

Universiti Teknologi MARA

**GEROBOK DAPUR : MOBILE APPLICATION OF
FOOD BANK**

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My hope is that this writing can benefit and contribute to the community through the implementation of a food bank of mobile application in Malaysia. May this good intentions and endeavors get the pleasure of Allah S.W.T. Hopefully the knowledge gained is beneficial to the world and the hereafter. Amin.

DECLARATION

I, *Syahmihanif Syah Bin Md.Sah*, declare that this project is entirely my own work, in my own words, and that all sources and quotations used are fully acknowledged and properly identified.

This final year project is presented in part fulfilment of the requirements for the Bachelor of Graphic Design. This project has not been submitted to any other University or higher education institution, or for any other academic award in this University

Signature:

Name of Supervisor: Madam Lili Eliana Mohd Redzuan

Position: Lecture

Date: 21 Disember 2018

CHAPTER 1

BACKGROUND RESEARCH

1.1 Introduction

In today's world, that lot of organisation who manage food with call the food bank. The revolution of technology, they use of managing food bank will be easier. In Malaysia the unemployment and poverty on the alarming. Malaysia is also not left behind, when there is an organization like Kenchara Group Kitchen and non-government organisation has initiative to start the food bank from the regular items being dropped off at outdoor step by anonymous donors. Therefore, this research also to aim identified sustainable consumption strategies and explored technology related to food consumption and sustainability. This research also to elaborate the responsibilities of the planning, receipt, storage and distribution of food item for donation purpose. It hope for this research can be developed a mobile application that effectively deals with the house sharing situation and in particular, would be of benefit to user and the community

1.2 Background Research

Food is the most basic requirement for any human being to live, grow and get energy to do daily activities. All humans have the right to life for the welfare of the family fun, including food. Food is basic human rights as set out in international law. It is the right of every person to have continuous access to resources needed to produce, obtain or buy enough food, not only to prevent hunger, but also to ensure the health and well being

Access to food is the main ingredient in food safety. Food safety according to the world food and Agriculture Organization (FAO) is defined as a situation where all residents have access to enough food to live healthy and active. Access to food that can be created with the food supply and the ability to get it. However, not everyone can afford to get food either because of poverty or other factors. Inability to obtain food shows the absence of food safety, namely the lack of physical, social and economic access to enough food. The absence of food security can lead to hunger and insufficient nutrition to the health needs of the body. Conditions that are inviting to the problem of famine.

Inability to obtain food supplies have caused almost one billion people in the world suffer from hunger. Therefore, to overcome the problem, the need for other mechanisms to help these groups. Therefore, food aid has emerged as the main answer to this problem and as a mechanism to create access to food for the poor. Food aid programmes have been implemented to address the strains hunger among the poor and less attention. According to the wealth of Graham, the food bank is seen as a mechanism for a more effective compared with other food assistance programmes in reducing hunger and improving food safety. Therefore, this study wishes to the mechanism innovation with technology to solve this problem

1.3 Problem Statement

The issue of food security has a close relationship with hunger, lack of nutrition and poverty. It is one of the most serious problems for most people in developing and poor countries. According to FAO, there is enough food for the world's population but is hindered only by lack of access to it. This situation shows that adequate supply of food in the market does not necessarily bring the implication of access to food for

every individual or household. Most of the problem of food security is the result of access to food, rather than due to a lack of food. This is because not everyone can afford to buy due to the difference in income level.

The world's total food is also estimated to be more than sufficient in 2030 where food production will increase by more than 70 percent higher than that produced in 1990, but there are still people who can not afford it due to the poverty problem that has led to the lack of access to the food. This indicates poverty is the cause of the absence of security of food security because it is closely related to individual income or household. Poverty is also a cause that is often associated with hunger that causes people to face the risk of starvation. Famine is the most basic threat that can cause death in which the number of deaths caused by famine exceeds the mortality rate due to Aids, malaria and constipation every year. According to the Food Agency of the United Nations, there are 166 million people in 22 countries in the world face hunger or difficulty in getting enough food. The problem of poverty is due to the high cost of living, low income and housing problems. The rising cost of living is due to the phenomenon of rising oil prices and basic necessities, especially food supplies. The issue of rising food prices is increasingly burdensome for consumers especially for the poor and low-income groups. These groups are most susceptible to any increase in food as most of their income is allocated to cover food expenditure³⁰ and subsequently their purchasing power is falling.

Global food prices are also expected to increase in the future due to population increase and rising cost of agricultural inputs. The absence of food security will come about as a result of poverty as they are closely interconnected with each other. Therefore, this situation shows that there are still people who are vulnerable to the

absence of food security because they are unable to get enough food for themselves and their families.

In addition to the poverty factor, we are also often surprised by unexpected natural disaster events such as landslides, tsunamis, earthquakes, floods and so on. Natural disasters are one of the threats to food security because it can not only destroy crops that supply food sources and can cause inability to get food especially for disaster victims.³³ Furthermore, climate conditions in Malaysia are often vulnerable to flood disaster events which often occurs each year in the monsoon season

In the case of a flood disaster in Malaysia, there is a proposal to set up a disaster warehouse as a food storage center and emergency assistance during the emergency period to face the possibility of major floods. This shows that our country really needs a specialized organization as a food storage center for distribution to the groups in need. With this suggestion, the writer feels very relevant to study the potential of establishing a food bank in Malaysia as it can not only provide emergency food aid during the disaster but to other groups who also need it.

