Development E-commerce Information System of Agriculture in Samarinda

Asep Nurhuda
Software Engineering Technology, Polytechnic of Agricultural, Samarinda, 17131, Indonesia
Email: acep.noor@gmail.com

Aulia Khoirunnita
STMIK Widya Cipa Dharma, Samarinda, Indonesia
Email: auliakhoirunnita93@gmail.com

Arika Rusli, Dimas K. Umami, and Sri Handayani
Software Engineering Technology, Polytechnic of Agricultural, Samarinda, 17131, Indonesia
Email: Arikarusli178@gmail.com, DimasKhairul@gmail.com, SriHandayani@gmail.com

Abstract: Samarinda village is a village that is predominantly working as a farmer and has a wide range of agricultural products, in addition to the abundance of agricultural products there is a problem of marketing of agricultural products that do not have access to sell their agricultural products. Authors conducted research in order to increase sales and expand marketing in the Village Samarinda through sales system-based Business to the Business and method development using the Research and Development. The results obtained in the form of a web site that can be accessed to serve online sales transaction so that it can increase sales in the village Samarinda.

Index Terms: Marketing Information Systems, R & D, Agriculture.

1. Introduction

The digital era is also called the information age, where information has become a basic need and a new commodity. Such an era is triggered by information technology (IT) which plays a role in accelerating and increasing accuracy in recording and processing data into information [1-3]. Agricultural information is one of the most important factors in production and there is no denying that agricultural information can lead to the expected development [4]. Agricultural information is the best application of knowledge that will drive and create opportunities for development and poverty reduction [4,5]. Samarinda is one of the villages located in sub-district, Samarinda district, East Kalimantan, Indonesia which has an area of 388.37 ha and mostly used for rice fields 233.17 ha (64.04%), yards and buildings 85.80 ha, moor/garden 46.73 ha where this village has great potential in agriculture considering the area is fertile and there is an irrigation route, but behind that there are problems related to agriculture, one of which is the problem of marketing agricultural products [6-8].

Does not side with farmers, because there is no knowledge of the market as a place to meet producers and consumers including market prices [9], demand and supply [10,11], so that producer farmers can only accept market prices which are generally determined by intermediary traders [8,12-14]. As a further consequence of the above conditions, the price limit at the producer level and in the larger market is obtained by intermediary traders and sometimes producers only get income in the form of production costs without profit [15]. This condition causes science and technology to be instilled in our farmers so that they can find out market information that is developing at a time like today [16-18], for that the authors wants to provide a solution so that farmers are not always manipulated by these intermediary traders by making " WEB-Based Marketing E-commerce Information System for Samarinda Agricultural Products" As the title of the thesis that the author will propose where later many traders from outside the region will know about the existence of agricultural products in Samarinda. Then system research web-based marketing of agricultural products aims to So that local traders are not arbitrary in determining the price of the product agriculture because farmers know latest agricultural price information from this e-commerce system. To make it easier for farmers to find information on seeds, fertilizers and methods planting, care and harvesting. This research

is expected this system can provide benefits in overcoming agricultural product marketing problems all this time happened by building Marketing e-commerce Information System web- based agricultural products systematic, directed and more efficient farmer's job in marketing the produce their farm.

2. Methodology

2.1 Research design

The development model used in this research is a research method and Research and Development (R&D). e R&D cycle is structured in several steps research includes [19]:

1. Research and data collection (research and information collection).
2. Planning
3. Product draft development (develop form of product).
4. Initial field trials (preliminary field testing).
5. Revise the test results (main product revisions).
6. Field testing (main field testing).

To be able to produce certain products used analytical research needs and to test the effectiveness of the product so that it can function in society broad, as for the research steps and development as follows [20]:

1. Potential and problems
2. Gathering information
3. Product design
4. Design validation
5. Design improvements
6. Product trial

2.2 Concept Unified Modeling Language (UML)

A use case diagram is a series / description of a group that is interrelated and forms a system that is regularly carried out or supervised by an actor. Use cases are used to shape the behavior of objects / things in a model and realized by a collaboration. Generally, use cases are represented by an ellipse with a solid line, usually contains a name. Use cases describe system processes (system requirements from the point of view of user's view).

