



Faculty of Computer Science and Information Technology

***Dr. Brownies Management Mobile Application***

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Bachelor of Computer Science with Honors (Multimedia Computing)

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**Dr. Brownies Management Mobile Application**

Nurul Munawwarah bt Johari

This Project is submitted in partial fulfilment of the  
requirements for the degree of  
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## **LIST OF ABBREVIATIONS**

<b>UNIMAS</b>	University Malaysia Sarawak
<b>URL</b>	Uniform Resource Locator

## **ABSTRACT**

Dr. Brownies Management Mobile Application is a mobile application that provide severe functions to the small business owner. The title of Dr. Brownies is referring to one of in-house shop located in Kuantan where the owner alone bakes and sell brownies. In this mobile apps, we will use 2 databases, shop's database and customer's database. Using this database, the system will generate the overall performance of the shop and this will help the shop to fix which part that they need to fix. Plus, it can increase their marketing by using template editor from this apps. Just by using a mobile phone, they can use all of this function anywhere anytime.

## ABSTRAK

*Aplikasi Dr. Brownies Pengurusan melalui peranti elektronik seperti contoh telefon pintar adalah aplikasi mudah alih yang menyediakan beberapa fungsi kepada pemilik perniagaan kecil. Tajuk Dr Brownies merujuk kepada salah satu kedai berasaskan rumah kedai yang terletak di Kuantan di mana pemiliknya seorang diri membakar dan menjual brownies. Dalam aplikasi mudah alih ini, kami akan menggunakan 2 pangkalan data, pangkalan data kedai dan pangkalan data pelanggan. Dengan menggunakan pangkalan data ini, sistem akan menghasilkan prestasi keseluruhan kedai dan ini akan membantu kedai untuk membetulkan bahagian mana yang perlu mereka perbaiki. Selain itu, ia boleh meningkatkan pemasaran mereka dengan menggunakan bahan sedia ada dari aplikasi ini. Hanya dengan menggunakan telefon bimbit, mereka boleh menggunakan semua fungsi ini di mana-mana sahaja pada bila-bila masa.*

## **CHAPTER 1: INTRODUCTION**

### **1.1 Introduction**

Dr. Brownies Management Mobile Application is a mobile application that provide severe functions to the small business owner and her runner. The title of Dr. Brownies is referring to one of in-house shop located in Kuantan where the owner alone bakes and sell brownies. It has its own runner who delivery all the brownies to the customer. In this mobile apps, we will use 2 databases, shop's database and customer's database. Using this database, the system will generate the overall performance of the shop and this will help the shop to fix which part that they need to fix. Plus, it can increase their marketing by using template editor from this apps. Next, for the runner's apps, it will show the order list that need to be delivery including the customer's details. Here, runner can directly call or navigate the address of the customer. Just by using a mobile phone, they can use all of this function anywhere anytime.

### **1.2 Problem Statement**

Nowadays, many people do business for living. Some of them, is in-house shop where they sell their product at home. Mostly, they will take order from their customer manually without proper system thus will causes an unorganized order. The worst case is, overlook of one or two customer's order. Besides that, the seller does not have their shop's database that include their customer's database, their cash flow, and etc. Thus, they would not know their real profit and loss and what can be repair to increase their sales and performance. Mostly, they don't have a proper marketing strategy due to unorganized business planning and lack of editing skill for marketing. While for runner, they use manually method to take care of the order that need to delivery. They need to scroll down through their contact number to search the customer's contact number. Then, need to ask direct to customer, their specific location to navigate it through map.



### 1.3 Objectives

1. To come up with a design and development of the Dr. Brownies Management Mobile Applications which include application for both owner and her runner.
2. To generate overall performance of the shop using data analysis method.
3. To provide design template for ads and features of follow-up customer easily.

### 1.4 Project Scope

Target user is the owner of Dr. Brownies which use as a business management app and for the runner. While for the database, it is based on the record of customer buying, customer's details (name, address, no. phone and their order history) and the cash flow of the shop. But, the limitation is that, insufficient data of both customer's details and the shop's database as owner did not make any record of it. Things needed it hand phone and laptop with internet connection.