1.4 Significant Of Study

The significant for this study give people back a sense of consciousness with food safety among the poor in Malaysia. With the introduction the significant of this study through the way of modern modernity. The significant can can be portrayed by way of the method of modernization.

The significant for this research is give back people sense of awareness with food security among the poor people in Malaysia. By introducing the significant through in the modern way of modernity. The significant can be portrayed through the way of method of modernization.

The amount of food around the world is also estimated to be sufficient in 2030 in which food production will increase more than 70 percent higher than that produced in 1990, but there is still not able to enjoy it due to the problems that led to the shortage of access to food. This indicates poverty is the cause of food insecurity as it is closely linked to individual income or household

Poverty is also a cause that is often associated with hunger that causes people to face the risk of starvation. Famine is the most basic threat that can lead to death where the number of deaths caused by famine exceeds the mortality rate due to Aids, malaria and constipation every year

Although the Malaysian community does not experience serious famine problems in third world countries, Malaysia is still vulnerable to food security shortages such as poverty, natural disasters and so on.

1.5 Literature Review

Food aid is one of the strategies to secure food security. This is because with the aid of food, it can create one of the main components in food security ie access to food especially for the poor. Food aid is needed especially when a country faces a natural disaster or lack of supplies and so much that requires the concern of the world community to assist these groups.

In developed countries there is a specialized organization that provides free food assistance to the needy community, known as the food bank. Food bank is a charity organization that serves as a place of collection, storage and distribution of food supplements through donation donations for free distribution to welfare agencies such as kitchen souvenirs, pantries, orphanages, parents' homes or distributors

directly to people who need it. It is a mechanism of food aid to overcome the problem of hunger and the inability of people to obtain food.

Between the Member States of the European Union as well as outside the EU, the Organization of food and the role of banks and charitable organizations are very a lot. In some countries they solely serve as intermediate agents who received contributions, store them and then redistribute them (Garrone, Melacini, Perego, 2014). On the other hand, the food bank model North-American/Australian considered to be going further and really give economic assistance to deprived people with focus on ' healthy food ', provides nutrition information and all food literacy programme with initiatives to stimulate physical activity (Butcher et al., 2014; Garrone et al., 2014; Lindberg, Lawrence, gold, Friel, 2014). Based on this Global food banking network (GFN), there are over 20 countries that have been implementing the Food Bank. Most will be implemented in developed countries such as the United States, Australia, Canada, Japan, New Zealand and the United Kingdom.

Food Bank network with various sources of food in the market, as food manufacturers, food importers, wholesalers, agents, supermarkets, hotels, organizations and individuals to donate their surplus products, near end or products with damaged packaging. In developed countries, food banks serve the population food insecure by collecting and distributing donations of food in a way that is fair and timely (Sengul Orgut et al., 2016).

“Most supermarkets and hypermarkets have the policy that whatever is on the shelf that expires within two or three months, it will be given to charity, returned to suppliers or sold at a discounted price,” (Ministry of Domestic Trade and Consumer Affairs, 2018) . About 186,354 heads of household earning below RM940 a month will

benefit from the Food Bank Programme to ease their burden. The collection and distribution of surplus food was a jointly organised programme by major hypermarkets in the country. This initiative is to ease the people's burden caused by the rising cost of living and reduce food wastage in Malaysia. The mobilization of community resources to collect and redistribute 'surplus' food to feed the hungry is a compelling strategy from several perspectives. In the context of hunger and food insecurity, redistributing rather than wasting food can be seen as a moral imperative (Hawkes & Webster, 2000; Riches, 1986).

In this context, Malaysia has not had food bank organization as implemented in most developed countries. However, in terms of the provision of food aid, there are various food aid programs that are also available to help the poor and needy. In Malaysia, food aid programs are channeled through formal and informal channels administered by the government, Non-Governmental Organizations (NGOs) or individually. These food aid programs have the same goals as food banks but they are done on a small scale. Among them are NGO support programs such as Pusat Makan Percuma Pertubuhan Membela Miskin Tegar Malaysia (BELAMISKIN), Kechara Soup Kitchen and PERTIWI Soup Kitchen.

The food bank organization has been implemented in several countries, especially in developed countries as a strategy to address the issue of hunger and lack of food security, this study was conducted to evaluate the effectiveness of the food bank in the technology of mobile application

CHAPTER 2

OBJECTIVES AND RESEARCH METHODOLOGY

2.1 Introduction

This section provides the review objectives to be achieved and the methods to be taken to the appropriate research projects. Researchers will explain how the objective of the study is derived logically from the problem clearly. A description of the methods and techniques used throughout the research (quantitative) approaches such as surveys, interviews, observation, case studies based on research-based projects and aims to collect original data.

2.2 Research Question

There are some questions that encourage the author to do this research. Among them are:

- a) Are food banks suitable and potentially feasible in Malaysia as a form of food security guarantee for the poor? and
- b) What are the appropriate concepts to be applied in the implementation of food bank in Malaysia?.
- c) Is the food bank very effective by using technology such as mobile application?