Class diagrams are used to show the classes and packages inside System Class diagrams are used to show the classes and packages inside system Class diagrams provide a static picture of the system and the relationships between them. Usually, several class diagrams are created for a single system. Some diagrams will display a subset of classes and their relations. Several diagrams can be made according to desired to get a complete picture of the system being built. Activity diagrams describe the various flow of activities in the current system designed, how each flow begins, the decisions that may occur, and how they ended

Activity diagrams can also describe parallel processes that may occur in some executions. Activity diagram is a state diagram specifically, where most states are actions and most transitions are triggered by completion of the previous state (internal processing) Activity diagram does not describe the internal behavior of a system (and the interactions between subsystems) is exact, but more describe the processes and activity paths from the top level in general. Describes business processes and the sequence of activities in a process. Used in business modeling to show the sequence of business process activities. The structure of this diagram is similar to a flowchart or data flow diagrams in structured design. Very useful when we make this diagram first in modeling a process to help understand the process overall. Activity diagrams are made based on one or more use cases in the use case diagrams.

3. Result and Discussion

3.1 Design development

Using the Research model Development (R&D) with the method Prototyping System Development. Method Prototyping System Development made to produce a Product in prototype form. A Prototype can be giving an idea of how the system will work fine.

a. Context Diagram

Context Diagram is a level part of Data Flow Diagram that is used to define context and system boundaries in a modeling. This includes relationships with entities outside the system itself, such as systems, organizational groups, and other external data stores. That can be seen at Fig. 1.
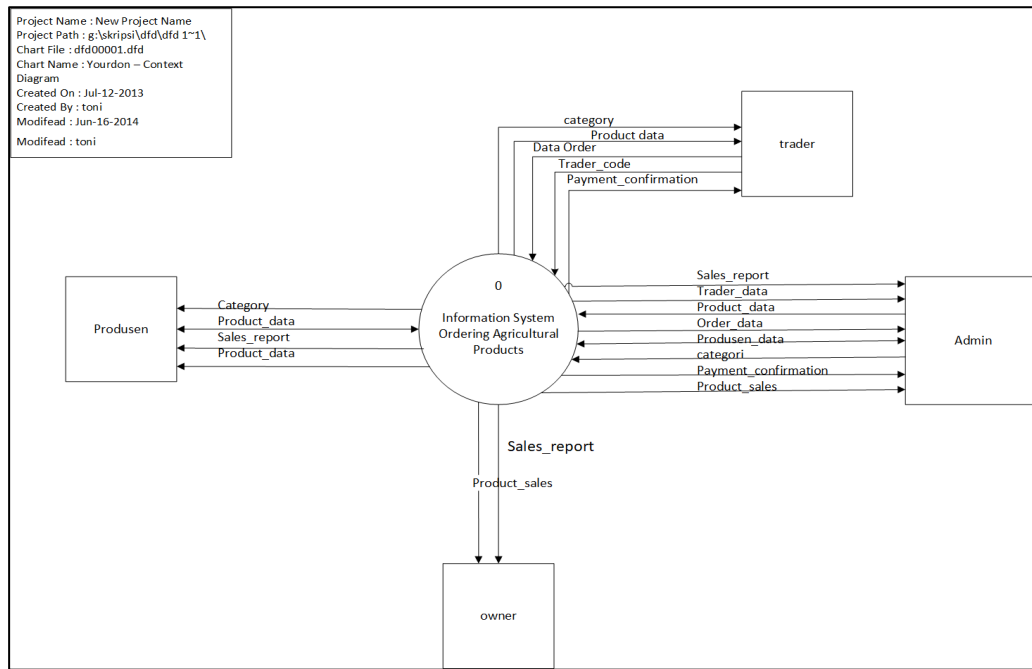
Project Name : New Project Name
Project Path : g:\skripsi\dfd\dfd 1~1\
Chart File : dfd00001.dfd
Chart Name : Yourdon – Context
Diagram
Created On : Jul-12-2013
Created By : toni
Modifead : Jun-16-2014

