

## CHAPTER 1. INTRODUCTION

### 1.1 Background

Covid-19 is an infectious disease caused by a type of coronavirus that was only discovered at the end of 2019[1]. The risk of transmission of this disease is so great that on March 9, 2020, the WHO (World Health Organization) officially declared Covid-19 a pandemic[2]. This means that this virus has spread widely in the world, one of which is in Indonesia. As of March 31, 2021, there were 1,511,712 confirmed positive cases in Indonesia[3]. With the high number of cases, the Indonesian people are encouraged to reduce the chain of the spread of Covid-19 by reducing activities outside the home and staying away from crowds.

In life, every human being has needs that must be met to maintain his life. Based on Maslow's hierarchy of needs (hierarchy of needs) is a psychological theory introduced by Abraham Maslow in a paper entitled "A Theory of Human Motivation" in the 1943 Psychological Review that humans have basic needs that must be met or at least sufficiently met beforehand needs - needs at a higher level[4]. The first basic need is physiological needs, one of which is the need for food. In one day, humans need several ingredients to be processed into food and meet the nutrients needed by the body. These materials such as rice and vegetables.

In obtaining basic daily needs, Indonesians especially housewives, will go to the market to buy them, such as rice, vegetables and side dishes. That way there will be a crowd created among those who shop as well. Meanwhile, in the era of the Covid-19 pandemic which is still ongoing in Indonesia, it is advisable not to crowd so that and can reduce the positive number of Covid-19.

In an increasingly advanced era, technology has also undergone major developments, such as the use of smartphones by various groups to carry out many activities, one of which is shopping. Besides, the development of the mobile internet also supports these activities. Technological advances in information and communication are driving the use and development of new shopping methods, leading to rapid growth in non-store shopping as

individuals can purchase products or services without having to go to retail outlets (Sharma and Shets 2004; Thompson 1997)[5]. Now online shopping has become a habit for some people, because of the convenience it provides, many people think that online shopping is a means of finding necessary items such as daily necessities.

Android users are increasing day by day. Android also has a greater variety of features and makes it easier for users to carry out their daily activities. In addition, many smartphones are made and supported by Android. With the ability of Android to connect to the internet and cellular services, the frequency of users to access all existing features, including online shopping is increasing[6].

Based on discussions above, according to the author, making a mobile application to support shopping for food necessities online is needed. The applications needed will be designed in a simple manner and have functions that are easily understood by users so that users can more easily access the online shop application for this dining need. That way, automatically users will also find it easier to meet the food needs needed during the Covid-19 pandemic situation. This application development uses the Rapid Application Development (RAD) method and for the database using Firebase technology. Because positive cases of Covid-19 in Indonesia are still high, people can meet their nutritional needs by shopping for basic necessities without having to leave the house and cause crowds. That way, in addition to maintaining one's own health, it can also reduce the risk of being exposed to Covid-19.

## **1.2 Problem Identification**

Based on the background, the author can identify the problem for development of this application, as follows :

1. How to design and build applications that make it easier for buyers to buy basic necessities especially in food needs?
2. How can people use the search feature to find an item to be purchased and then there are recommendations for other items?
3. How can people use the application easily?

### **1.3 Purpose**

The purpose of this application development is to make easier for users to purchase food necessities without having to go. That way, users can avoid crowds and can reduce the chain of spread of Covid-19 but still be able to consume nutritious and nutritious foods in the body.

### **1.4 Limitation**

Some limitations of study are listed as follows :

1. This application sells food items such as vegetables and rice.
2. This application is used for users who will meet the needs of personal or family meals.
3. This application uses English.
4. In making this application using Android Studio and can only be used for the Android operating system.
5. This application must use an internet connection.

### **1.5 Benefits**

The benefits of designing this application are listed as follows :

1. This application makes it easy for users to buy food necessities such as vegetables and rice.
2. Application indirectly helps in the fulfillment of nutrients in the body.
3. This application can reduce the crowd when shopping for food needs.

### **1.6 Research Methodology**

#### **1.6.1 Data Collection Method**

The author uses some methods to conduct the system and development of application with the title is Developing Mobile Application for Selling Food Needs in Covid-19 Pandemic. Books, journals, articles, and resources from Internet that can help to get supporting theories and development of this project.

### 1.6.2 Software Design Method

RAD (Rapid Application Development) is a method developed to overcome the weaknesses of traditional systems development methods in building applications such as waterfall models. RAD is a fast method used in the application development cycle and provides better software quality[12]. The advantage of using this method is that it reduces the development and maintenance costs of the software. James Martin believes that this RAD can be a more flexible and adaptive method for application development in changing user needs and ensuring that system quality can develop quickly with minimal costs.

There are four steps to using the RAD method:

1. Determine project requirements

RAD begins by determining what the requirements are in building a project such as functional requirements and non-functional requirements. This initial stage is useful for providing a broad overview of the project to be worked on.

2. Make a Design (Prototype)

At this stage the developers make the design of the desired application, including the features and functions that will be in the application. By making this prototype, it is useful to double-check the design that will be made according to the needs of users or not.

3. Process of Development and Collection of Feedback

After knowing what kind of application to build, the developer changes the prototype into an application form. At this stage, the developers do application coding, test and integrate with other parts. This process will continue to be repeated by considering feedback from clients regarding features, functions, interfaces and all aspects of the application.

4. Implementation

At this stage, final testing is carried out, optimizing for application stability and performing maintenance and compiling documentation.

## 1.7 Related Work

In this work, the authors present a discussion of these developments applications that have the same concept. The author has conducted a literature review before starting application development. And based on the literature review, some of the work related to this work was found. Found jobs made food ordering application.

In 2020, Geri Daniel, Andrew Brian Osmond, Anton Siswo Raharjo Ansori have created an application similar to the title "Vegetable Traders Application for Ordering Food Material Subsystem Android Application for Buyers"[9]. In their application, they have a function to become a media liaison between buyers and sellers, making it easier for buying and selling activities.

The reason the author wants to build an application with almost the same function is because the application is very useful for people who are currently at home because the condition is still Covid-19. Even at home, people also have to meet the needs of healthy food.

## 1.8 The Writing Structure

As for the systematical structure, this thesis is divided into five chapter, with an explanation for each chapter is as follow :

### **CHAPTER 1. INTRODUCTION**

This chapter discusses the background of study, problem identification, purpose, limitations, benefits and research methodology of the study also this thesis schedule is made.

### **CHAPTER 2. REVIEW OF LITERATURE AND THEORETICAL BASIC**

This chapter discusses about the theoretical basic that relate with this thesis. Which is used as a basis for understanding the project development process which supports this Final Project thesis

### **CHAPTER 3. ANALYSIS AND DESIGN**

This chapter discusses about the analysis and design of the system. The author discusses the general description analysis or current conditions, then the analysis of the current system is continued with the search for information and data for system requirements analysis. Then the results of the analysis are used to determine the design of the application framework.

## CHAPTER 4. IMPLEMENTATION AND TESTING

In this chapter, the author discusses about the implementation of the result of the study and the final design of the system into coding to make an application that can be used by users. Then, it also illustrate the user interface of the system.

## CHAPTER 5. CONCLUSION

This chapter contains the conclusion of thesis and suggestion that are used for future development.

### 1.9 Schedule

Table 1.1 Schedule

No	Activities	Weeks									
		1	2	3	4	5	6	7	8	9	10
1	Planning	■									
2	Literature Review		■	■							
3	Design and Analysis			■	■	■					
4	Development						■	■	■	■	
5	Testing						■	■	■	■	
6	Documentation										■