, the number of customers and the demand increase. The target customers are villagers from different villages and Serian town residents who may lack IT knowledge. The existing way of promoting the business is through social media such as Facebook and Instagram and the only platform for them to contact the customers is WhatsApp. Furthermore, the client is currently managing her business alone where she is the only one who takes orders, prepare the products, and performs delivery. With a better ordering system, the client can easily manage the orders by providing a more precise product catalogue. This will indirectly solve the issue of the overlooked order from the current ordering platform and introduce IT more in-depth among young entrepreneurs and villagers.

NO		ITEM	AMOUNT	TOTAL
1		Cake Cigu Smash		50
2		Cake Eva		60
3		Sale Pizza 9/10		126
4		Cake Nana	}	55
5		Boba lalale		5
6		Cake Dia (Andrea)		180
7		Cake Liba		175
8		Cake mdm Sula		50
9		Cake Kenny		40
10		Cake Kayol		50
11		Sale Pizza 22/10		216
12		Cake Estera		45
13		Cake mama Jacky		50
14		Cake Elvira		60
15		Cake Gendut		50
16		Sale 24/10		108
17		Sale 29/10		372
18		Boba amber		30
19		Sale 30/10		28
20				
21				
22				1760
23				
24				

TOTAL / 總計
Jumlah

Received by / Diterima oleh / 收單人

Signature / Tandatangan / 經手人

Figure 1. 1: LC's Sweet Treats selling record for October

1.3. Objectives

The main reason for conducting this project generally is to provide an alternative way for this young entrepreneur to manage her business by developing an ordering system. Based on the interview and survey results, the client handles the business alone, including preparing the products, taking orders, and performing the delivery. In this case she needs a good system to help her efficiently manage her business. Therefore, the aims and objectives of this project are:

- To study the existing system of food ordering
- To develop an ordering system for a young entrepreneur of LC's Sweet Treats
- To test and evaluate the functionality of the system's features.

1.4. Procedure/Methodology

The methodology that is chosen for this project is the Agile, Extreme Programming (XP) methodology. Agile is a modern methodology that is faster and more efficient than Waterfall methodology. Extreme Programming is one of the Agile approaches that can produce high-quality software and is also very flexible in terms of changing requirements or tasks. Demand for lightweight or agile development software has arisen as a result of the ability to make modifications across the whole software development life cycle and a desire for quick software development (Shrivastava et al., 2021).

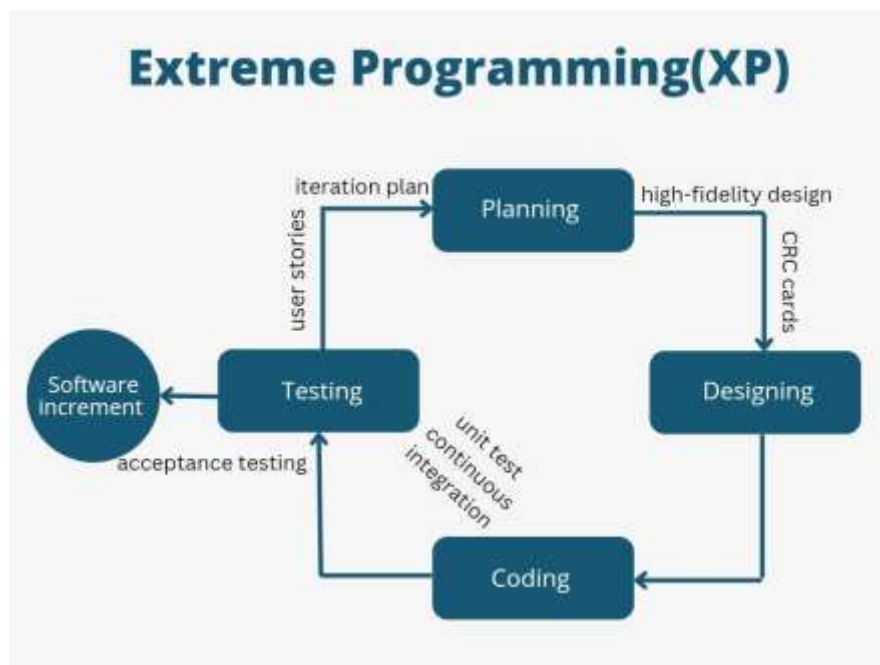


Figure 1. 2: Extreme Programming(XP) Cycle

Adapted from https://www.researchgate.net/figure/Extreme-Programming-Cycle_fig1_339915012

