

Application Of Artificial Intelligence in Chatbot Application As Palm Oil Price Information System and Capacity On Ramp in Labuhanbatu

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Abstract

This study aims to facilitate palm oil entrepreneurs in obtaining information on palm oil prices using advanced technology, based on research conducted are still using methods that are considered less efficient in providing price information to customers. After this study, palm oil entrepreneurs can easily get information about the price of palm oil in Ramp Nina, Pulo Padang Village. Customers will get information on palm oil prices by simply calling the whatsapp number used to provide information on palm oil prices then the chatbot will provide information on palm oil prices to customers. It is considered quite efficient in solving existing problems.

Keywords : Palm Oil, Information Systems , Chatbot.

1. Introduction

Labuhanbatu is an area with the income of the community is oil palm, with many oil palm in the area makes the entrepreneurs in the field of oil palm many who set up Ramp (place of weighing and collection of fresh fruit bunches of oil palm) in Labuhanbatu. So far , palm oil entrepreneurs and palm oil farmers find it difficult to find out information about how much palm oil costs, the price of Berondolan, and how much more capacity on a Ramp every day. The Ramp owners only write the details of the price in front of the Ramp entrance, which means that oil palm farmers and palm oil entrepreneurs must first go to the Ramp to find out the price of oil palm at that time, not infrequently the farmers must be disappointed after bringing oil palm to the Ramp its capacity has met the needs of the day. This is considered detrimental to palm oil entrepreneurs because they have to think about where this palm oil will be sold.

With the development of the concept of Society 4.0, the author is interested in building a system that facilitates human work in obtaining information and involves technology in the process. Given the Artificial Intelligence (AI) is increasingly used and developed from year to year, ranging from health, academic, services, to business does not escape the role and sophistication of Artificial Intelligence in it. The purpose of this study is to make it easier for palm oil entrepreneurs to know information about the price of palm oil, the price of palm seeds and capacity on the Ramp in order to improve services and facilitate palm oil entrepreneurs to sell palm heads owned by the community. On a Ramp can be ascertained a lot of customers who will sell oil palm every day, it is felt to facilitate the work of the Ramp owners what if on the Ramp is designed a Chatbot system as a form of service on the Ramp. With the Chatbot and Chatbot applications developed through a program called, it is certain that farmers will know how much oil palm prices on the Ramp and how much remaining capacity on the Ramp by sending a message on the ramp whatsapp number. This is considered to benefit farmers and facilitate the Ramp entrepreneurs. The Target of this study is expected that this system can facilitate and assist entrepreneurs in the field of oil palm in obtaining the information needed.

Artificial intelligence is considered quite effective in solving problems that often occur in everyday life as well as in the sale of palm oil. Due to the use of artificial intelligence makes it easier for farmers to know the information palm oil prices accurately and effectively, with the lack of access to obtain information about the price of palm oil on the Ramp to be addressed and also the lack of information about the capacity of the Ramp is a problem that often occurs in the, even though palm oil has been brought to the Ramp location, This is because the capacity of the Ramp is full, with the lack of information at this time, you can imagine how much loss will be borne by farmers and palm oil entrepreneurs. This is considered detrimental and a waste of time, not to mention the added cost of Transportation trucks used to deliver palm oil to be sold, the declining quality of palm oil if the sale of palm oil must be postponed the next day, and not to mention the change in palm oil prices that change every day. With this system, farmers and palm oil entrepreneurs can find out how much the price of palm oil on the ramp to be targeted and can also compare the highest price of each existing Ramp and can anticipate if the capacity of the intended Ramp is full. To overcome these problems, the author wants to conduct research and apply Artificial intelligence in Chatbot applications as an Information System on palm oil prices and capacity on the existing Ramp in Labuhanbatu.

The specific purpose of this study is to make it easier for farmers and palm oil entrepreneurs to obtain information on palm oil prices and information about the capacity of palm oil on the Ramp easily. By knowing the prices of palm oil on the Ramp will certainly benefit farmers because they can find out the highest price. If this study does not run then the system that runs for this will continue as it is and certainly very detrimental to farmers and palm oil entrepreneurs. If the system works well, it can certainly increase farmers ' income, indirectly improving the community's economy.

