



Faculty of Computer Science and Information Technology

***DIGITAL CATALOGUE MOBILE APPLICATION FOR BRAND  
MANUFACTURERS IN SARAWAK***

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**(69125)**

**Bachelor of Computer Science with Honours  
(Software Engineering)**

**2022**

**Digital Catalogue Mobile Application for Brand Manufacturers in  
Sarawak**

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This project is submitted in partial fulfilment of the  
requirements for the degree of Bachelor of Computer  
Science with Honours

Faculty of Computer Science and Information Technology

UNIVERSITI MALAYSIA SARAWAK 2023

UNIVERSITI MALAYSIA SARAWAK

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## **ACKNOWLEDGEMENT**

First and foremost, I would like to express my heartiest and biggest gratitude to my final year project supervisor, Dr Cheah Wai Shiang for his erudite involvement and guidance which were crucial to the success of my project task. In fact, his insightful criticism of each chapter and valuable insights have helped me refine my ideas. I also wish to express my gratitude to my examiner, Prof. Dr Wang Hui Hui that provide checking and precious insights on the project that I have been working on. Besides, huge thanks to Prof. Dr Wang Yin Chai, final year project coordinator, for utilizing his lecture time wisely to provide us useful information and guidelines in order for us to complete this project precisely and making sure students do not repeat the same mistake all over again. In addition, I want to express my sincere gratitude to all of my classmates and friends for providing me with the information I needed to complete this project. Last but not least, I want to express my sincere appreciation to my parents for their unwavering support and kind words as I worked to finish this project.

## TABLE OF CONTENT

<b>ACKNOWLEDGEMENT .....</b>	<b>III</b>
<b>TABLE OF CONTENT .....</b>	<b>IV</b>
<b>LIST OF FIGURES .....</b>	<b>IX</b>
<b>LIST OF TABLES .....</b>	<b>XV</b>
<b>ABSTRACT .....</b>	<b>XVII</b>
<b>ABSTRAK.....</b>	<b>XVIII</b>
<b>INTRODUCTION.....</b>	<b>1</b>
1.1 Introduction .....	1
1.2 Problem Statement.....	3
1.3 Objectives .....	4
1.4 Methodology.....	4
1.4.1 Concept.....	5
1.4.2 Inception.....	5
1.4.3 Construction.....	6
1.4.4 Release.....	6
1.4.5 Production.....	6
1.4.6 Retirement.....	7
1.5 Project Scope .....	7
1.6 System Environment.....	8
1.7 Significant of Project .....	8

1.8	Project Schedule .....	10
1.9	Expected Outcome.....	11
<b>2</b>	<b>LITERATURE REVIEW .....</b>	<b>12</b>
2.1	Introduction .....	12
2.2	Shopfully .....	12
2.3	LIDL .....	21
2.4	Flipkart.....	30
2.5	Features of the existing applications and proposed application comparison.....	37
2.6	Conclusion .....	42
	<b>REQUIREMENT, ANALYSIS AND DESIGN .....</b>	<b>43</b>
3.1	Introduction .....	43
3.2	Methodology.....	43
3.3	Inception Planning .....	45
3.4	Analysis .....	45
3.4.1	Functional Requirement.....	53
3.4.2	Non-functional Requirement.....	54
3.4.3	Software Requirement.....	55
3.5	System Design .....	56
3.5.1	Use Case Diagram.....	56
3.5.2	Use Case Description.....	57
3.5.3	Sequence Diagram.....	74

3.5.4	Activity Diagram.....	87
3.5.5	Class Diagram.....	89
3.5.6	Graphical User Interface (GUI).....	90
3.6	Summary.....	100
<b>IMPLEMENTATION.....</b>		<b>101</b>
4.1	Introduction .....	101
4.2	Development Installation and Configuration of Software Used.....	101
4.2.1	VSCoDe for Android Application Development.....	102
4.2.2	Firebase.....	104
4.3	Implementation of DigiCat Mobile Application functionality .....	105
4.4	Application Page (Customer/User).....	105
4.4.1	Login and Sign-Up page.....	106
4.4.2	Home page.....	107
4.4.3	Search page.....	109
4.4.4	Catalogue page.....	110
4.4.5	Product page.....	111
4.4.6	Cart page.....	112
4.4.7	Checkout page.....	113
4.4.8	Payment page.....	114
4.4.9	Store location page.....	115
4.4.10	Nearby store page.....	116



