



## Whatsapp Chatbot Implementation for New Students University of Labuhanbatu

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### ARTICLE INFO

### ABSTRACT

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The issue that frequently arises is that potential new students find it difficult to get information about the campus of their choice because the office and students are human beings who need rest and are not constantly on campus. As a result, a chatbot on the WhatsApp platform was created to make it simpler for prospective students to obtain information about campus, class schedules, and so forth.

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## 1. Introduction

You need information on tuition costs, academics, campus news, payment codes, and other topics as a new student. A collection of data that has been processed to make it more valuable is referred to as information.[1]. Human error can occur at any point throughout the process of looking for information on the university's website by students because users are still unfamiliar with the site. [2].To get more detailed information, students must go directly to the campus.Of course, this takes a long time and is less effective.The development of technology in this era is one form of the era of reform and information disclosure.Artificial intelligence is a technology that continues to improve every year[3]. Artificial intelligence is intelligence that is added to a system that can be adjusted, this intelligence is called Artificial Intelligence or AI [4].

The average smartphone is equipped with the most sophisticated and latest applications so that we can exchange news and communicate more easily. WhatsApp is an application for exchanging messages for free without being charged because the data package in the form of internet for electronic mail and browsing, also applies to the use of WhatsApp.[5].Students can use WhatsApp to get information from the college without having to go there. Students can find out about what is going on at the institution by utilizing WhatsApp. However, this is not always available since the people who operate it are humans who require rest.A new generation of students at the University of labuhanbatu is being taught how to use chatbots to solve problems and find answers to their questions Chatbots are one of the many ways that teachers can help students learn more quickly and easily [6]. In light of this issue, the chatbot function is deemed acceptable for the process of searching for news and information on the Labuhan Batu University's official website. A chatbot is a service that uses rules to engage with students via chat. It is required to enhance or modify the system on the new student site that generates a chatbot feature in order to use chatbots.[7].Artificial Intelligence is a way to logically solve problems with machines.AI (Artificial Intelligence) is a part of computer science that teaches creating machines that can do work like humans and can be better than humans.One application that uses AI (Artificial Intelligence) is the ChatBot application.[8].

A chatbot could be used by the to provide real-time communication services for people working in a variety of jobs The role of a chatbot is needed to provide information about what is happening in the workplace and how it can be used to improve productivity [9].

ChatBot is a chatbot that can be used to communicate and provide information to the public. ChatBot can also be used as a customer service tool, for example, in an event of a call centre failure. [10]. The ChatBot is a mobile phone app that allows students to communicate with each other via text message. The system of the ChatBot has similarities with monitoring and remote control equipment for remote electrical



equipment, by using a cellular phone that provides SMS services. It makes it easy to exchange information (text-based) remotely.[11].Artificial Intelligence JavaScript (AIJS) is used in making Chatbots by implementing some of the ways AI works in it. There are several tags that are used to create a chatbot. This language provides some of text used in the Chatbot. It can run on all popular web browsers such as Google Chrome, Internet Explorer and Mozilla Firefox.[12].

Chatbot is a feature where we will communicate with it through the chat feature. The chatbot will provide direct and conversational feedback, and can take an action from the conversation. Chatbots usually run on popular messaging apps. There are 2 (two) types of chatbots: a. A chatbot that runs or operates based on a set of commands. This type of chatbot can only respond based on the available commands or commands. If someone types other than the command or command that has been specified, then the chatbot will not understand the purpose of that person. b. A chatbot that runs or operates with machine-learning (ML) and artificial intelligence (AI) to provide the best feedback. Usually referred to as AI-powered chatbots. The use of chatbots can be applied to various aspects, especially in the world of education. In general, the various services provided by the campus have been equipped with the sophistication of information technology. Usually, services and information are provided on a site that can be accessed by students and lecturers. However, not all students understand how to access the site because they are still laymen, as for other factors, namely information is not always updated by the campus because they are human beings who can be negligent at any time.[13].

WhatsApp is an instant messaging application for smartphones and the web that is used as a communication tool. It also functions as a medium for education and business. WhatsApp provides an official API that users can use to create botchat messages.[14].Whatsapp is a social media app that allows users to send and receive messages, documents, photos and videos. [15].Black box testing software engineering is a testing method that deals with unknown internal programs. Testers see the software as a 'black box' that is not required to display content, but is based on external testing. In this type of testing, the software will run and then be tested whether it meets the user's needs.[16].

## 2. Method

The model we use for research is the waterfall model.Waterfall is a simple classic model with a systematic and sequential approach to software development.:

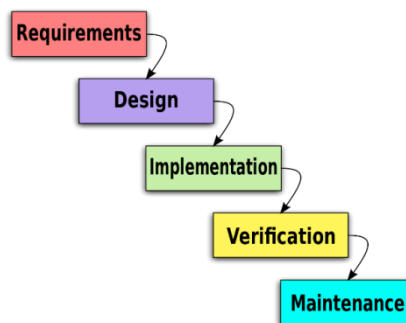


Fig 1. Research Methods

- a. Requirement
 

Software developers must know what needs are needed in developing the software. Data can be obtained from conducting interviews, discussions or surveys. The data will then be processed into information about the user's needs for the software being developed by the software company. Software developers must also know what is needed in order to develop the software that meets these needs.
- b. Design
 

The first stage of design will be to define the appearance of the desired system. Design will be done before coding begins which aims to determine how it will look as a whole. This stage can define the system architecture that will be made as a part of the overall project.
- c. Implementation
 

Software is broken down into small modules that will be worked on and combined at a later stage. This is the stage where coding is made to ensure that the software fulfills the desired function. The code is



send your email address and it will send you the correct message. Here, we test the main command which is "! menu".