Modifead : toni

Fig. 1. Context Diagram

b. DFD level data collection

DFD is a diagram that describes the flow of data from a process that is often referred to as an information system. The data flow diagram also provides information about the input and output of each entity and the process itself. that can be seen at the Fig. 2.
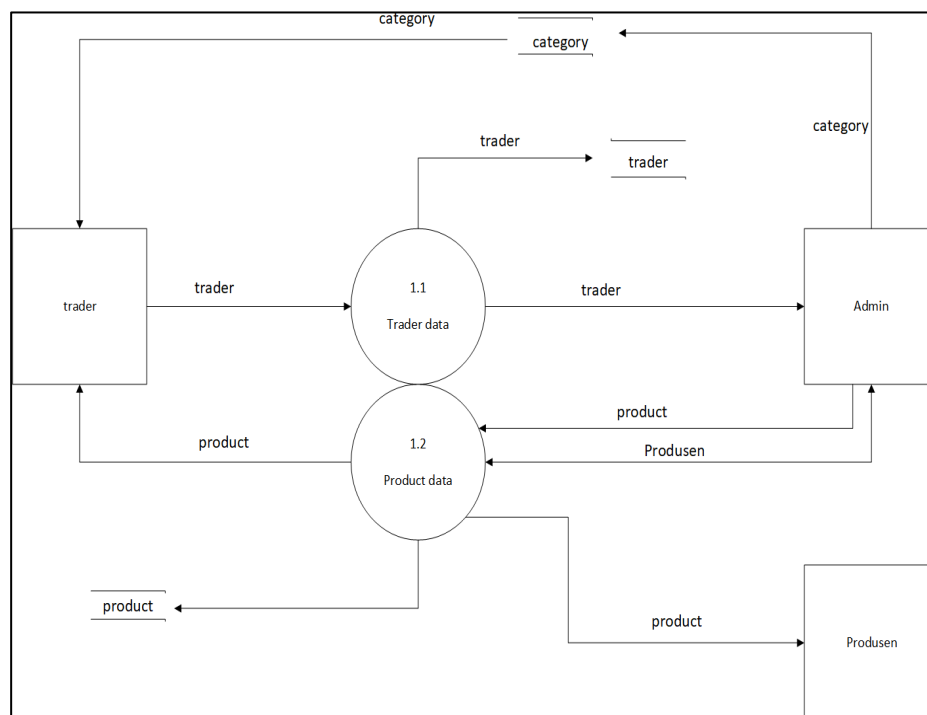
Fig. 2. DFD Level Data Collection

c. ERD

ERD is a model or design for creating a database, so that it is easier to describe related or relational data in a design form. With the ER diagram, the database system that is formed can be described in a more structured and neat manner. That can be seen at the Fig. 3.
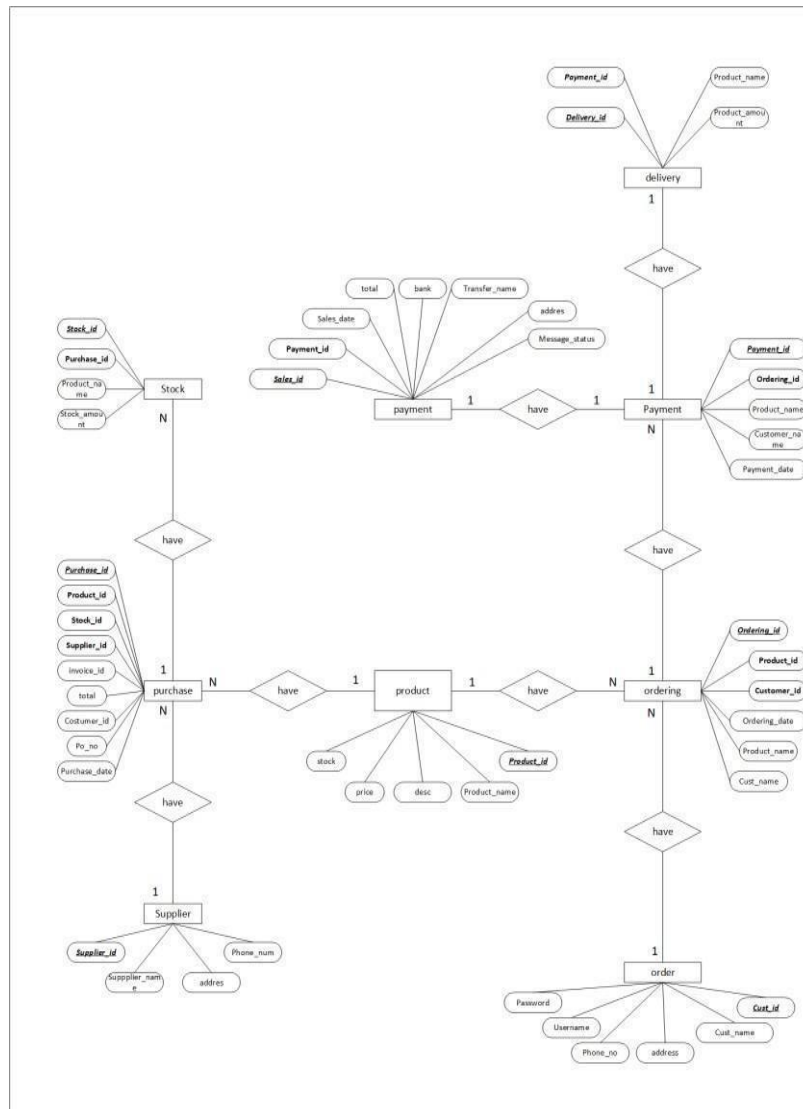
Fig. 3. Entitas Relation Diagram

