



Design Whatsapp Gateway Admissions for New Students at Labuhanbatu University During The Pandemic

Mutiara Br Samosir ¹, Rahel Marianti Ritonga ², Febriani Naibaho ³, Ibnu Rasyid Munthe ⁴

^{1,2,3,4}Faculty of Science and Technology, Informatics Management University of Labuhanbatu, Rantauprapat, 21418, Indonesia

E-mail: mutiarasamosir1012@gmail.com ¹, rahelmarianti4@gmail.com ², febrinaibaho19@gmail.com ³, ibnurasyidmunthe@gmail.com ⁴

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ABSTRACT

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Over time there will always be many changes that continue to occur, from the smallest things to the biggest things. Especially in this era of increasingly sophisticated technology, getting information is very easy, but during a pandemic like now it is very difficult to carry out activities so that it becomes something very complicated, especially for students who want to enter. registering for college will be very difficult to get information, but fortunately now there is a Whatsapp Gateway that makes it easy for new students to get the latest information about student registration, we are currently conducting research on the Whatsapp Gateway, to make it easier for new students to get the latest information, at this time we use the research method we use today is the waterfall method or the waterfall flow method, this research model works according to stages such as from the highest point to the lowest working according to the correct sequence and process, with the aim of writing this research so that new students can use the Whatsapp Gateway well, making it easier for them to get information. About registration during this covid19 pandemic, which is difficult to carry out daily activities with the Whatsapp Gateway. All that can be done easily, with the Whatsapp Gateway, having an impact on students. prospective new students don't have to worry about how to get the right information, prospective students no longer need to bother coming to campus to see the development of existing information, just use the Whatsapp Gateway, any activity or desire they want to get development information can be done easily only by using the Whatsapp Gateway without having to waste time and energy, everything can be done at home, according to the current rules during this pandemic.

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1. Introduction

Almost all human life is related to the development of information technology. The report states that in this modern era, the stages of disseminating information are very easy and fast for us to receive. It can be said that human life with the development of information technology is very closely related.[1] One clear proof of this connection can be seen in March 2020, Indonesia was infected with the COVID 19 outbreak and began with positive victims in Depok City. After that, there was an increase in cases throughout the Greater Jakarta area so that it became a red zone area. The COVID-19 pandemic is a non-natural disaster that grieves the entire population of the earth. All activities of human life on earth are disturbed, including education. Several countries affected by this outbreak have decided to close schools, colleges and universities, including Indonesia. Until now the crisis really came suddenly, governments in any hemisphere including Indonesia had to take a bitter policy of closing schools to reduce the outbreak. By limiting the physical contact of the community on a massive scale and to save lives or still having to open schools for the survival of workers in maintaining economic sustainability. This creates problems in the world of education. As for the consequences of Covid-19 which also hampers the world of education, especially the acceptance of new students, namely the economic factor. [2]

Since the presence of the covid outbreak, all people have been affected by the corona virus, such as reduction of employees, quiet sales, and workers who work who get a salary per day, where the government's



policy is to enforce social distancing or stay at home. As a result, this leaves parents confused about how to provide for the family's needs. Therefore, not a few parents delay or give a break for their children to go to college until next year or until the situation allows and has improved enough. [3] A system that will make it easier for the agency to disseminate all university information, especially information on new student admissions during the pandemic has been launched. The Whatsapp Gateway makes it possible for people to communicate with each other without having to leave the house. This is a step in the right direction and will help the government control the spread of the disease.[4]

Whatsapp Gateway is an application from the CHAT API that has the ability to send messages to other platforms. The first step that needs to be done is to register on the Chat-API page. After that, we will be directed to the admin panel, where your private instance will be created. Next, open WhatsApp on your phone, go to Settings > WhatsApp Web > Scan QR code. and verify via email. after that, please login so that you can verify the whatsapp number used by clicking Add New Number in the upper right corner of the website page.[5] Where, with this feature the system can directly send information to all prospective students based on the phone number data that has been provided by prospective students during registration. With the addition of these features, the existing information system for new student admissions becomes more efficient and effective and is expected to facilitate the delivery of information en masse and automatically, resulting in an increase in services to prospective students. With the Whatsapp Gateway, we can spread messages of hundreds of numbers automatically, and can be directly connected to the database of cell phone numbers on your cellphone as well as many more features that can be used to make it easier to channel information to new students.