2. Literature Review

Indonesia is a country that has a lot of Natural Resources in the field of plantations. Development the world of information technology is remarkable for the progress of human civilization can help work especially in the field of plantations. One of the plantations rich in natural resources in Indonesia namely oil palm plantations because the geographical conditions are very suitable for plantation development palm oil. Palm oil can be used as cooking oil, fuel for vehicles, materials kitchenware, cosmetics and much more. Oil palm (*Elaeis guineensis* Jacq.) is a type of plant that is important for the plantation field where it can provide opinions for farmers and the Community. Results from oil palm plants are oil palm fruit or fresh fruit bunches (FFB) that form fruit on age 2-3 years Amriana et al. (2020).

Palm oil is one of the plants that has its own charm in the community. Current oil palm plantations in Indonesia are growing very rapidly. Palm oil is grown and cultivated almost throughout the archipelago, whether it is privately owned or owned by a company. This plant contains many efficacy makes palm oil demand continues to increase. (Sidauruk and Ade Pujianto 2017).

According to Riadi Bakce and Riyadi Mustofa (2021), The existence of oil palm plantations able to improve the welfare and reduce unemployment, provide job opportunities and business opportunities. Job opportunities is the availability of jobs for accommodate the workforce. Job opportunities is an important indicator of an economy. Broad employment opportunities decrease the number of unemployed people, increasing productivity of the population, and increase production and national income. Employment opportunities or energy

demand work is a derivative demand (derived demand) of the demand for products goods and services.

According to Rahayu et al. (2020), The development of Information Technology very fast computer-based has makes a lot of changes in the joints human life. One of the developments the latest technology is artificial intelligence (artificial intelligence). With the existence of artificial intelligence, computers can perform certain tasks such as conducted by human robot chat (chatbot). A Chatbot is a computer program who can have a conversation through writings. Today, chatbots have used for practical purposes such as online assistance, personal service, or acquisition information, in this case can be seen function the program as a type of conversational agent (or conversational agent). Chatbot role as a conversational agent who can used as a helpdesk.

According to Anggraini et al. (2020), Continuous advances in information technology, such as Artificial Intelligence (AI), opening up new and exciting opportunities for the co-creation of value between economic actors, Consider how AI is used to tailor marketing communications between service providers and customers, or how intelligent robots autonomously perform tasks, such as answering questions, which previously required human effort. Today, AI technology allows computers to be actively involved in human decision making and can even allow computers to make decisions without human involvement. Because AI increasingly used in marketing practice, AI is improving practice and theory established marketing and changing the way value is co-created a number of studies have investigated co-creation of value using AI from service provider perspective or how AI enables resource integration between service providers and beneficiaries. This study makes an important contribution to our understanding of AI enables value creation. However, there is far more research aimed at understanding human interaction to humans with AI technology compared to studies investigating interactions human to non-human.

According to Putra et al. (2021), Artificial intelligence is one form of technology which is experiencing very rapid development in this modern era. Artificial intelligence allows machines to think and make your own decisions, one of which is technology chatbot. Chatbot or conversation with a robot is an application artificial intelligence that can simulate conversations intelligent among humans based on knowledge granted. Chatbots are intelligent agents that can mimic human ability to communicate through text messages. The existence of chatbots has been widely used in companies as in the bank to help answer questions about banking-related information and customer complaints. According Abilowo et al. (2020), Chatbot is a question and answer system between humans and robots or machines. Chatbots are commonly used to help provide information to users.

According to Sugiono (2021), During the Covid-19 pandemic, information in the media appeared so quickly and in such a large volume that resulting masyarakat sulit difficult to choose the information that will be a reference in making decisions. Chatbot is a means of communication developed by several institutions in the world to disseminate official information to its users through artificial intelligence technology. This phenomenon can explained through the concept of Society 5.0. According to Sihombing (2020), The use of artificial intelligence in the process of forming local regulations in the era of the Industrial Revolution 4.0 as get justification in order to minimize disharmony between local regulations with various other laws and regulations.

3. Methodology

In this study the authors use the application Landbot.oi to create a palm oil price information system on Ramp, using this application customers can easily get the latest price information. simply by calling the whatsapp number used by the customer, you can find out the price information that ibgin knows. Starting from the price of fresh palm fruit signs to capacity on the Ramp.