### 1.5 Brief Methodology

The chosen methodology for the project would be based on Prototype Model as shown as below. Prototype methodology is defined as a Software Development model in which a prototype is built, test, and then reworked when needed until an acceptable prototype is achieved. (Allen, S., Graupera, V., & Lundrigan, L. (2010))

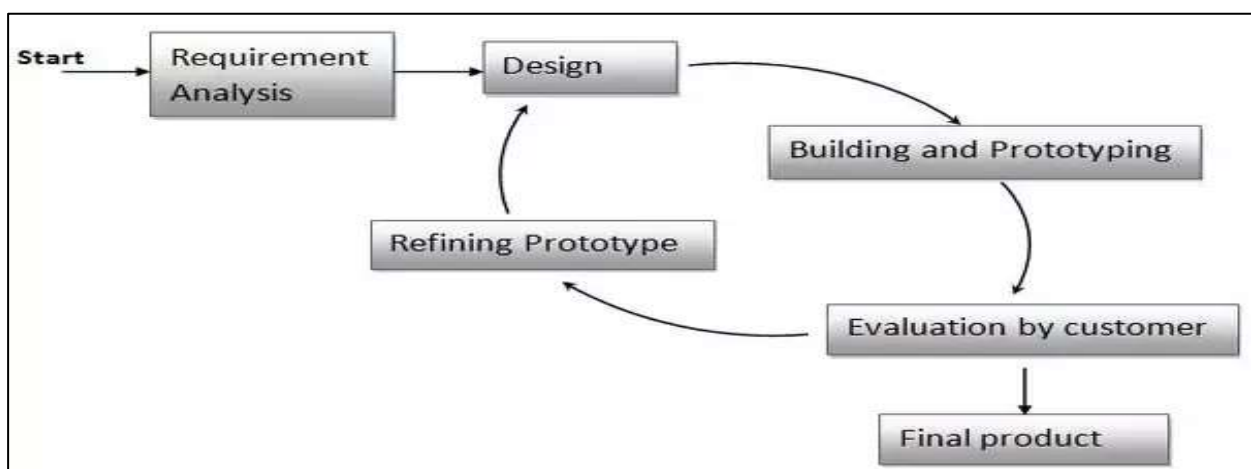


Figure 1.0: Prototype Model

Based on the figure above, prototype model consists of three main phases which are the requirement analysis phase, prototype cycle phase and implementing phase. Requirement Analysis is the first phase in Prototype Model where developers are needed to found out the requirements to develop the system by stating the problem statement and objectives of the system. Furthermore, developers are required to compare the functionalities and usage of the proposed system with other existing system in the market. Thirdly, developers go through prototype cycle phase which is an iterative phase. This phase requires developers to design and develop the prototype of the system. The steps in this phase are repeated with evaluation by customer until the results of the refinement are acceptable. After that, the proposed system is ready to be deployed. In the end, the system is ready to be implemented as the final product.

### **1.6 Significance of Project**

The proposed apps will produce a mobile application that will be useful as a platform for owner of Dr. Brownies to manage her product's sale and for her runner, to manage the delivery of the product. In the proposed system, it will improve the ways of taking and track the customer's order in proper organizing so that will be no overlook order. Plus, this mobile apps will show the pattern through the order's history on which product is the most buy and the association rules between one product to one product. Furthermore, it can trace between new and old customer so that we can do promotion to the old customer. This proposed apps will provide a calendar and put the customer's order on it. Next, it will track the shop's cash flow so that owner will know the profit and loss whether on that day, week, month or overall. Apart from it, it has a function where owner herself can create and design her own post for marketing despite of different level of IT background. While for the runner, she can manage the order list by arrange the order by the nearest distance. Next, she can directly call and navigate maps the address of the customer. All this function is to help and make their shop more organized and professional.

### **1.7 Project Schedule**

Project schedule is used as a guideline and reminder to develop the Dr. Brownies Management Mobile Application. Gantt chart has been used to represent the project schedule

with the help of Excel to ensure the timely completion of the project. The Gantt chart is developed based on the important tasks and date from a table shown below. The Gantt chart is shown in Figure 2.

Task Name	Duration	Start	Finish
Define the scope	4 days	Thu 3/10/19	Tue 8/10/19
Choose Methodology	4 days	Tue 8/10/19	Fri 11/10/19
Plan Schedule	3 days	Sat 12/10/19	Tue 15/10/19
Submission of Chapter 1	1 day	Sat 26/10/19	Sat 26/10/19
<b>CHAPTER 2 : LITERATURE REVIEW</b>	<b>17 days</b>	<b>Sun 27/10/19</b>	<b>Sat 16/11/19</b>
Information Gathering	3 days	Sun 27/10/19	Tue 29/10/19
Review on Existing System	5 days	Wed 30/10/19	Tue 5/11/19
Analyze Information	4 days	Wed 6/11/19	Mon 11/11/19
Define Features of Project	4 days	Tue 12/11/19	Fri 15/11/19
Submission of Chapter 2	1 day	Sat 16/11/19	Sat 16/11/19
<b>CHAPTER 3 : METHODOLOGY</b>	<b>20 days</b>	<b>Sun 17/11/19</b>	<b>Thu 12/12/19</b>
Analyze Requirement	4 days	Sun 17/11/19	Wed 20/11/19
Interview Target User	1 day	Fri 22/11/19	Fri 22/11/19
Finalized Findings and Design Content	2 days	Sat 23/11/19	Mon 25/11/19
Design Workflow and Storyboard	5 days	Wed 27/11/19	Tue 3/12/19
Submission of Chapter 3	1 day	Thu 5/12/19	Thu 5/12/19
Finalized FYP 1 Report	1 day	Tue 10/12/19	Tue 10/12/19
Submission of FYP 1 Final Report and Paper for assessment	1 day	Thu 12/12/19	Thu 12/12/19