2.3 Research Objective

This study was conducted to achieve the following objectives:

- a) Analyse the potential of food bank in Malaysia
- b) Analyse a potential concept to be applied in the implementation of food bank in Malaysia.
- c) Identify the effectiveness of food bank in technology such as mobile application

2.4 Limitation

This study is to identify awareness on food security among Malaysian people. It is relevant as it can help raise awareness and teach them high moral values in Malaysia. There are many ways to help them, among which is the implementation of food banks.

2.5 Delimitation

Field research will be held in Malaysia. There are several ways to obtain data information. For primary data, namely questionnaire, researchers will scope down the target for the feedback. Researchers also make observations and surveys to respondents. There will be a major target groups, a Malaysian, age range 15-40 years old and above. This target audience can know about this issue, but not all of them are aware of the issue and some of them find it difficult to face that.

2.6 Research Methodology

The methodology of the study is one important aspect in this study. A good research methodology will produce the qualities of the reserach and can be trusted. In this study, the author has used some of the main method as a guide to a better quality of results

Data collection method mean that data collection and process all information related to the subject studied. Data collection is the process of with regard to the design and implementation of data collection using a certain method-method for obtaining data and information related to issues that are examined. This data usually have information in the form of statistics, facts, perceptions and so on that have been gathered up for analysis. This method was used to gather data related to the study of

each chapter in the writing of this. This study will use two main method such as Online Survey method and documentation method

2.6.1 Online Survery

Online Survey are a method in which subjects and researchers are present in the process of obtaining information. Research information is obtained directly by researchers from the subject. Through this method, we can storing answers by web form and statistical software to provide analysis. From the analyse online survey, we also can make integral changes in our functioning of mobile application

2.6.2 Documentation

This method is one of the process of gathering information and facts through research of documents connected with this study. This document consists of written material such as books, seminar papers, articles in journals, theses, reports, newspapers, magazines, brochures, bulletins, internet etc. related to the study authors. The use of this method is very important since through it by fact data. This method is used in almost every chapter to obtain data on food security, food aid, food bank, social welfare and basic concepts used technology concept in mobile application.

2.6.3 Case Study

Generally, food banks are warehouses that are registered as charitable organizations that serve as a place of collection, storage and distribution of food derived through donations or partnerships that will be distributed free to agencies providing food to hungry and needy communities. It collects surplus, groceries and non-sellable food products, donated or purchased meals for distribution to the poor or to charitable organizations that channel such assistance to those in need. Food aid

provided by food banks has a widespread network through government, community and welfare programs. It shows a unique combination of three major representatives in the public sector such as the public sector (government at all levels), the private sector (traders community including the food industry and the media) and the voluntary sector (NGO community) to act together in dealing with hunger problems.

Initially, the food bank system was created because there were billions of pounds of food wasted annually where at the same time there were almost a billion people who did not have enough food. Therefore, food banks are created to collect food surpluses to be distributed to groups of people who need them through welfare agencies. This process involves all sectors of society whether government agencies, businesses or civil society. The operation process of food banks is described through the diagram 1

Diagram 1 : Operation Of Food Bank



Source: The Global Food Banking Network operation

Figure 1 shows the overall food bank operations by looking at the three main functions, namely food bank as a place of gathering, storage and distribution of food to the poor and needy. Food bank operations are like food distributors who are aimed to profit but in this case food distribution is done for mere merit, not for profit.

2.6.3.1 Fundraising

i - Fund Resources

Food banks get food supplies from goods that can not be sold from supermarkets or donations from food companies as well, supply through purchases from capital raising or donation contributions from residents in the community and the collected food will be given to those in need

ii – Contribution Parties

Parties that contribute to the food bank consist of a variety of market system chains such as stocks, distributors, wholesalers, retailers and the public. Food bank has the support and cooperation from the food and retail industry.

2.6.3.2 Storage and Management of Food Supply

Food bank is used as the center for the devaluation of food donations donated by the community. Food banks need to manage the food donations before being distributed to welfare bodies or individuals in need.

i - Food Stocks

Food banks need to have food stocks to ensure that their operations run smoothly and food is sufficient to be distributed to the poor and the needy. Typically, food bank warehouses have a variety of fresh and staple food stocks such as bread,

dairy, fruits, vegetables, pasta, cold and frozen foods, dry goods, beverages, snacks, baby food and personal care items and more .

ii - Handling of Food Contribution

For the process of handling the food bank it is done by paid employees and volunteers. Paid workers function as coordinators in some food banks, but most food banks rely entirely on volunteering services in all their operations. These volunteers are usually comprised of unemployed and in some agencies, they include current and prior users of food banks. In some food banks, these volunteers are comprised of people who work to fulfill community service (people required by law to do welfare work in society as punishment for misconduct done), work to fulfill welfare or training placement for students. Obviously, the supply of labor through non-performing workers is a very important asset to enable food banks to manage labor-intensive work ie sorting and distributing non-quality retail food.