4. Result and Discussion

4.1 Result

Ramp is a shelter for fresh fruit bunches of oil palm before the palm oil mill is processed, the process of selling oil palm on a ramp is for oil palm farmers to weigh the oil palm they bring to the Ramp. In the process of weighing oil palm can be seen in the picture below :



Figure 1. Palm Scales On Ramp

After the fresh fruit bunches of palm oil weighed on the scales next ramp ramp officer recorded and melaukan transaction process palm oil prices in accordance with the price on that day. Then you will see what the image below looks like :



Figure 2. Palm Oil Scales

In the previous paragraph has been explained how the process of weighing fresh fruit bunches of palm oil, then the next will be explained the process of making the Price Information System fresh fruit bunches of palm oil. In the development of this chatbot service information system application, it uses a system development service called Landbot.io. Landbot is very easy to use, without the need to do the coding process, the application development process uses the services already provided by landbot. Here the researcher will explain how to start building a landbot application program.oi this. The first thing to do is register an email and fill in your data to be able to start this landbot service. here is a view of the service landbot.io can be seen in the picture below:

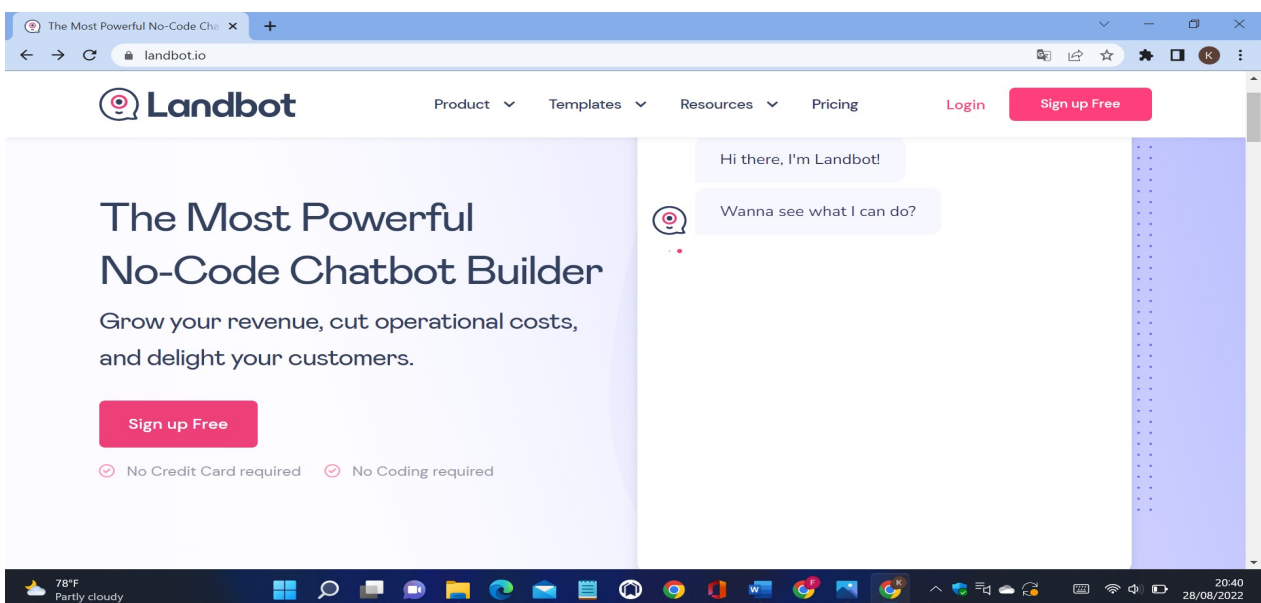


Figure 3. Landbot Initial View

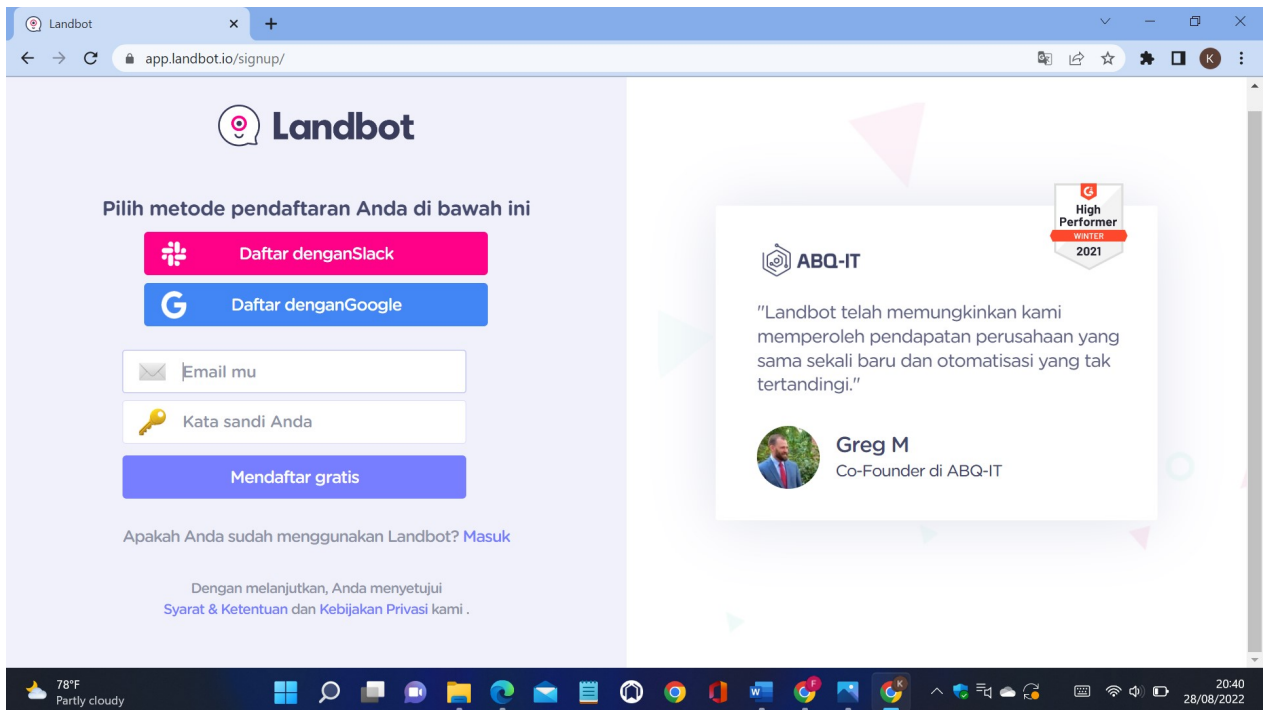


Figure 4. Initial Registration View

Researchers build chatbot applications using landbot.io, the first thing to do is login to the application landbot.io, then you will see what the image below looks like :