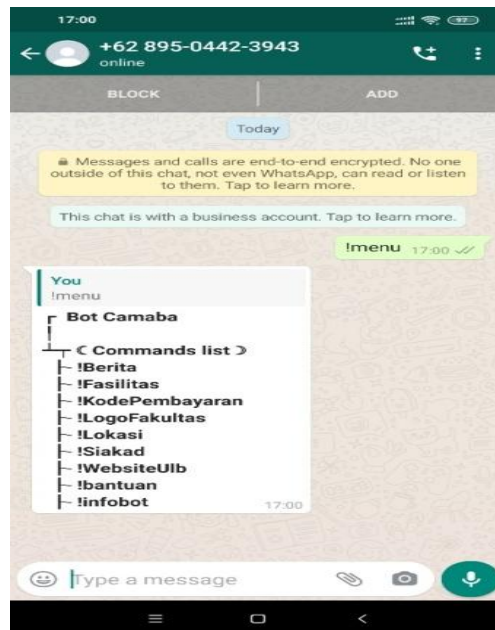


Fig 4. Camaba Bot

- c. After using the command "! news", the latest information from Labuhanbatu University will be displayed on the top of the screen. After using this command, the latest data from the university will be shown on the bottom of the page.



Fig 5. News Chatbot

- d. "! facility" is the second command. The information about all the facility inside the Labuhanbatu University building will be described after executing this command.

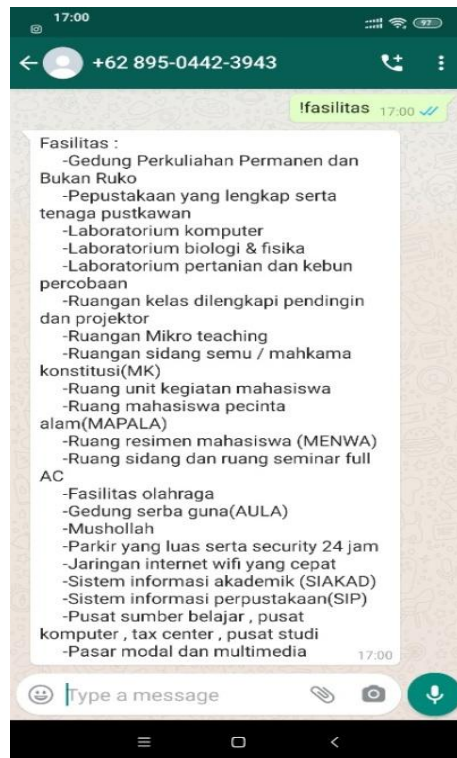


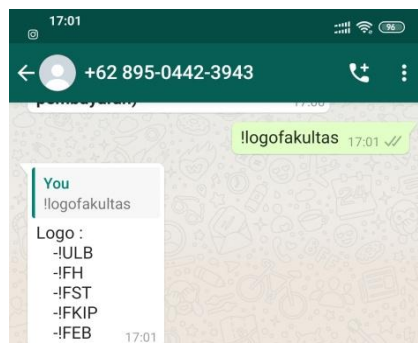
Fig 6. Chatbot Facilities

- e. "!! Payment code", followed by the payment code for development fees, tuition fees, midterm exams, and others. After using this command, information regarding the format along with the payment codes for these fees will be described..



Fig 7. Payment Chatbot

- f. Perintah keempat adalah "!! Logofakultas". Setelah menggunakan perintah ini, maka daftar perintah untuk menampilkan logo setiap fakultas akan ditampilkan.



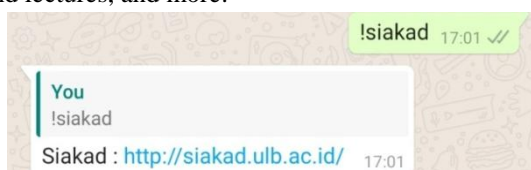
**Fig 8.** Chatbot Logo Faculty

- g. The fifth commandment is "! location". After using this command, the location of Labuhanbatu University will be clearly explained.



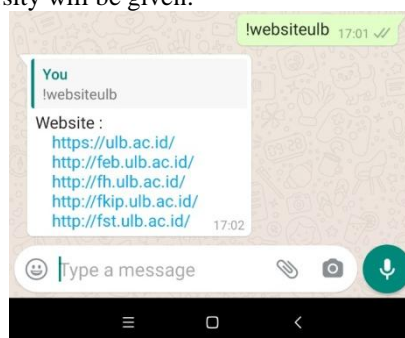
**Fig 9.** Chatbot Location

- h. “! Siakad” is a website where you can find out financial information, grades, attendance, lecture materials, and others. After using this command, the website will be provided to you so that you can check your finances, attend lectures, and more.



**Fig 10.** Chatbot Siakad

- i. “! websiteulb”. After using this command, the website belonging to each faculty, including the main website of Labuhanbatu University will be given.



**Fig 11.** Chatbot website

- j. “! help”. After using this command, the guide to using this bot will be displayed.



Fig 11. Chatbot help

- k. A bot created by a group of people in the has been able to create an infobot that can be used to send "! infobots". The information about the programming language and the names of the members who helped in the design of this bot will be described. After using this command, the name of the person who designed it will be shown on the screen.



Fig 12. Chatbot infobot.

#### 4. Conclusion

Based on the results of the Waterfall method tests conducted on the chatbot application, it can be determined that the chatbot application is capable of answering questions posed by students based on the knowledge provided. Chatbots may be interacted with using WhatsApp, which is available online. The created chatbot application may give information about student registration and college..

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