In an effort to conduct this project through Extreme Programming, five values must be practised: communication, simplicity, feedback courage and respect. Furthermore, this methodology can be performed in small group, which can indirectly be used for individual projects.

Phases in Extreme Programming

1.4.1 Planning

In this phase, requirements for the system will be gathered from the client. The user stories must be obtained to describe the desired result and for the developer to easily get the system's vision. The developer may come up with an iteration plan based on the user stories.

1.4.2 Designing

In the designing phase, a simple design will be produced based on the Class Responsibility Card (CRC) that contains relationship between classes and what is needed or not in the system. This project uses Figma to create a high-fidelity design to simplify the system development process. This phase related to one of the Extreme Programming values – simplicity, where good design gives the system shape and rationale and helps eliminate redundancies and excessive complexity.

1.4.3 Coding

The coding phase is the most important phase that needs full attention in Extreme Programming. This is because the phase may be more than one because there will always be client requirements changes from time to time. However, this phase will be less time-consuming because the coding will be based on the previous phase which is designing.

1.4.4 Testing

For the testing phase, the overall completed coding for the system will be tested to detect or find any bugs or errors. In Extreme Programming, this phase can be conducted regularly and continuous integration because of the changing of codes and user needs also known as acceptance testing. This phase can be a daily activity in the Extreme Programming cycle.

1.5. Scope

This project is conducted to produce an ordering system that both client and customers will use for easy business. The scopes of this project are:

- a. Target users will be the client and her customers consist of villagers and residents in Serian and Balai Ringin area.
- b. For now, this system will be used in Serian and Balai Ringin area including schools, hospital, and villages.
- c. The system will be limited to the area with an internet connection since a minority of villages have not yet received an internet connection.

1.6. Significance of Project

The accomplishment of this project will benefit the client more as she can manage to run her business in a more organised way, resulting in less time and energy consumption. Besides, the system also helps customers to satisfy their craving by choosing the products in an orderly catalogue with prices. Furthermore, with this system, the client will not overlook any incoming orders from her customers since the charges will be displayed accordingly on the admin side. At the same time, the importance of technology can be disclosed to the public via this system's functionality.

1.7. Summary

The following is proposal for Online LC's Sweet Treats Ordering System that will be developed for young entrepreneur to help her manage her business in effective way. This system will be developed HTML, PHP, Javascript, CSS and Bootstrap.

The client's current method of operating her business entails doing everything by herself, including product preparation, order taking, and delivery. This approach requires more time and effort, which is why a system is necessary to make things simpler. The target customers are residents of Serian town which may lack of IT knowledge. Thus, the use of the system will increase the locals' understanding of technology.

The objective of this project is to study on the existing system of food ordering system at the same time to develop the ordering system for the young entrepreneur. Other than that, this project is also developed to test and evaluate the functionality of the system's features.

Procedure or methodology that are used for this system is Agile approach, Extreme Programming. This method is the most suitable one because all the process are flexible and can be used for individual project. The phase in Extreme Programming includes planning, designing, coding, and testing. The project will be carried out within two semesters to be exact 8 months 15day based on the Extreme Programming phases.

This system will produce an organized and user-friendly interface which will make it easier for the user to use. Dashboard for admin side will be very helpful for the client to view the progress of her orders and stocks. Overall, the system will make big changes in client business operation as it will helps the client and the customer interaction easier.