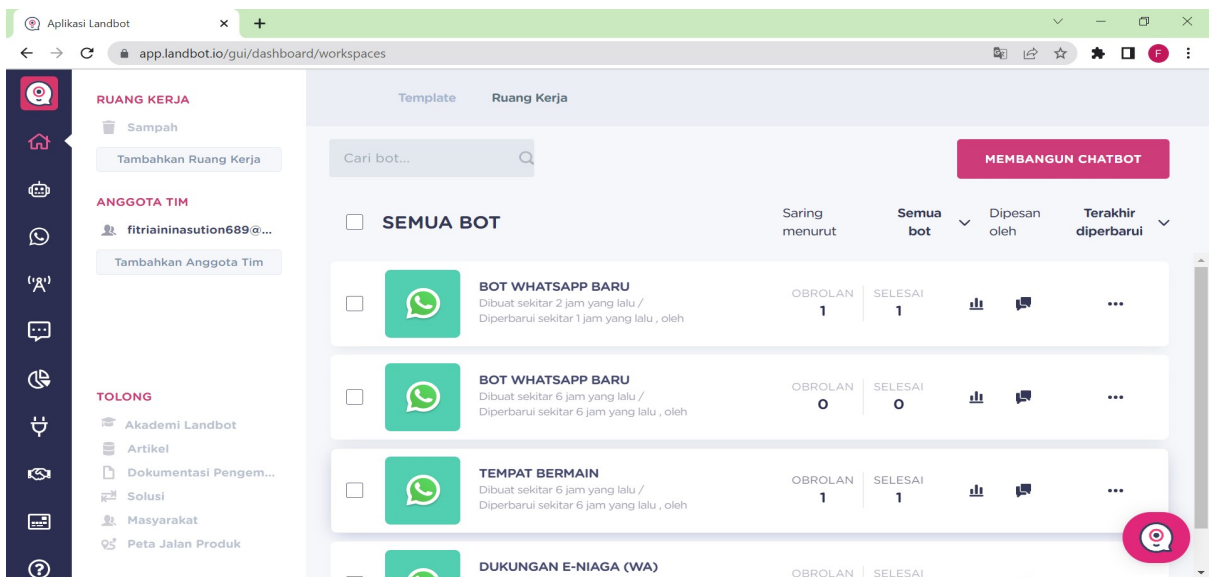


Figure 5. Landbot.io Application Main Menu Display

In the image below can be seen in the menu, we can choose where we will launch the bot. there are several options including, landbot web, whatsapp application, messenger and, on the

ApiChatbot application. In the development of chatbot applications this time the researchers used the Whatsapp application. Can be seen in the picture below:

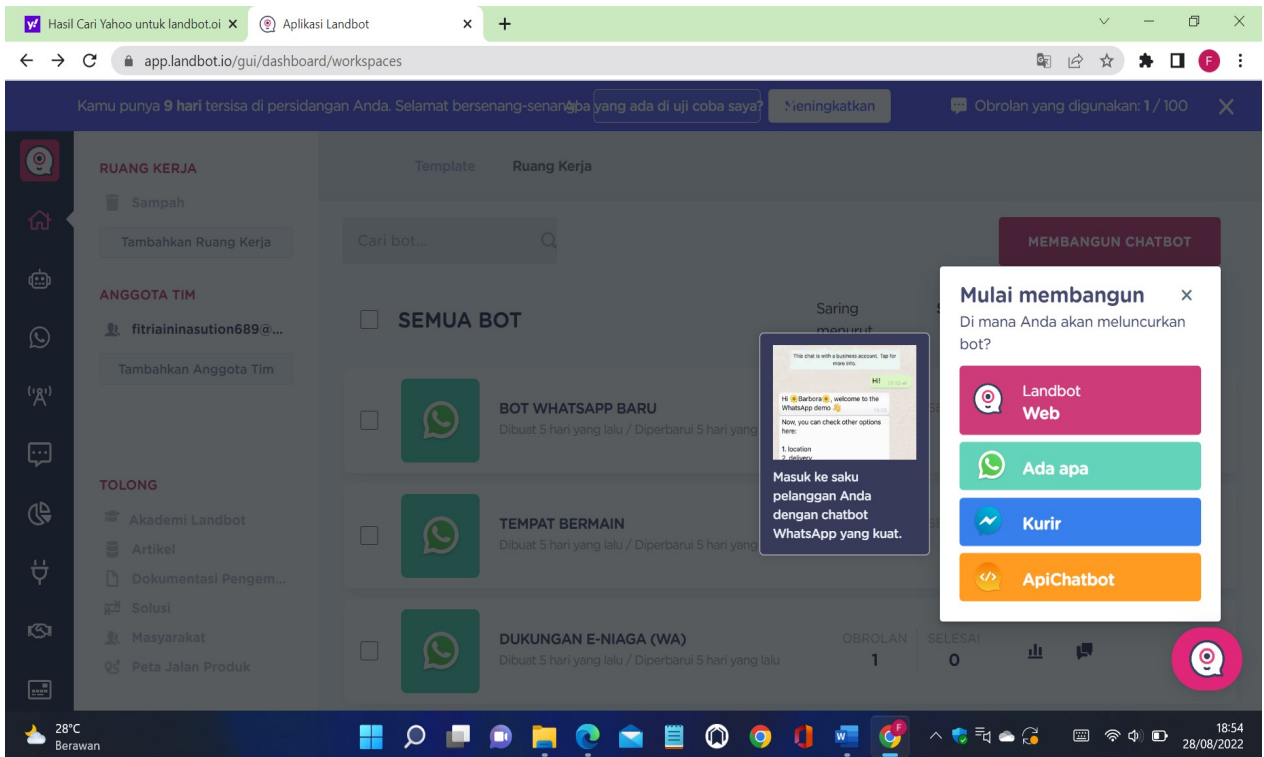


Figure 6. Display To Start Creating Applications Using Whatsapp

The following is a display page to design a palm head Price Information System using Landbot.io, in this section the researchers designed a system in accordance with the needs of price information that is easy to understand by ramp customers and can be used easily also for palm oil entrepreneurs or call it admin. In this section the admin will change the price information every day. The Display can be seen in the picture below :