Delivery of food is dependent on the source of the donation. When food donations are delivered to food banks, workers will arrange the food according to the category of use for the food distribution structure. In handling food donations, workers will isolate items that do not fit according to the standard category, thus requiring different distribution processes. They also isolate foods that appear to be damaged, rotten or otherwise believed to be unsafe and foods given in large amounts requiring special treatment. Typically, workers in the central coordinating organization will check the contribution of the donation and unsafe products will be issued before the food is delivered to welfare agencies.

2.6.3.3 Distribution of Food Aid

i - Food Assistance Receiver

The process of food distribution can be done in a number of ways whether directly delivered to those who need food aid or through welfare institutions providing food aid. Most food banks will distribute the food to a community institution network that has several types of food aid programs whether government or non-governmental charity to facilitate them to be acquired by the communities in need. Among the welfare institutions that receive food aid from food banks are food pantries, kitchens, vans, shelters, children's care canters, parenting canters, orphanages, schools, drug abuse rehabilitation canters, programs after school and various programs that serve food to the hungry community. The welfare agencies are very much dependent on food banks to provide food and groceries to help control their budgets in the future.

ii -Type of Food Aid

Although the food bank receives a food donation that is wasted, which is a non-marketable food surplus from producers, manufacturers, distributors and other sources, this does not mean that food banks will distribute 'food waste' or 'waste' to hungry people. Instead, food banks distribute good food to the recipient to make it easy for people who have no purchasing power through a network of public institutions. If there is a threat from any of the donated products, the food bank will reject the gift or dispose of it

iii - Food Distribution Time

Most food banks distribute food on a daily basis and there are also those who spend 2 to 3 meals a week, and usually operate for two to four hours each time. Food

banks also provide emergency food assistance during disasters such as floods, tsunamis, droughts, landslides and others.

In conclusion, food banks are seen as an important mechanism in helping people gain access to food they can not afford. Through the role and function played by the food bank, it was able to help improve food security especially at the micro level ie for poor individual groups. This is because it has created one of the key components of food security ie access to food that helps the poor to get food for free. It is not only used as a means of eliminating hunger but also empowering the people to control their condition. This demonstrates the important role played by the voluntary welfare sector by focusing more on issues of poverty and hardship by offering assistance in various ways.

CHAPTER 3

ANALYSIS AND FINDINGS

This section provides a discussion based on the original data obtained from research methods used earlier. The results should be presented in a way that addresses the objectives of the study. The results are reported in the form of figures, tables, descriptive text, image and visual concepts, work trial.

3.1 Data Analysis

Analyse the data is processes that have been analysed with the intention to determine conclusions based on existing data. This chapter provided that the results obtained from data collection of this study and find out that awareness the community about this issue. Data is collected and recorded by the survey respondents 171. Data has three sections divided into psychographic, demographic and issue.

For the first, demographic data was recorded from respondent to describe the characteristic such as the age group, biological sex, occupation and another else. The age group was divide into three which are 15-25 years old, 26 – 35 years old, 36 – 40 years and above. Most of the respondents were 15 – 25 years old which recorded by 101 respondent (59.1 %). The least group age 26- 35 years old, we are recorded by 30 respondent (17.5%). For group age 36 – 40 years and above, 40 respondent (23.4%) records that we get it. The subject biological also has recorded when 116 female respondent (67.8%) and 55 male respondent (32.2%). The ethnicity is divided into four categories that are Malay, Chinese, Indian and Others. The higher number recorded by 153 respondent (89.5%). The occupation of the subject has been asked. When 5 respondent is worker (34.5%), 12 respondent is self-employment (7%), 6

respondent is unemployment (3.5%) and 94 respondent is student (55%). We also can see when the income of respondent which by 40 respondent get income less than RM 3000 thousand salary per month (52.6%), 20 respondent get income RM 3001 – RM 5000 salary per month (14.6%) and 16 respondent get income more than RM 5000 salary per month (9.4%). Other than that, they has no income because of student and unemployment (52.6%). The last recorded is residential area. Most of them lived in the city when 81 respondent has recorded (47.4%), 42 respondent was lived in rural area (24.6%) and 48 respondent was lived in suburbs area (28.1%). All of the above are in the table below

Table 1: Demographic Data (Age)

Age	Respondent	Percentage (%)
15 – 25 years old	101	59.1 %
26 – 35 years old	30	17.5 %
36 – 40 years old	40	23.4 %

Table 2: Demographic Data (Gender)

Gender	Respondent	Percentage (%)
Male	116	67.8%
Female	55	32.2%

Table 3: Demographic Data (Race)

Race	Respondent	Percentage (%)
Malay	153	89.5%
Chinese	3	1.8%
Indian	3	1.8%
Others	12	7%

Table 4: Demographic Data (Occupation)

Occupation	Respondent	Percentage (%)
Worker	59	34.5%
Self-employment	12	7%
Unemployment	6	3.5%
Student	94	55%

Table 5: Demographic Data (Income)

Income	Respondent	Percentage (%)
Less than RM 3000 thousand	40	52.6%
RM 3000 - RM 5000	25	14.6%
RM 5001 and above	16	9.4%
No Income	90	52.6%

Table 6: Demographic Data (Lived)

Lived	Respondent	Percentage (%)
City	81	47.4%
Rural area	42	24.6%
suburbs area	48	28.1%

Second, we discussed about the psychographics data of the target audience. Most of them has been donate food when 99 respondent say yes (57.9%). But 123 respondent (71.9%) has no idea about function of food bank and only 18 respondent (10.5%) has been using the service of food bank. Most of the respondent always give donation when 72 respondent (42.1%) give donate in month, 23 respondent (13.5%) give donation once in three month, 17 respondent (9.9%) give donation once in six month and 59 respondent (34.5%) doesn't give donation. All of the above are in the table below.