2. CHAPTER 2: LITERATURE REVIEW

2.1. Overview

A literature review covers information published in a specific field of study, and occasionally information published within a specific time frame ("*Literature reviews*", 2021). The method of reading, analysing, evaluating, and summarising the present system or approach of a certain issue linked to the research study can be explained as the writing of the literature review in Chapter 2. Numerous sources such as journals, articles and existing websites will be reviewed in the effort of analysing information on e-commerce website related to this project's topic.

In this chapter, a comparison between the existing similar e-commerce systems was also carried out to gain information that can be used for developing the real system during FYP2. Besides reviewing the current existing system, the tools and technology will also be studied in more depth to provide guidance on the software and hardware that are suitable to apply to the online ordering system. This chapter will begin with an overview of the objectives of the ordering system followed by the review of the similar existing systems and the review of the tool and technology involved.

2.2. Overview of Objectives

The aim of this online LC's Sweet Treat ordering system is to help the business owner manage her orders and for the customer to view and choose the products easily. Based on the Chapter 1 objectives, which are to examine existing food ordering systems, develop an ordering system for a young entrepreneur, and test and evaluate the functionality of the system's features, it is essential to carefully and thoroughly review the objectives so that the project can achieve its intended purpose.

The first objective is to study the existing food ordering system more deeply, which will be carried out in this chapter. The second objective of the system is the most crucial because it explains the main purpose of the project that is to develop an ordering system for the young entrepreneur which will be accomplished on FYP2. The final one is to test and evaluate the functionality of the system itself that will be done throughout the development process.

2.3. Review on Similar Existing Systems

2.3.1 Recharge-Malaysia

Recharge-Malaysia is one of the famous Korean Restaurants in Kuching located at Saradise. This restaurant uses a fully online ordering system for their business. Customers who come to this restaurant will be required to scan the QR code provided in-order to view the menu. View menu and submitting orders can be done on the application/website. However, payment can be made at the counter or through online transactions within the app. The Recharge-Malaysia website can be accessed on a mobile phone and this method will also be implemented in Online LC's Sweet Treats Ordering System project. These are some overviews of the Recharge-Malaysia website:

a. Landing Page

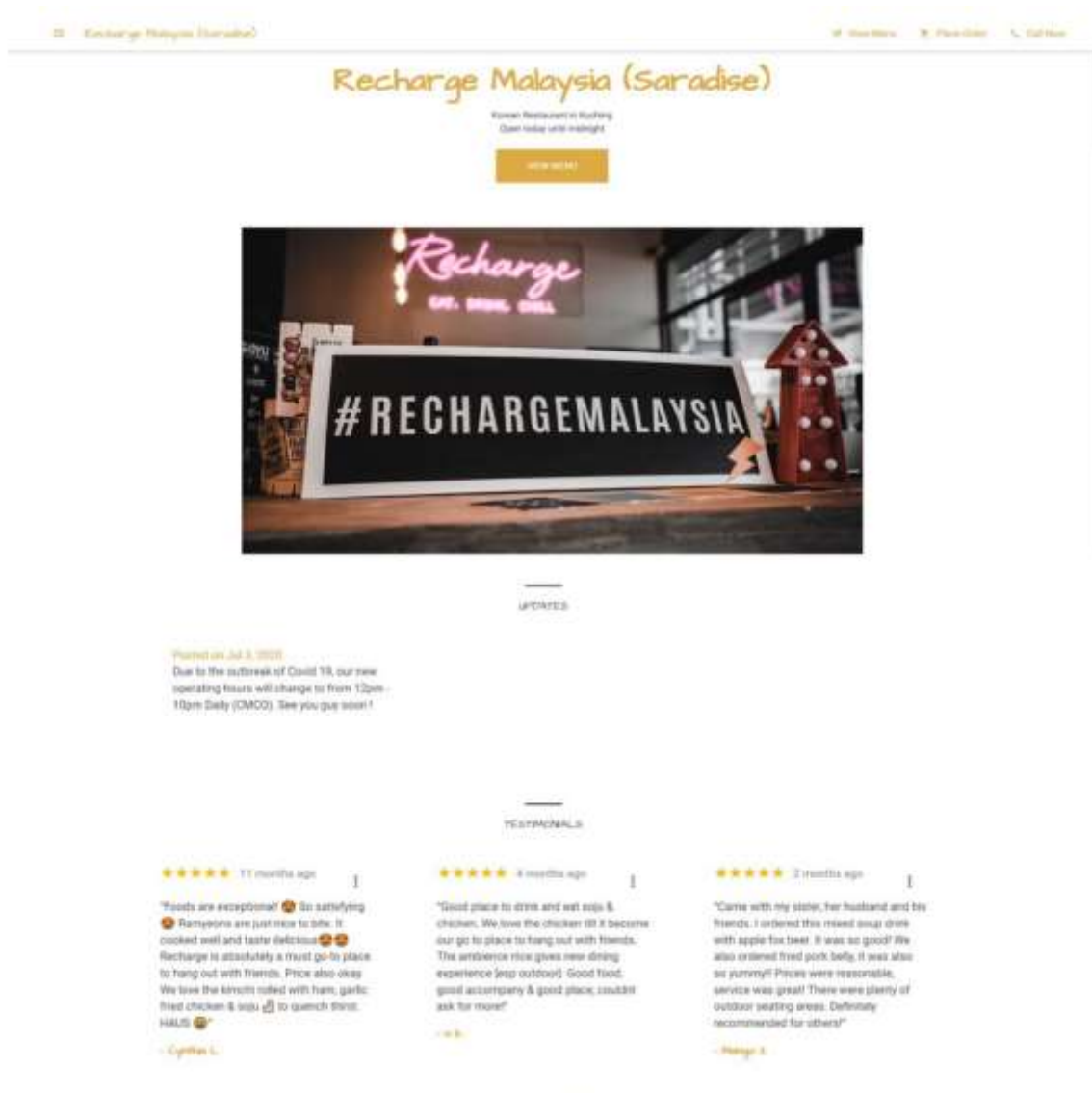


Figure 2. 1: Upper part of landing page of Recharge-Malaysia

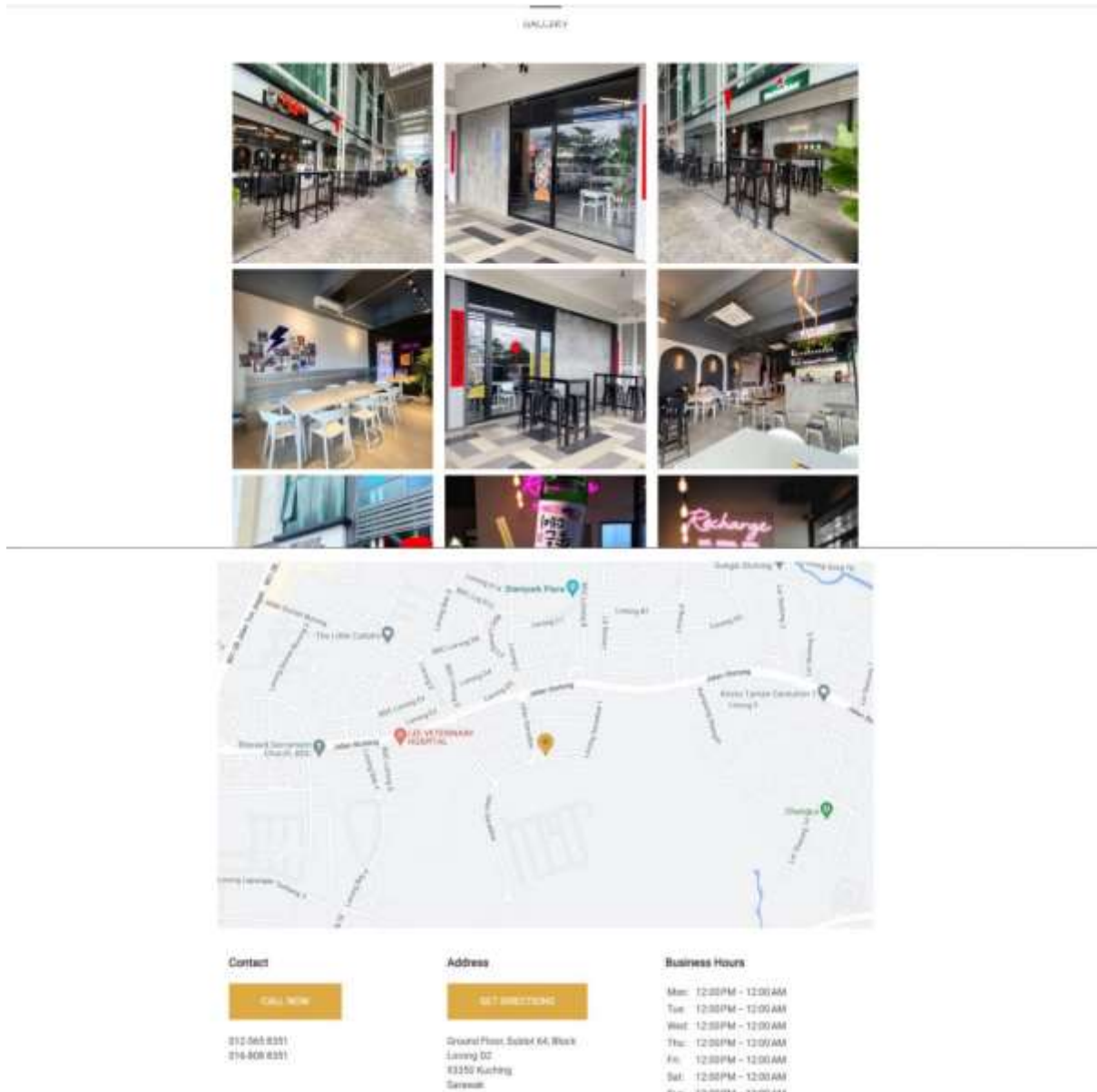


Figure 2. 2: Bottom part of landing page for Recharge-Malaysia

The landing page of Recharge-Malaysia website is full of information that will be planned to implement in the project. At the top of the landing page, there will be a button to their menu; if we scroll down, there will be other information about the company. There are testimonies from the customers displayed and they are also encouraged to write feedback on