4.4.11	Notification page.....	117
4.4.12	User profile page.....	119
4.4.13	Favourite Page.....	120
4.5	Application Page (Admin).....	121
4.5.1	Login Page.....	121
4.5.2	Home Page.....	122
4.5.3	Manage Catalogue page.....	123
4.5.4	Manage Product page.....	125
4.5.5	Manage Category page.....	126
4.5.6	Manage Order page.....	127
4.6	Summary.....	128
<b>TESTING .....</b>		<b>129</b>
5.1	Introduction .....	129
5.2	Testing .....	129
5.2.1	Functional Testing.....	130
5.2.1.1	Test cases.....	130
5.2.2	Non-Functional Testing.....	147
5.2.3	Usability Testing.....	147
5.4	Evaluation Discussion .....	151
5.5	Summary.....	152
<b>CONCLUSION AND FUTURE WORK.....</b>		<b>153</b>

6.1	Introduction .....	153
6.2	Achievements .....	153
6.3	Limitation and Future Works .....	155
6.4	Future Works .....	155
6.5	Conclusion .....	156
<b>REFERENCES .....</b>		<b>158</b>
<b>APPENDIX A .....</b>		<b>159</b>
<b>REQUIREMENTS QUESTIONNAIRES.....</b>		<b>159</b>
<b>APPENDIX B.....</b>		<b>162</b>
<b>TESTING FEEDBACK QUESTIONNAIRES.....</b>		<b>162</b>

## LIST OF FIGURES

Figure 1.1 Agile Model Phases .....	5
Figure 1.2 Project Gantt Chart Schedule .....	10
Figure 2.1 Shopfully Home Screen (Website) .....	13
Figure 2.2 Shopfully home screen (Mobile).....	14
Figure 2.3 Add retailer to favourite list .....	14
Figure 2.4 Shopfully search functionality.....	15
Figure 2.5 Shopfully search for products nearby .....	15
Figure 2.6 Shopfully Nearby Shops list.....	16
Figure 2.7 Shopfully list of cities.....	16
Figure 2.8 Shopfully Catalogue Page.....	17
Figure 2.9 Shopfully Catalogue Product info .....	18
Figure 2.10 Myers' shopping page .....	18
Figure 2.11 Shopfully chat and save to list features.....	19
Figure 2.12 Shopfully menu bar.....	20
Figure 2.13 LIDL Home screen.....	22
Figure 2.14 LIDL Map to find store.....	23
Figure 2.15 LIDL product list for a specific category.....	23

Figure 2.16 LIDL product details page.....	24
Figure 2.17 LIDL notification calendar interface.....	25
Figure 2.18 LIDL bottom page of the home screen.....	25
Figure 2.19 LIDL Online Leaflets page.....	26
Figure 2.20 LIDL Leaflets download.....	26
Figure 2.21 LIDL shopping list interface.....	27
Figure 2.22 LIDL deleting shopping list.....	27
Figure 2.23 LIDL add new entry on list.....	28
Figure 2.24 LIDL added entry on the list.....	28
Figure 2.25 LIDL more page .....	28
Figure 2.26 Flipkart Login Screen.....	30
Figure 2.27 Flipkart Home Screen.....	31
Figure 2.28 Flipkart Category Lists.....	31
Figure 2.29 Flipkart brand screen.....	32
Figure 2.30 Product subscription screen.....	32
Figure 2.31 Popular products nearby screen.....	33
Figure 2.32 Account management screen.....	34
Figure 2.33 Product information screen.....	35
Figure 2.34 Product details screen.....	35