Table 7: Psychographics Data (Donated Food)

Have been asked to donate food	Respondent	Percentage (%)
Yes	99	57.9%
No	72	42.1%

Table 8: Psychographics Data (Function of Food Bank)

Know the function of Food Bank	Respondent	Percentage (%)
Yes	48	28.1%
No	123	71.9%

Table 9: Psychographics Data (Food Bank Services)

Using the food bank service	Respondent	Percentage (%)
Yes	18	10.5%
No	153	89.5%

Table 10: Psychographics Data (Function of Food Bank)

Often to donate	Respondent	Percentage (%)
Once in month	72	42.1%
Once in three month	23	13.5%
Once in six month	17	9.9%
Doesn't give donation	59	34.5%

Last section, the respondents have been asked about preference them to donation from food bank through mobile application. Majority of them agree that food bank should be serve in mobile application when 169 respondent (98.2%) agreed about that. From that, 121 respondent (70.8%) should be navigation (user friendly) for prioritized in the development of the mobile application while 44 respondent (25.7%) choose design (user interface) and other than that said both of them must be

function on the application. 162 respondent (94.7%) has claimed that mobile application can help in the donation.

Table 11: Platform Mobile Application for Food Bank

Agrees if there are platforms such as apps on smartphones available for Food Bank in Malaysia	Respondent	Percentage (%)
Yes	169	98.2 %
No	2	102%

Table 12: Features in Mobile Application

Special features need to be applied in the app	Respondent	Percentage (%)
Design (User Interface)	121	70.8%
Navigation (User Friendly)	44	25.7%
Both	6	3.5%

Table 13: Mobile Application for Food Bank in Malaysia Help In The Process of Donation

The smartphone app for food bank in Malaysia helps in the process of donation	Respondent	Percentage (%)
Yes	162	94.7%
No	9	5.3%

After looking at the results of the analysis, the researcher found that Malaysians are very concerned about this issue. They are very concerned about the welfare of society if in distress and poverty. Due to their concerns on the issue, they will immediately help in this problem. Among for this issue, the donations and food aid for poor and famine must be simplified and more systematic by using the apps

CHAPTER 4

DESIGN PROSES

4.1 Introduction

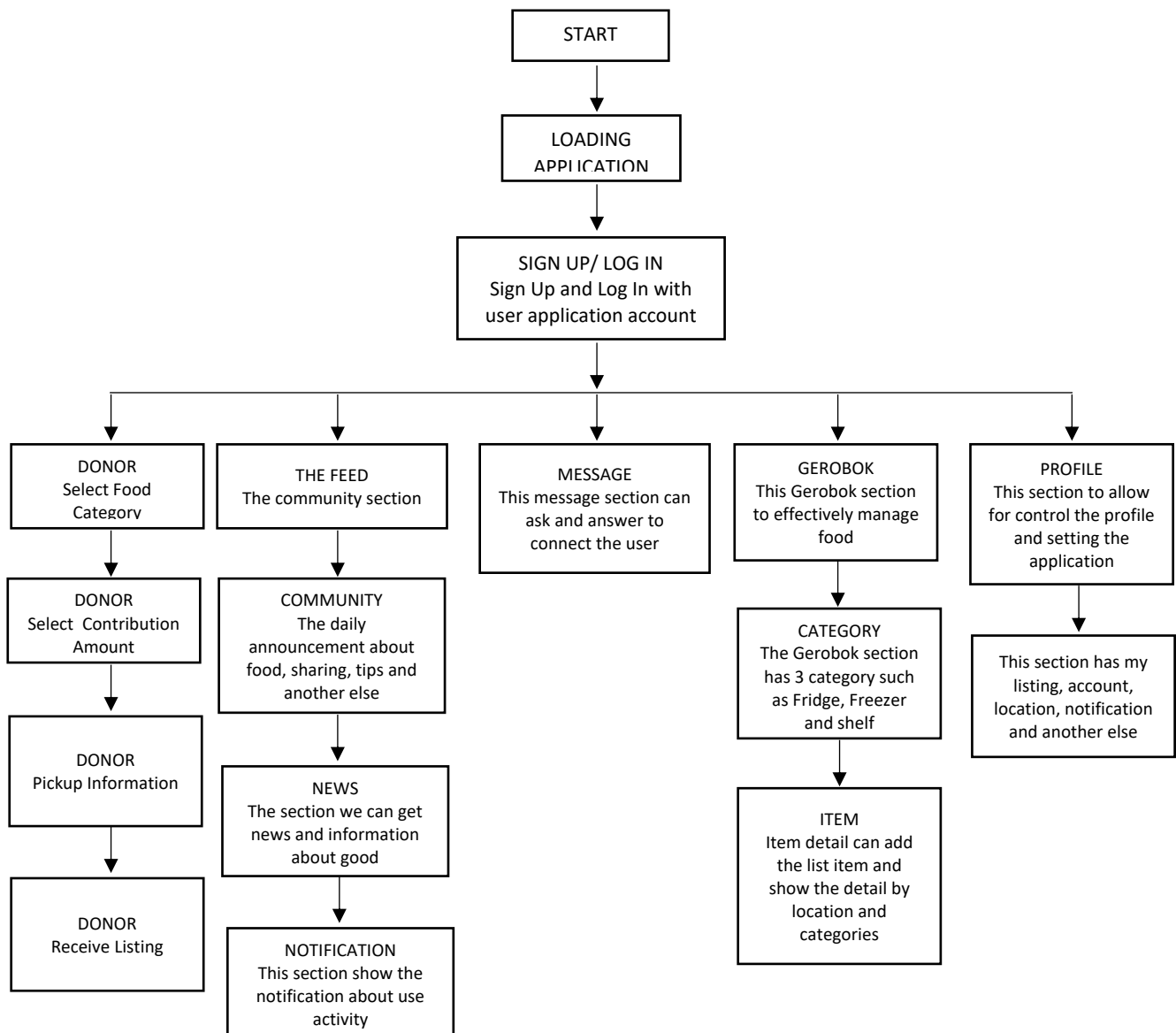
The goal of this project was to develop a prototype technology that will assist users in dealing to donor a food. The first thing that had to be considered was what kind of technology the prototype should be and what space would the technology be most effective. The choices included a mobile application, a website, and an installation or gadget. After some reflection on the research and findings from the field studies, and ideas about how an installation or gadget could possibly support efficient for donation food, I decided to create a mobile application.