the services and products of the company. As we scroll down again, there will be a map of the restaurant's location, and this feature also will be implemented in LC's Sweet Treats ordering system. Other than that, is the business information such as operating hours and contact information.

b. Product Catalogue

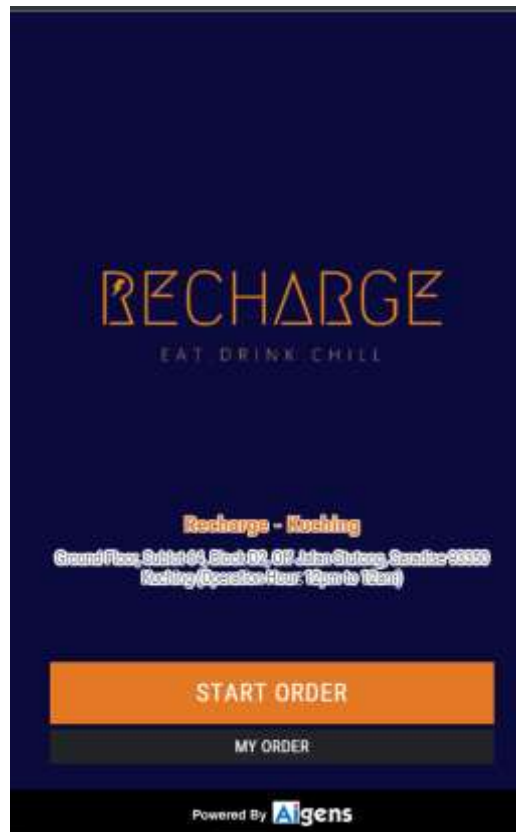


Figure 2. 3: Front page of the catalogue

This page will appear as soon as the customer clicks on the *View Menu* button on the landing page. Customer may click on *START ORDER* button to continue.



Figure 2. 4: Recharge-Malaysia menu