a. Admission Process for New Students at Labuhanbatu University

The process of accepting new students at Labuhanbatu University is usually followed by several general processes. These include: Registration process, Administrative selection, Written selection, and psychological tests. Re-registration for students who have passed the first stage of the admissions process is also a step in the process.[6]

b. Whatsapp Gateway

Whatsapp Gateway is a system used to make it easier for a person or a company in their work process by sending the same message at the same time to many people on a text and alphanumeric basis. In general, Whatsapp Gateway allows users to send messages to multiple people at once with its use done with pulses. [7]. Whatsapp is a cross-platform mobile application where we can reach Whatsapp for free and not only that, WhatsApp can send an unlimited number of images, video and audio messages using the internet. The Whatsapp Gateway works by typing a message via whatsapp containing the school information you want to convey, then the school officer determines the phone numbers to be addressed, and then the officer can send it.

c. UML Modeling

The UML (Unified Modeling Language) modeling in the new student admissions information system by providing several UML diagrams has been updated to make it easier for students to understand The UML diagram shows how a student can be placed in a class based on his or her ability to apply for admission to an institution. [8] The design of the WhatsApp gateway system is described via modeling. The Unified Modeling Language is one type of modeling (UML). The following UML diagrams were used to create apps in this study [9] :

1) Use Case Diagrams

The Use Case Diagram is a diagram intended for the communication process between the user and the system. It is recognized to be very efficient and detailed in explaining the content or usability of a system in the form of a diagram. [10]



Fig 1. Use Case Diagram System Admission Information New Students

The registration officer or admin has the power to regulate, evaluate, and provide results from the registration process that has been carried out by prospective students. In Fig 1. Use Case Diagram of the New Student Admissions Information System is a system that describes how the process flow of a person or prospective student to obtain information about Labuhanbatu University. [11]

2) Sequence Diagram

The Sequence Diagram is a diagram whose job is to describe the process of interconnected interactions in a system in the form of messages that will be delivered along with time..[12]. Fig 2 shows a number of objects where the object is directed by the user (user) The object in question is the message. Where prospective students fill out the registration form and then submit it to the registration committee then the registration committee will save the prospective student's information to a database and select and provide information to the student.

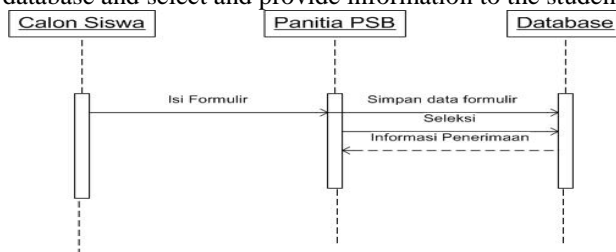


Fig 2. Sequence Diagram Registering

3) Class Diagram

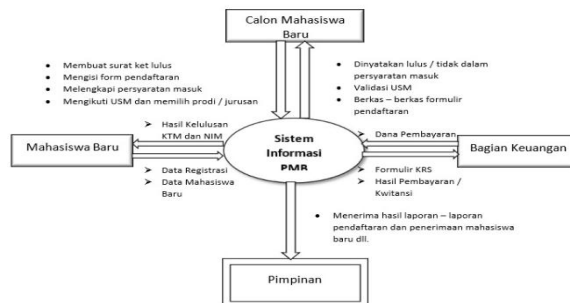


Fig 3. New Student Admission Diagram Class

In Fig of the Class Diagram of New Student Admissions there are four subjects that are interconnected to produce an object, each of which receives information from prospective students, new students, finance department and leaders. Each subject has several details, namely prospective students register first, bringing a certificate of graduation, filling out registration forms, completing entry requirements, and taking tests and choosing study programs or majors. Then, the information system will issue the following: a letter declared passed or not, test validation, and registration form files. The finance department will submit payment data to the information system and the money system will provide the payment data for new students. And all student data reports will be submitted to the leadership.