Figure 2.35 Flipkart Cart screen.....	36
Figure 3.1 Agile Model .....	44
Figure 3.2 Questionnaire 1.....	48
Figure 3.3 Questionnaire 2.....	48
Figure 3.4 Questionnaire 3.....	49
Figure 3.5 Questionnaire 4.....	49
Figure 3.6 Questionnaire 5.....	50
Figure 3.7 Questionnaire 6.....	50
Figure 3.8 Questionnaire 7.....	51
Figure 3.9 Questionnaire 8.....	52
Figure 3.10 Questionnaire 9.....	52
Figure 3.11 DigiCat Application use case diagram.....	56
Figure 3.12 Sequence Diagram on user side.....	75
Figure 3.13 Sequence Diagram for search functionality.....	76
Figure 3.14 Sequence Diagram for store location functionality.....	77
Figure 3.15 Sequence Diagram for nearby store functionality.....	78
Figure 3.16 Sequence Diagram for edit profile functionality.....	79
Figure 3.17 Sequence Diagram for make payment functionality.....	80
Figure 3.18 Sequence Diagram on Admin side for add and edit catalogue.....	82

Figure 3.19 Sequence diagram for add and edit category for admin.....	84
Figure 3.20 Sequence Diagram for manage order functionality.....	85
Figure 3.21 Activity diagram for users.....	87
Figure 3.22 Activity diagram for admin.....	88
Figure 3.23 Class Diagram for the DigiCat Application.....	89
Figure 3.24 User login GUI.....	90
Figure 3.25 User account creation GUI.....	90
Figure 3.26 Home page GUI .....	91
Figure 3.27 Catalogue page GUI .....	91
Figure 3.28 Product page GUI.....	93
Figure 3.29 Google maps page GUI .....	93
Figure 3.30 User profile page GUI .....	94
Figure 3.31 Shopping list page GUI .....	94
Figure 3.32 Checkout/Payment page GUI.....	95
Figure 3.33 Admin login page GUI.....	96
Figure 3.34 Admin home page GUI .....	96
Figure 3.35 Edit catalogue page GUI .....	97
Figure 3.36 Add new catalogue page GUI.....	97
Figure 3.37 List of category page GUI .....	98

Figure 3.38 Manage order page GUI.....	99
Figure 4: Main screen file for the development.....	103
Figure 4.1 Firestore Database in the Firebase console.....	104
Figure 4.2 Login page.....	106
Figure 4.3 Sign up page.....	106
Figure 4.4 DigiCat user home page .....	107
Figure 4.5 Home page drawer.....	107
Figure 4.6 Search page.....	109
Figure 4.7 Search result.....	109
Figure 4.8 Catalogue page I.....	110
Figure 4.9 Catalogue page II.....	110
Figure 4.10 Product list page.....	111
Figure 4.11 Product page.....	111
Figure 4.12 Cart page.....	112
Figure 4.13 Checkout page.....	113
Figure 4.14 Payment selection page.....	113
Figure 4.15 Credit/Debit card form .....	114
Figure 4.16 User current location page.....	115
Figure 4.17 Store location page.....	115

Figure 4.18 Nearby store main page.....	116
Figure 4.19 Nearby store list page .....	116
Figure 4.20 Notification page .....	117
Figure 4.21 User profile page.....	119
Figure 4.22 User profile form update page.....	119
Figure 4.23 Favourite Page.....	120
Figure 4.24 Remove favourite.....	120
Figure 4.25 Admin login page .....	121
Figure 4.26 Admin Home Page.....	122
Figure 4.27 Manage catalogue page.....	123
Figure 4.28 Add new catalogue form I .....	123
Figure 4.29 Add new catalogue form II.....	124
Figure 4.30 Manage product page.....	125
Figure 4.31 Add product form.....	125
Figure 4.32 Manage Category page.....	126
Figure 4.33 Add new category page.....	126
Figure 4.34 Manage Order page.....	127
Figure 5.1 Usability evaluation on the application’s user interface questionnaire results...	148
Figure 5.2 Usability evaluation on the application’s user satisfaction questionnaire results.	149