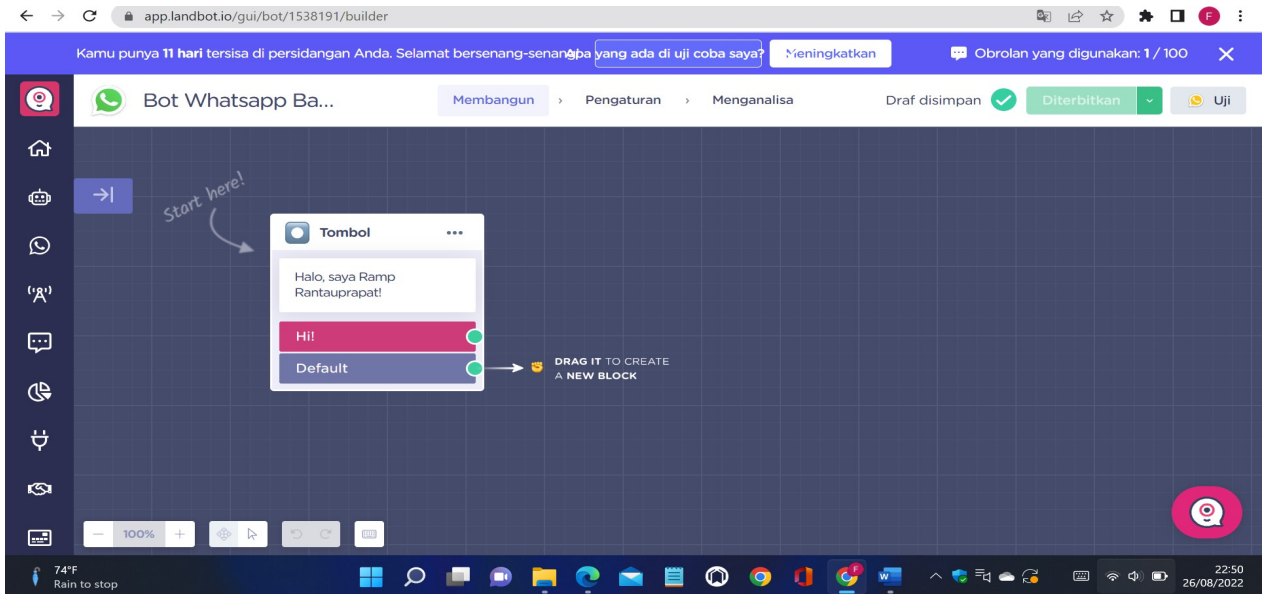


Figure 7. Display Page For Designing Applications

After that the process we do is how to add the buttons on the system that we will use, in this menu we can add text, images, etc., for more details can be seen in the Picture below:

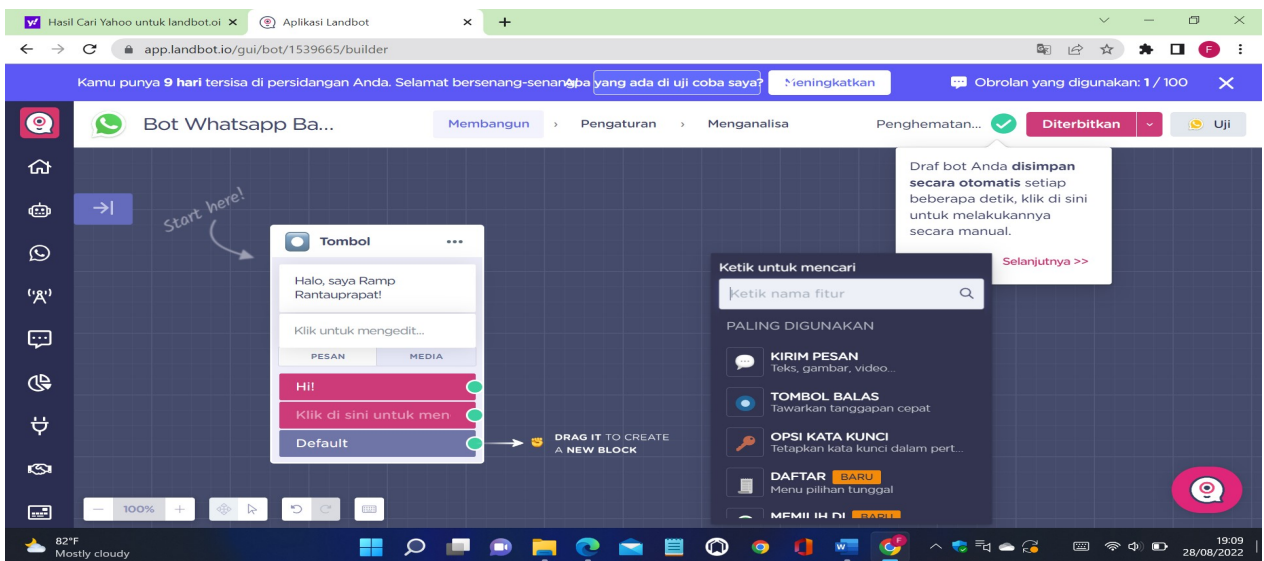


Figure 8. View To Add A Reply Button On The System

The picture below is a picture of the display process and how the system works in informing the price of oil palm, in the display below can be seen the system provides information on the price of fresh fruit bunches, palm seeds and capacity on the Ramp. In the picture can also be seen the flow of the palm oil price information system. The Display can be seen in the picture below :

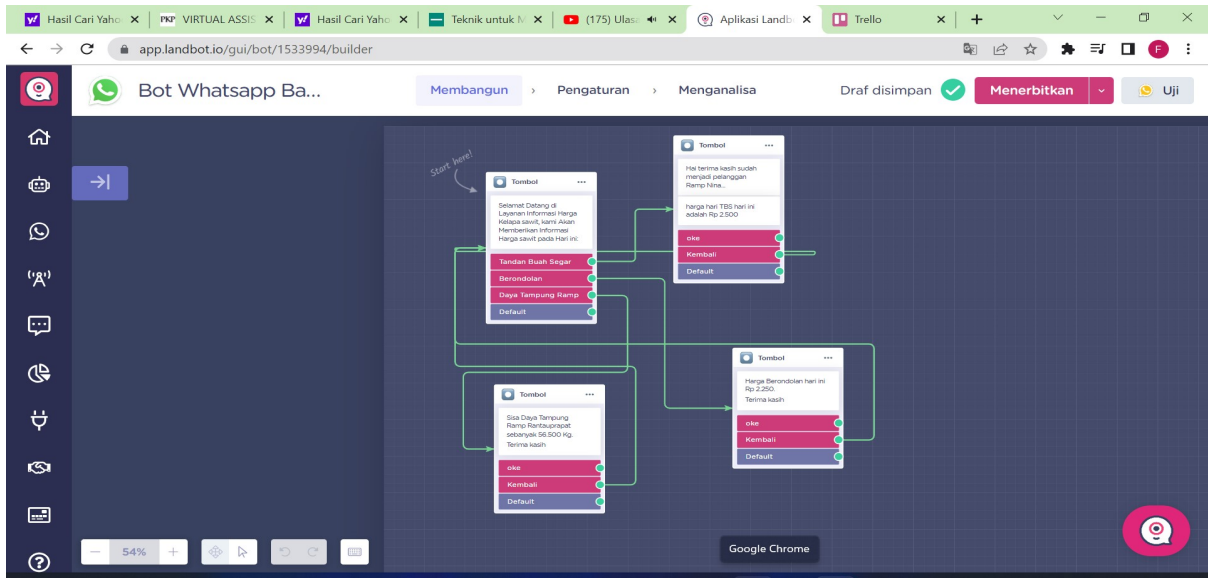


Figure 9. Application Design Process

The next process is the stage of testing the system that has been designed. In this process we can test the system that we make whether it is running well or not. With this test we can also find out whether the system is easily understood by the user or not. The Display can be seen in the picture below :