Table 1: Project Schedule Table for FYP 1

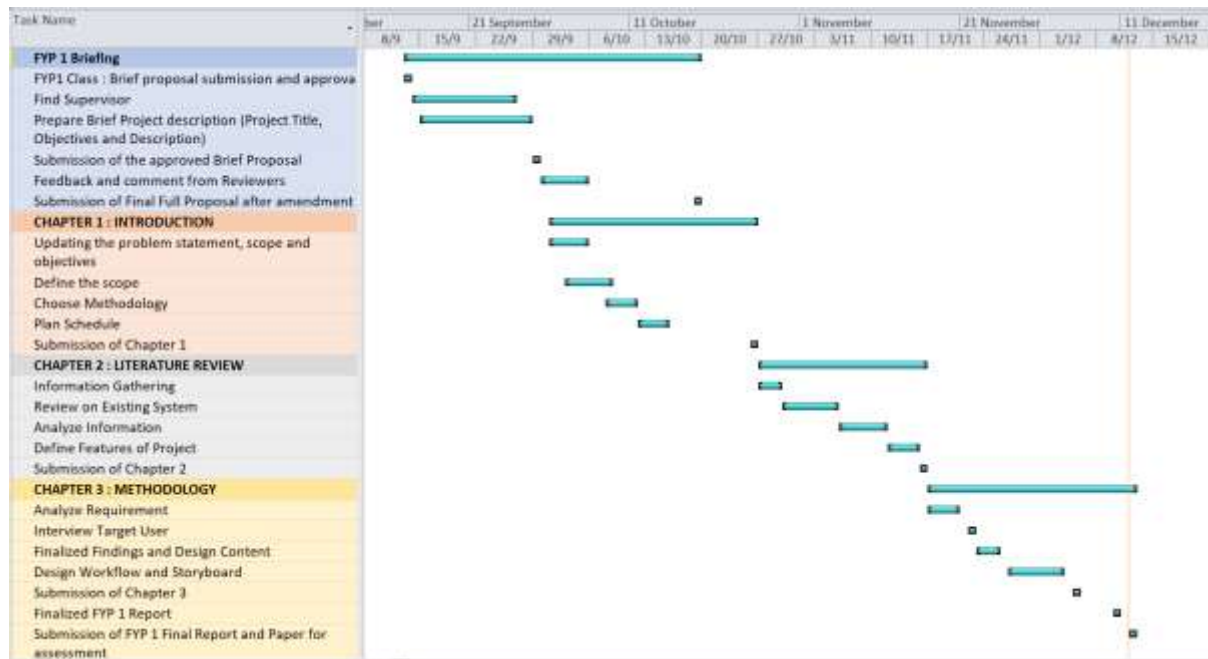


Figure 1.1: Project Schedule Gantt chart for FYP 1

## 1.8 Expected Outcome

The sequel of this mobile application is to benefits all business owner especially for in-house shop business, to have their own business manager applications. The user will get to see their business performance by week, months, years and overall including their cash flow. They will be 2 databases, one is for shop's database where it will show how many orders on that day and which food is the more recent people bought. Second database is, customer's database where they can detect who is new customer and who is not. If we want to do a promotion, we can directly give the notification to the customer by linking with customer's phone number. Here also, have a function where they can do their own marketing's design using the template given. Others, for the runner's side, the user can manage the order list and delivery efficiently.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter discussing the background of the particular project or research that has been published by the scholars and researchers. The main points of research for this project to know the current system and to know which technique that will be used to develop the current system. The purpose of the literature review was carried out to examine and obtain information related to the methodology, design, and techniques used to develop this Dr. Brownies Management Mobile Applications.

Furthermore, this report covered case studies which have few existing related mobile application details, comparison from the review of the similar applications and the conclusion for both owner and runner application. This review would be the guideline for the development application as a process of identifying the similarity on an idea or concept from existing application.

### **2.2 Android Mobile Application**

Nowadays, Android operating system is one of the most widely used operating system. Android is an open source and Linux-based Operating System for mobile devices such as smartphones and tablet computers (Allen, Graupera & Lundrigan, 2010). Android was developed by the Open Handset Alliance (OHA), led by Google, and collaboration with other companies and operators, such as Dell, HTC KDDI, Intel, Motorola, Qualcomm, NTT DoCoMo, Sprint, Nextel, Telefonica, Texas Instruments, Samsung, LG, T-Mobile, and Nvidia (Android Overview).