## LIST OF TABLES

Table 1.1 System Environment .....	8
Table 2.1 Feature between existing and proposed application.....	37
Table 3 Interview details from Kampung Quop entrepreneurs.....	46
Table 3.1 Software requirement .....	55
Table 3.2 Use case description for login.....	57
Table 3.3 Use case description for browsing the catalogue app .....	58
Table 3.4 Use case description for logout.....	60
Table 3.5 Use case description for managing catalogue.....	62
Table 3.6 Use case description for managing the catalogue category.....	64
Table 3.7 Use case description for adding product to shopping list.....	66
Table 3.8 Use case description for search store location .....	68
Table 3.9 Use case description for make payment.....	69
Table 3.10 Use case description for manage order.....	71
Table 3.11 Use case description for edit profile.....	73
Table 5.1 Login Test Case .....	131
Table 5.2 User Registration Test Case .....	132
Table 5.3 Search Functionality Test Case .....	134

Table 5.4 Favourite Functionality Test Case.....	135
Table 5.5 Cart Functionality Test Case .....	136
Table 5.6 Nearby Store Functionality Test Case .....	137
Table 5.7 Catalogue store location Functionality Test Case .....	138
Table 5.8 Payment Functionality Test Case .....	139
Table 5.9 Add catalogue functionality test case.....	141
Table 5.10 Edit catalogue functionality test case.....	142
Table 5.11 Delete Catalogue Functionality Test Case.....	144
Table 5.12 Manage order functionality Test case.....	145
Table 6.1: Review of the objectives and achievements.....	154

## ABSTRACT

*Digital catalogue is the cornerstone of successful firms' marketing and growth plans. In this project, digital catalogue mobile application is going to be developed as a platform to replace any use of paper-based catalogue and social media for brand manufacturers in Sarawak. The focus of this application development is on user experience and user interface interaction. The search features will make it simple to browse the catalogue. Additionally, the app will have to organize and edit the product catalogue listings. The application will incorporate API to display the location of each store that owns the catalogue as well as a list of nearby retailers for based on the user's device location. Users can also make purchases directly from the application. Products from the catalogues can be added to cart to complete the orders at once. Payment API will be utilised to handle the transaction securely. To provide quick access to their deals, users can also add each catalogue to their favourite list. Using the flutter SDK, the front end of the mobile application will be developed while the Firebase platform will take care of the application's backend. Agile methodology is chosen because it allows cycle back to each phase for any amendments or modification, thus save more time and fasten the development process. A functional prototype for the catalogue application is expected to be designed and developed by the end of the final semester where user can interact and browse through the catalogue thus finding the location of the store that sells the product in the application. With the digital catalogue, a company can convey its products to wholesale and retail customers. By enabling customers and prospects to instantly search, browse, and purchase company's product offerings online, digital catalogues add a new level of convenience for both a company and its customers and prospects.*

## ABSTRAK

*Katalog digital adalah asas kepada pelan pemasaran dan pertumbuhan firma yang berjaya. Dalam projek ini, aplikasi mudah alih katalog digital akan dibangunkan sebagai platform untuk menggantikan sebarang penggunaan katalog berasaskan kertas dan juga media sosial untuk pengeluar jenama di Sarawak. Tumpuan utama pembangunan aplikasi ini adalah pada pengalaman pengguna dan interaksi antara muka pengguna. Ciri carian akan menjadikannya mudah untuk melayari katalog. Di samping itu, aplikasinya perlu menyusun dan mengedit senarai katalog produk. Aplikasi ini akan menggabungkan API untuk memaparkan lokasi setiap kedai yang memiliki katalog serta senarai peruncit berdekatan berdasarkan lokasi peranti pengguna. Pengguna juga boleh membuat pembelian secara langsung dari aplikasi. Produk dari katalog dapat ditambahkan ke troli untuk menyelesaikan pesanan sekaligus. API pembayaran akan digunakan untuk menangani transaksi dengan selamat. Untuk memberikan akses cepat ke tawaran mereka, pengguna juga dapat menambahkan setiap katalog ke senarai kegemaran mereka. Dengan menggunakan SDK flutter, bahagian depan aplikasi mudah alih akan dikembangkan sementara platform Firebase akan mengurus backend aplikasi. Metodologi agile dipilih kerana membolehkan kitaran kembali ke setiap fasa untuk sebarang pindaan atau pengubahsuaian, sehingga menjimatkan lebih banyak masa dan mempercepat proses pembangunan. Prototaip fungsional untuk aplikasi katalog dijangka dirancang dan dibangunkan pada akhir semester terakhir di mana pengguna boleh berinteraksi dan melayari katalog sehingga mencari lokasi kedai yang menjual produk tertentu dalam aplikasi. Dengan katalog digital, syarikat boleh menyampaikan produknya kepada pelanggan borong dan runcit. Dengan membolehkan pelanggan dan prospek mencari, melayari dan membeli penawaran*