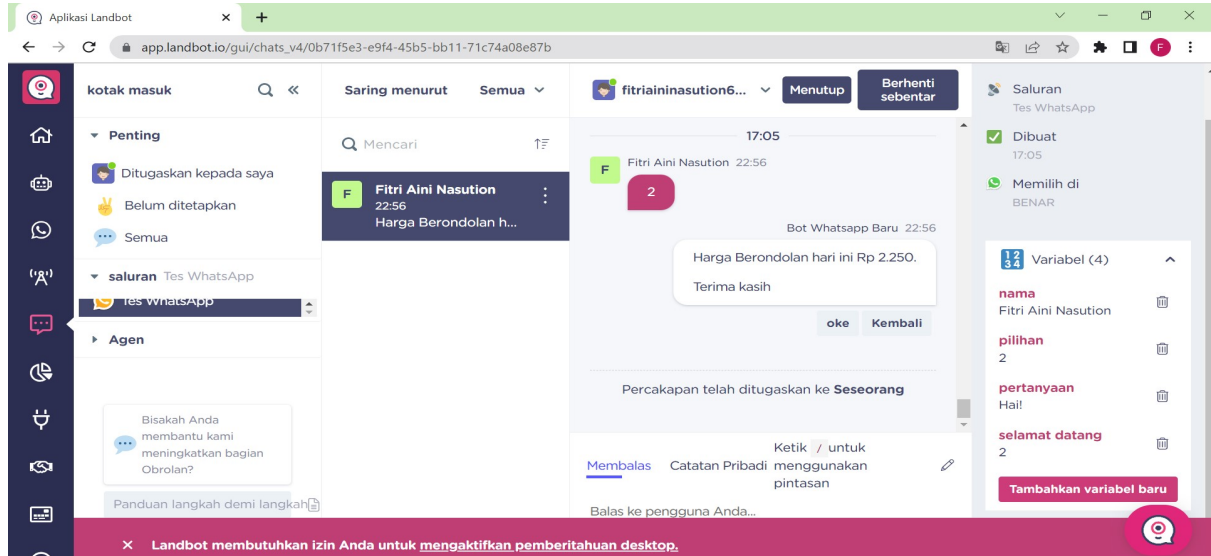


Figure 10. Test System

After the system testing process, the test can be viewed through a smart phone on the whatsapp application. In the whatsapp application, you can see how the system can run properly. The Chatbot provides a reply according to the customer's request. By using the application, customers can obtain the required palm oil price information, simply by choosing to use the

number on the smartphone display in the whatsapp application. The Display can be seen in the picture below :

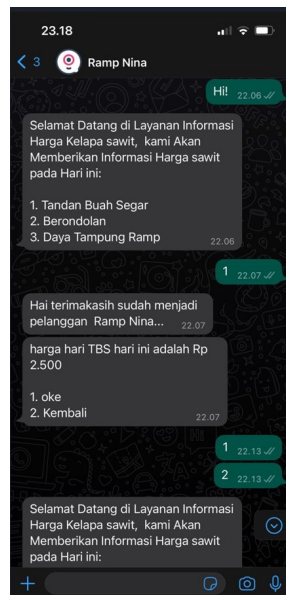


Figure 11. Chatbot Reply Display On Whatsapp Application

4.2 Discussion

After testing can be concluded that the application runs well and can be applied to the Ramp, thus this will facilitate customers in obtaining information in accordance with the palm oil prices they need. Chatbot is an application that has been widely used by entrepreneurs, ranging from retail customers to Online-based entrepreneurs.

5. Conclusion

With this research, to obtain information on palm oil prices, customers no longer need to visit the ramp . they just contact the Whatsapp contact used on the Ramp to obtain price information, by contacting the contact, the customer will get an automatic reply made by a robot that has updated information every day, this robot is called a chatbot. Thus the palm oil entrepreneurs will facilitate their work in providing information to customers and make it easier for both parties, both palm oil customers and palm oil entrepreneurs.

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