d. *System Build*

This is the proposed information system flow. Sector (trade and administration). Merchants fill in the registration for login which will be stored in the database. After logging in, the merchant can place an order, then the administration section will also log in and make a summary of the merchant's order. After that, the administration will make a delivery report and then provide a note to the merchant. That can be seen at the Fig. 4 (a). The leader makes a report on the expenditure of goods and logs in after getting confirmation from the admin and it will be stored in the database. Then the producer will login and create product data and fill in product data in the database, which can be seen at the Fig. 4 (b).
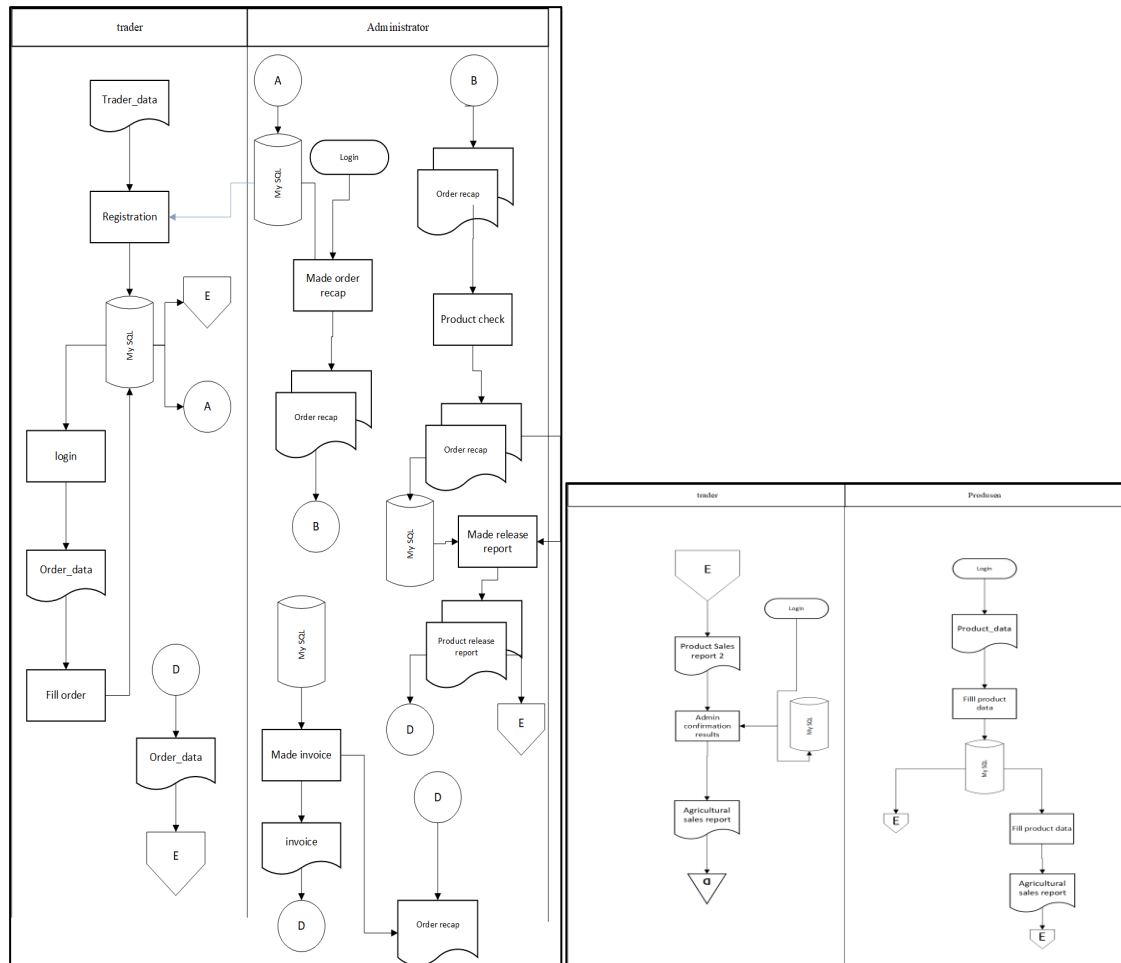
Fig.4.System to Build (a) and (b)