4.2 Low Fidelity Prototype

The next stage involved writing down what kind of solutions there were to the problems identified in the findings of my field studies and research. My conclusions from the field studies, along with my research formed the basis for understanding the problems and discovering solutions. I began by writing out what the challenges and objectives of the app would be the inputs, the outputs, insights, the needs of users, and general statements. These wireframes were written on post-it notes and aligned to different categories. The task analysis helped to analyse what sort of steps would be involved for a user when using the application.

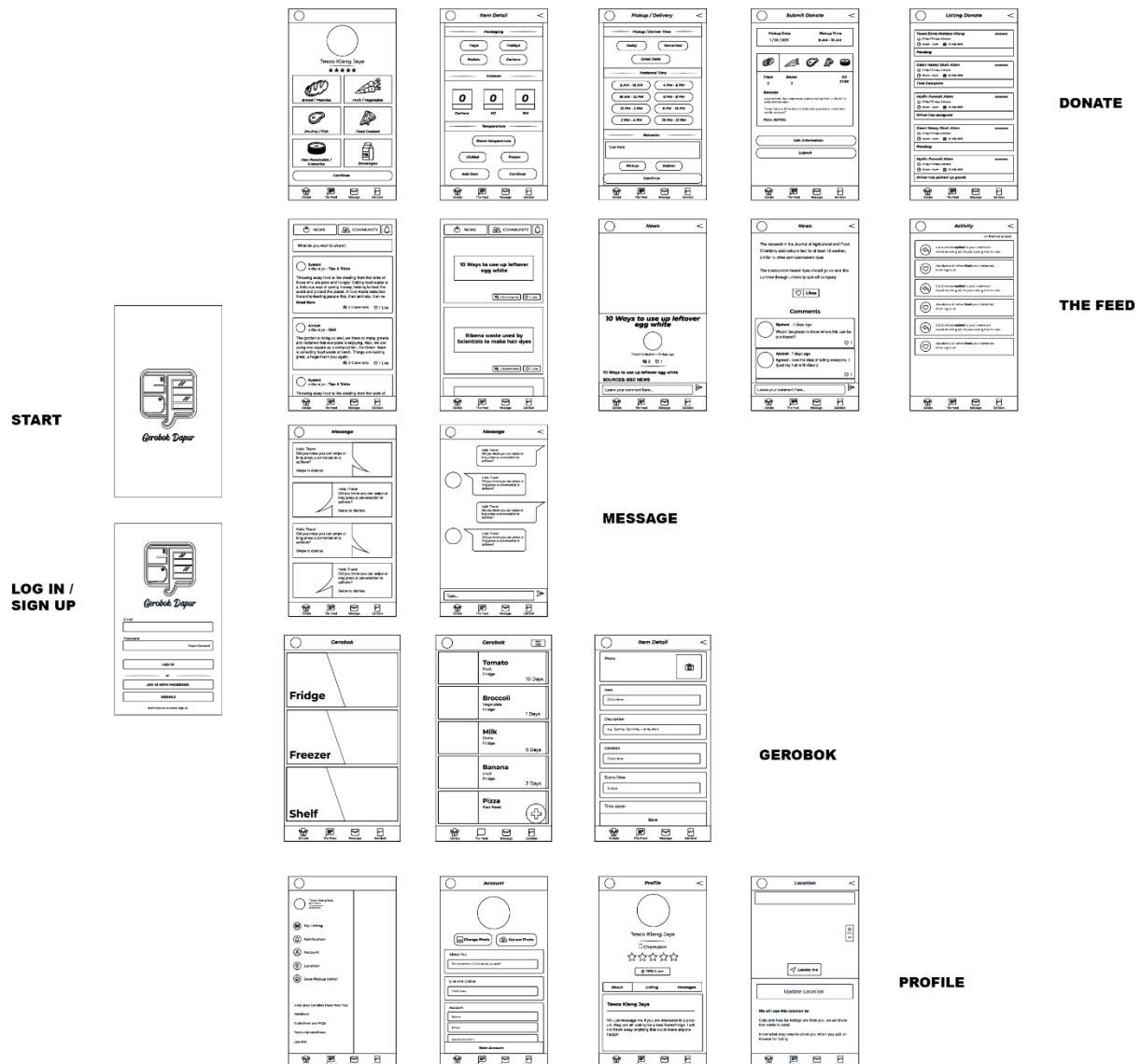
The goal of creating these wireframes was to use them to create a low fidelity prototype. Low fidelity prototypes are “created to inform both the design process and design decisions” (Buchenau and Suri, 2000). They are developed early in the design process and are used to evaluate various ideas (Rudd *et al*, 1996). This allows for quick iterations of design to achieve design and interaction goals.