Android offers a unified approach to application development for mobile devices which means developers need only develop for Android, and their applications should be able to run on different devices powered by Android. With Android, user can use all the Google apps where there are more than 600,000 apps and games available on the Android Market (Android application development). These factors have led Android to become the World's most widely used Smartphone platforms. Android's open natures encourage a large community of developers and enthusiasts to use the open source code as a foundation for community-driven

projects in order to add new features on current apps. (Android architecture) defined that Android operating system is a stack of software components which contain several main components.

### 2.2.1 Characteristics of Android Mobile Application

Android applications are written in the Java programming language using the Android Software Development Kit. Gandhi (n.d) mentioned that Android is available as open source for developers to develop applications which can be further used for selling in android store such as Google Play or the Amazon App Store. Basics characteristic of Android applications are stated as below:

- Android applications are composed of one or more application components (activities, services, content providers, and broadcast receivers)
- Each component performs a different role in the overall application behavior, and each one can be activated independently (even by other applications)
- The manifest file must declare all components in the application and should also declare all application requirements, such as the minimum version of Android required and any hardware configurations required.
- Non-code application resources (images, strings, layout files, etc.) should include alternatives for different device configurations (such as different strings for different languages)

### 2.2.2 Advantages of Android Mobile Application

Currently, over 87% of the world population uses a mobile phone and more than a billion people use smartphones. The Android operating system (OS) holds a 78% market share for smartphones and tablets globally with more than 1.6 million applications built on the platform 'Android Application Development' (n.d.). The Android mobile application gives different advantages and satisfaction to user according to different use in a mobile environment. Advantages of Android Mobile Application are stated as below:

- Easy to Integrate

The entire platform is ready for customization. User can integrate the mobile application according to their business need. Android is the best mobile platform between the application and process architecture. Most of the platforms allow a background process in helping the user to integrate the apps.

- Save time and increase productivity

In a society or in developed country people can do their daily work like check email, contact with business partner from any time in a bus, train, car or walk. So, no need to wait in a room or office. This kind of way saves the time and people can get more time to work. The manpower productivity of society or country is increasing gradually.

- Excellent graphic support

Android offers high built-in support for powerful 2D and 3D graphics that help businesses and organizers to attract millions of users to the application. High quality graphics play a very significant role in applications.

## **2.3 Existing Application**

### **2.3.1 For Owner of Dr. Brownies Application**

For owner of Dr. Brownies application, we will go through several example of mobile applications that have some related function as Dr. Brownies application purposes. Here, the function that been looking for is, Manage Customer on their interface, how they manage their customer and the details needed, Manage Cashflow on their interface, the input and output of the data, and the analysis of the cashflow, Manage Campaign on their interface and what tools are needed, and lastly, Manage Calendar, on their interface, and how the data needed are help in the calendar interface.

#### **2.3.1.1 Facebook Ads Manager**

Facebook Ads Manager is a mobile application made for Businessmen or anyone that want to promote their event. It allows them to stay connected with their ad performance no matter where they are as it easy to create and track Facebook ads from your mobile device with powerful and efficient mobile tools. With Facebook Ads Manager, user can see in-depth analytics that let you fully understand how their ads are performing at all times and help their ads reach potential customers using our detailed targeting options. More, user can create and

publish ad images with text, shapes, logos, stickers, filters, templates and more. This apps can also be used for Instagram platform. Here, the function that are related with the propose application is under Manage Cashflow and Manage Campaign.

Google play store URL:

<https://play.google.com/store/apps/details?id=com.facebook.adsmanager>

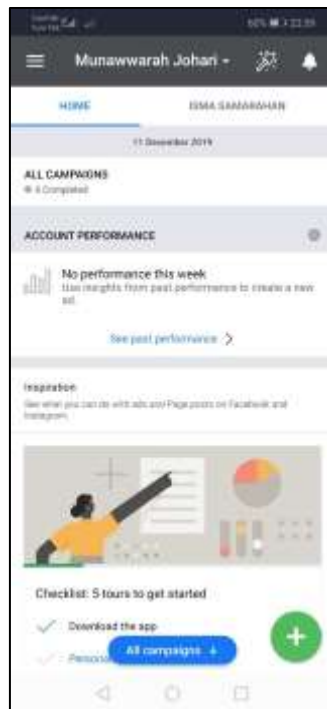


Figure 2.0: Main Interface

Figure 2 shows the main interface of Facebook Ads Manager. Here, we can see three main functions; - Creative tools, All Campaigns and Account Performance.