3.2 Result of development

a. Main Page Menu View

This is the homepage of the application. You can do something and search. There is a button login, shopping cart, contact us, all products and the other. First you need to login to buy the products. That can be seen in Fig. 5.
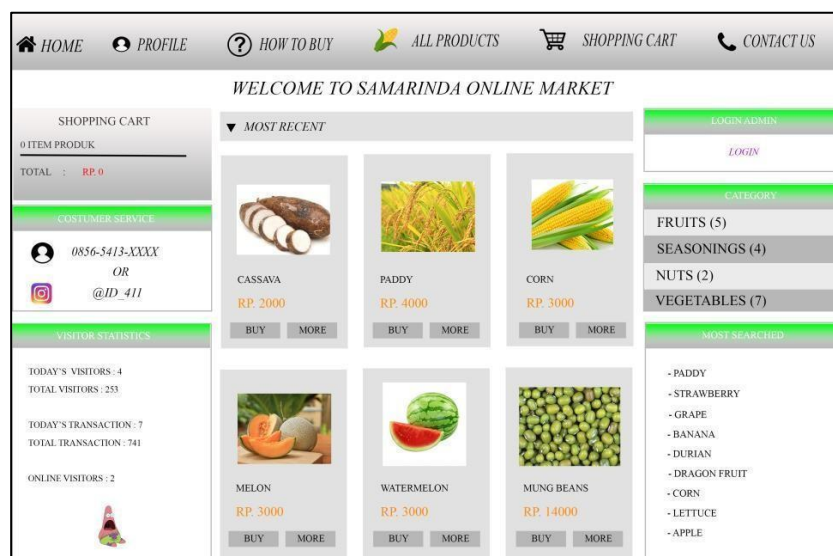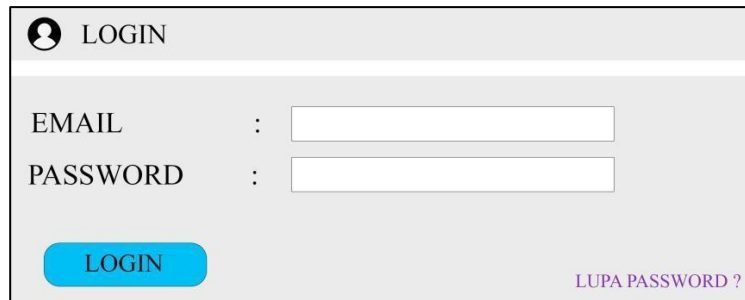

Fig. 5. Main Page View

b. Trade Login View

This one is for a trade. They can start to sell if they have login. For login you can fill your email and password and then click login for the next step. That can be seen in Fig. 6.
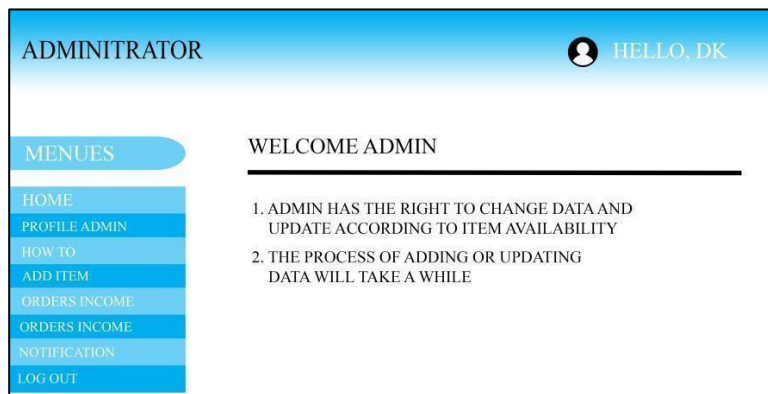
Fig. 6.Trade Login View

c.   *Admin Menu Page View*

And this one Is admin menu page view. This for the admin to control the app. Admin can change data and update the products according to the availability. Admin can check what is orders came from buyer. That can be seen in Fig. 7

Fig. 7. Admin Menu Page View

d.   *Add product View*

Add product view is for administrator to add a new product. Admin can add the name of products, category, weight, price, stocks, the description and photo of the products. That can be seen in Fig. 8.