Diagram 2 : **Framework** Gerobok Dapur (Mobile Application of Food Bank)



Framework is a **set of commands/basic functions** that can help in solving processes more complex. Framework that supports a **particular approach to a specific objective**, and **serves as a guide** that can be **modified as required by adding or deleting items**

Diagram 3 : User Interface outline Layout



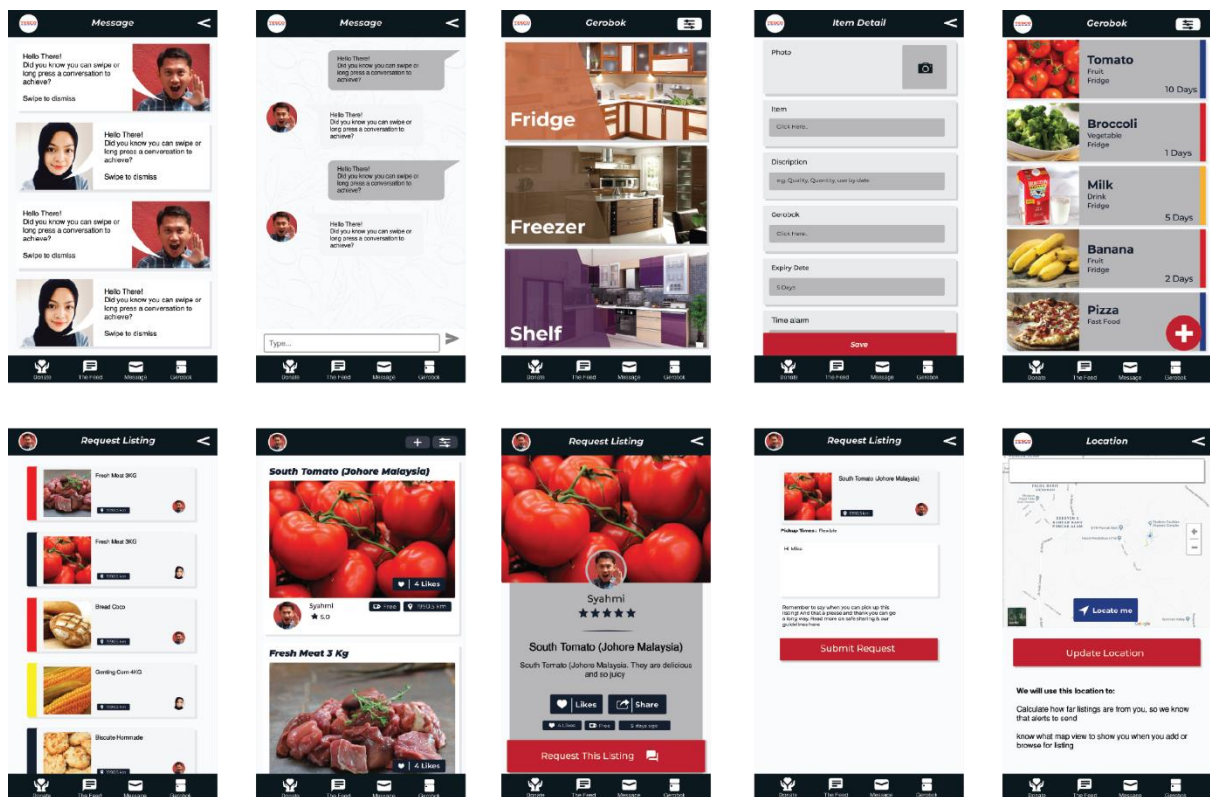
4.3 High Fidelity Prototype

After some time experimenting and build the outline user interface (low fidelity prototype) of possible designs and implementations of the suggestions and feedback, I began to create and build the new high fidelity prototype. This included adding the changes mentioned from the results of user testing and experimenting with new ideas

for further evaluation. High fidelity prototypes have more functionality and are more interactive than low fidelity sketches and wireframes. The high fidelity screens represent products interface and for better evaluation by the end users (Rudd *et al*, 1996). The high fidelity prototype represents the way the application “looks, feels, behaves, and works” (Moggridge, 2006).