*produk syarikat secara dalam talian dengan cepat, katalog digital menambah tahap kemudahan baru bagi syarikat dan pelanggan serta prospeknya.*

## CHAPTER 1

### INTRODUCTION

#### 1.1 Introduction

Living in an era of rapid internet and digital development, mobile phones have become a vital instrument in everyone's life. All issues based on aspects such as communication, marketing, and shopping can be solved easily by using mobile phones. A lot of us have seen product catalogues everywhere in a form of papers whether it is on the newspapers, magazines and even on the sewer of a street. However, with the rise of digital catalogue, this printed catalogue has become more obsolete, but it is still utilised by big company like IKEA (Tran, 2019).

For variety of reasons, the digital catalogue is the cornerstone of successful firms' marketing and growth plans. Even though printed catalogues had their advantages, they are becoming less common as digital catalogues become more prevalent, and it is also reasonable to say that they are now what is expected as the industry standard (Pjetra, 2020). According to an article, the printed catalogue with professional designs that contains 8 or more products in an A4 sizes paper costs around 150 dollars to 200 dollars per page, which is expensive (Chadwick, 2021).

Moreover, if the product offering price were to change, we need to prepare the catalogue from scratch, reprint the whole thing and redistribute it to customers. People usually receive

more than one copy of the printed catalogue. Sometimes people would not want to lug those things around and just throw or leave them everywhere. Digital however is a lot more convenience and can be access anytime and anywhere if you have a mobile device and an internet connection. To make it more convenient, users can also purchase the product from the catalogue and get the product delivered straight to their front door house.

This thesis introduces a digital catalogue mobile application as a platform to replace any use of paper-based catalogue and social media for brand manufacturers in Sarawak. For this project, there will be 2 applications. One is for the user or the customer who desire to browse the catalogue or make some purchases, while the other app is for the admin to manage the front end of the user application as well as the orders. Apart from viewing and getting to know what is on promotion, users can also make some purchases on the product that is sold from the catalogue through the mobile application. In this application, we will include high-quality, vibrant images of every specific product to attract users and make them keep interacting with the application. Besides, user experience and user interface interaction are highlighted for this application development. Browsing of the catalogue will be made easy using the search function. The purchase and transaction process will require less effort from the user and can be done immediately. The app will also have the features to organize and edit the product catalogue listings faster and simple. For instance, user can add the offered products from the catalogue to their shopping list so that they are prepared and know what to buy when arrived at the store. Search and discovery of a certain catalogue can be made easy by using this map to find out where the store is located. Direction, hours, and route will be shown to the user. Additionally, users can locate for any nearby stores based on their current location. Users can also add each catalogue or retailer to their favourite list to grant fast access to their deals.

With the proposed digital catalogue, it allows a company to communicate its commodities to retail and wholesale consumers in a couple of seconds. Digitization of print catalogues adds a new level of convenience not only for a firm, but also for users and prospects by allowing them to easily buy, search and browse through their product offerings online.

## **1.2 Problem Statement**

The use of printed catalogue is still utilised by a lot of brands and company here is Sarawak, Malaysia, as it can be seen everywhere especially the shopping mall. Based on the interview conducted during the site visit, one of the entrepreneurs described the hardships faced by their consumers in knowing the exact location and time for the selling period of their products as well as the inefficiency of printed catalogue usage for marketing their product. They also stated their hardship on selling their products through social media as not everyone utilizes social media to purchase anything. Besides, without going digital, updates on the content of the catalogue will not be a swift process to handle and it guarantee requires more cost to make sure the catalogue stays up to date some items may run out of stock. Through digital catalogue, users can easily navigate through the catalogue and find the items that they want through the search option without them wasting time flicking through pages. Editing can also be done much easier, and it allows certain company to incorporate their own branding style to attract their customers. It is also hard to figure whether a customer is interested with the products that is displayed on the printed catalogue.