Fig. 8. Add Product View

e.   *Input result view*

And the last one input result view. This is after administrator add the products. There is category of the products and description. And you can see how many visitors and today transaction. That can be seen in Fig. 9.
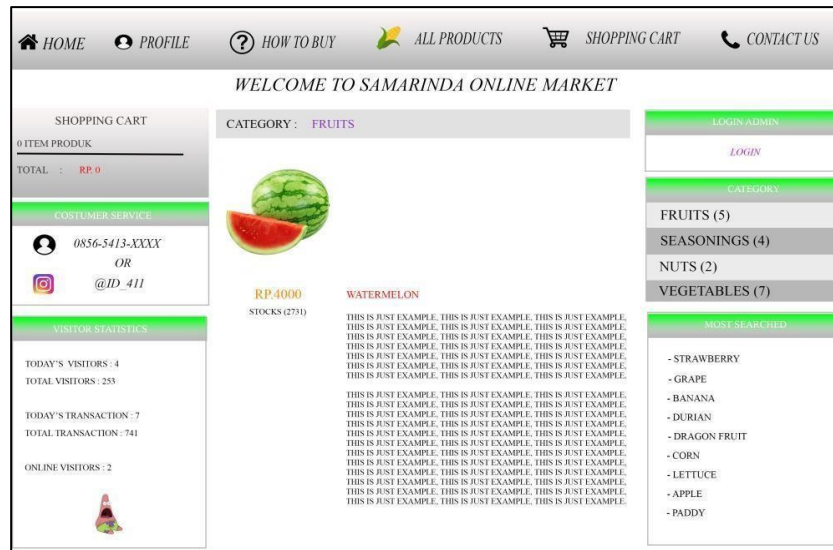

Fig. 9. Input Result View

4. Conclusion

With the marketing information system web-based agricultural produce, will be more make it easier for farmers to sell their produce their farms, so that farmers will be more save time and cost in spend to get merchant who will buy agricultural products that they planted, and can be more helpful village government in welfare farmers in the village. With the implementation of information systems, marketing of agricultural products can provide accuracy in the amount of results agriculture, so that make it easier for the government to regulate policies that will be applied to the farmers in the village of Samarinda. With this information system, data agricultural products can be monitored properly, so that when the leader wants to know sales results per period can be reported quit.

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Authors' Profiles

Asep Nurhuda, S.Kom, M. Kom, was born in Samarinda on February 8, 1989. He is a lecture of Software Engineering Technology, Polytechnic of Agricultural, Samarinda since 2021. He is also a teacher of Network Engineering in Senior High School Muhammadiyah 1 Samarinda until now. He obtained Master Degree from Business Engineering in STMIK Eresha Jakarta (2014). He also obtained Cisco Certified Network Associate (CCNA) & Foresec Certified in Networking Security (FCNS) in 2013.

Aulia Khoirunnita, S.Kom, M. Kom, born in Samarinda on August 17, 1993. S1 higher education at STMIK Widya Cipta Dharma (2015). While the Master's Computer from Amikom University (2022), Specialized in Information System and Audit System.

Arika Rusli, was born in pinrang, south Sulawesi on August 28, 2000. She was graduated from nurse school in samarinda. Now, she is studying in 5th semester majoring in software engineering technology. She has a lot of hobbies. She loves read a novel, listen music, Streaming Korean Music Video. Besides that, she most love is checks out at the orange store, it's a habit every day, lay down. Watch Series Korea, Thailand, Japan and China 24/7. Stray Kids, SHINee, Ohm Pawat, Nanon Korapat, Gulf Kanawut, Mew Suppasit, Pond Naravit, Phuwintang, Michieda Shunsuke, Meguro Ren, Wang yibo, xiao zhan, Zhang Zhehan, Gong Jun who have inspired and encouraged for her.

Dimas Khairul Umami, born on October 28, 2000 in Kutai, graduated from a vocational high school majoring in multimedia, currently studying in his 5th semester majoring in software engineering technology really likes to rest and play games, often forgets assignments but always finishes on time, one of the questions that many people ask is why he is so thin, for that he intends to gain weight but until now he still can't.

Sri Handayani, born in Grobogan, September 18, 2002 to be precise in Central Java, now she is 19 years old, She is the youngest. Her habits are business, her business is Oriflame, from semester 3 she has learned about business, her dream is success at a young age, hopes that she can continue to work hard until her dream is achieved, after graduation she wishes can buy a house.