Picture 1 : High Fidelity Prototype Gerobok Dapur





4.4 Function Gerobok Dapur Mobile Application

4.4.1 Log In

Login & Registration Interfaces make apps **more secure** as every function used will **require personal data** to **give and receive donations**. This interface can show the logo of Gerobok Dapur Mobile Application

4.4.2 Donation

As the main users of the app food surplus whose main priorities are handling this operation, we **streamlined the posting process** to **have as few steps and options** as necessary

4.4.2 Message

Messaging is a key part of the mobile experience. The function message is connects surplus food, food bank, food aid, society and anybody who using this apps. We can start conversation to ask the question or answered it about food surplus

4.4.3 The Feed

The feed is the function for the community of user. There has two section such as community and news. For the section of community is the daily announcement about food waste, sharing tips and another else. Section news we can get news and information about food

4.4.4 Gerobok

This function is to manage our food stock. Gerobok function has 3 categories such as Fridge, Freezer and Shelf. We can set expired date to remind us about our food stock.

4.4.5 The Profile

This section to allow for control the profile and setting the application. This section has my listing, account, location, notification and another else

CHAPTER 5

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

Based on studies performed, it is clear that the poverty factor has close with the absence of food safety. Food aid is one of the strategies to address hunger and lack of food security especially in the individual and household level for the group. Also, the food bank that manages funds and donations from the public to be distributed to beneficiaries. Mostly, the parties give a positive about the establishment of a Food Bank in Malaysia. However, it requires a detailed study to make it happen. Implementation of food banks than can be done with reference to food banks in developed countries based on modern technology. There are many things that need to be assessed in more detail so that they can made a mobile applications that are implemented effectively.

Mobile application development also has specific objectives related to the process of design thinking, such as end user focus and the essential principles of good design. The use of user-based design approach in creating a prototype high loyalty for mobile applications is clear during the design phase. The authors expect to the analysis and findings in this study had a positive impact and benefit in increasing the welfare of Malaysian society especially to the poor and less fortunate.

5.2 Recommendation

This paper present a recommender guideline to create effective mobile application . This project also is about the development of technology support to tackle the problem of food distribution to those in need. I have conducted extensive field studies in the form of reading, survey and observation of practices, and exploring technologies related to food donation and use. As a result, I have developed a high-fidelity prototype that aims at the user to contribute to the food bank. Taking care of what challenges the community, the group and others faced in solving this problem helped me understand the problem itself and looked for possible solutions and strategies for the situation. This study forms the basis of my literature review. Explore and test the various technologies, tools, websites, mobile apps and existing installations, how they deal with problems in the food donation channels, and what to learn to inspire to design effective support technologies. The main goal of the project is to develop an effective prototype related to a food bank that provides management to the parties involved to channel the food bank orgasm, the to give the food to those who are need. Hopefully this application will give our nation a favour

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Appendices

The aim of this questionnaire is to find out about the implementation of food bank using mobile application.

The questionnaire will only take a few minutes to complete. It is very important that you answer all questions. Please answer all questions honestly and all responses / views very awaited. Certainly there are confidentiality and the results will be used only for academic purposes

SECTION A

1. Age

- ☐ 15 to 25 years old
- ☐ 26 to 35 years old
- ☐ 36 to 40 years old

2. Gender

- ☐ Male
- ☐ Female

3. Race

- ☐ Malay
- ☐ Indian
- ☐ Chinese
- ☐ Others

4. Occupation

- ☐ Working
- ☐ Not Working
- ☐ Self-employed
- ☐ Student

5. *Monthly Income*

- ☐ *Low than RM3000*
- ☐ *RM 3001 – RM 5000*
- ☐ *More than RM 5000*
- ☐ *No Income*

6. *Residential Area*

- ☐ *City Area*
- ☐ *Suburban Area*
- ☐ *Rural Area*

SECTION B

1. *Have you ever been asked to donate food?*

- ☐ *Yes*
- ☐ *No*

2. *Do you know the function of Food Bank?*

- ☐ *Yes*
- ☐ *No*

3. *Have you or your family ever used the Food Bank service?*

- ☐ *Yes*
- ☐ *No*

4. *How often do you donate?*

- ☐ *Monthly*
- ☐ *once in three months*
- ☐ *once in six months*
- ☐ *Never Donate*

5. *Where is your channel to donate?*

- ☐ *Donate by yourself*
- ☐ *Non-Government Charity Organisation*
- ☐ *Government Organisation*

SECTION C

1. *Do you agree if there are platforms such as apps on smartphones available for Food Bank in Malaysia?*

- ☐ *Yes*
- ☐ *No*

2. *If yes, what are the special features need to be implemented in the application?*

- ☐ *Design (User Interface)*
- ☐ *Navigation (User Friendly)*
- ☐ *Both*

3. *In your opinion, is the smartphone app for Food Bank in Malaysia helping in the donation process?*

- ☐ *Yes*
- ☐ *No*