4) Activity Diagram

An Activity Diagram is a diagram whose workflow or process contains activities and actions that can be repetitions or selections. [13]

2. Method

Software Development is a team of scientists and engineers who work on the software development life cycle (SDLC) model with waterfall. The research method used is the Software Development life cycle which is based on the concept of software development. [14] The waterfall model is a sequential, sequential software lifeflow approach starting from analysis, design, coding, testing and program implementation. It is often also known as a linear sequential model or classical cycle. This waterfall model provides a sequential framework for analyzing, designing, testing, coding and implementing software. [15]

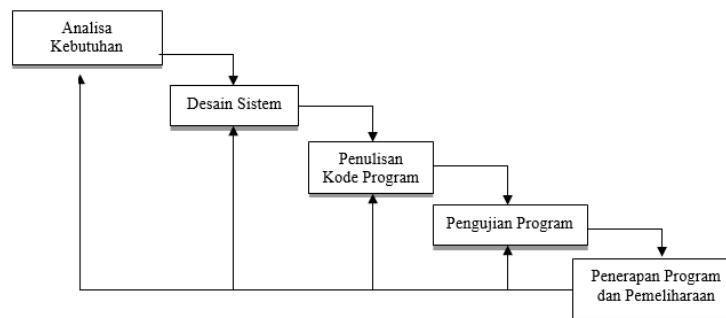


Fig 5. Research Methods

The stages of the waterfall method are as follows:

- a) **Analysis**
Researchers must find several things that encourage them to do research. In this analysis, researchers must evaluate and make observations to collect data. So that you can find out what is needed from the system to be developed. This stage describes the initial planning of researchers in developing the system. [16]
- b) **System Design**
A new system design is the design of a new computerized system. System design involves making an architectural design in the form of Unified Modeling Language (UML) and researchers will then design the system to be developed.
- c) **Program Code Writing**
In this article, we will show the design of an application that uses a programming language that suits our needs. In making the application, the implementation of the design is currently carried out using the PHP Framework CodeIgniter programming language. We will then show how it would be possible to create a new version of the application with a different language.
- d) **Program Testing**
Program testing is an attempt to further explore existing software which will be developed. The Black Box Testing method is a test of the features that already exist in the system where these features produce the required or desired input and output. In this stage, the system will be tested with the concept of Black Box Testing. [17]
- e) **Program implementation and maintenance**
The de is designed to ensure that software and systems are not affected by changes made during the ting phase of an application's development process. [18] A researcher at Labuhanbatu University has been working on a new computer system for student admission to the university. The new system will replace the previous system, which is still using paper or referred to as a manual. It will be used to help students apply for university places.

3. Results and Discussion

3.1 User registration main page

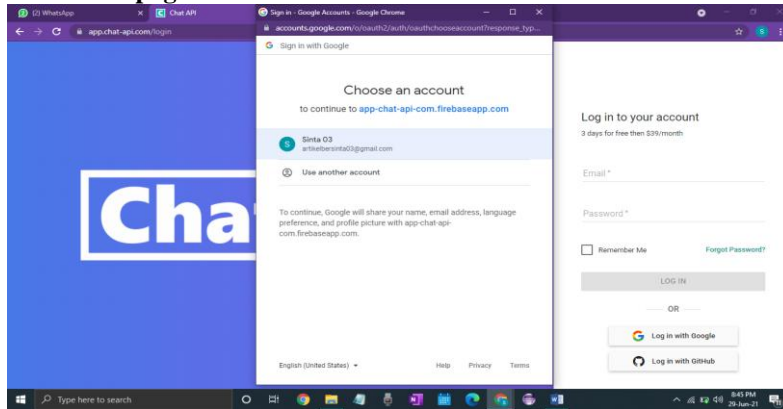


Fig 6. User registration main page

The main page display is a view where the user will create a registration account to be registered in the Chat-API account.

3.2 Chat-API main page

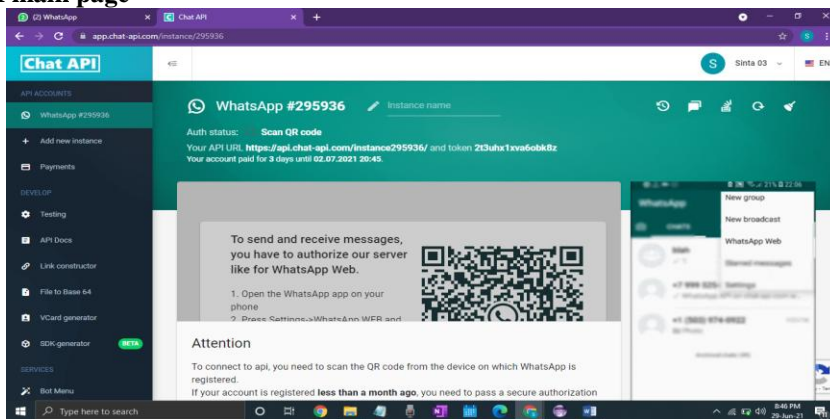


Fig 7. Chat-API main page

Chat-API is a new feature that will be used to provide updated information to prospective new students. In this view, the user will be directed to scan the barcode that has been displayed on the main menu of Chat-API. The barcode can be scanned by clicking on the bar code in the chat window.

3.3 User Login Page

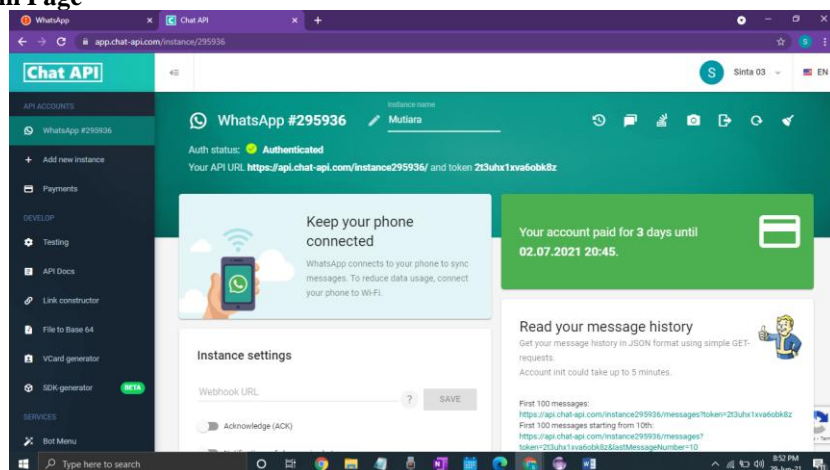


Fig 8. User Login Page



In this view, please enter the user name to be saved or recorded by chat-api account.

3.4 Chat-API feature display

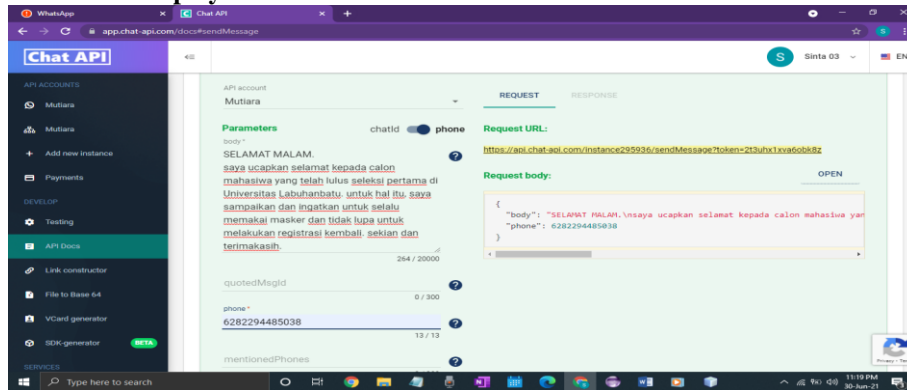


Fig 9. Chat-API feature display

In this view, there are two functions, namely chat id for more than one message recipient. While the phone for one recipient of the message. Meanwhile, the procedure for doing or conveying information through Chat-API. In the body for a place to write messages or information. Chat id for writing the number that we will address. Mention phone for tag use in messages.

4. Conclusion

A system was launched to disseminate all university information during the COVID-19 pandemic that can be controlled without having to leave the house. The system will make it easier for the agency to send information on new student admissions based on the phone number data provided by prospective students during registration. With this feature, the system can immediately send information to all prospective students based on their phone numbers. It can facilitate the delivery of information en masse and automatically send messages to other platforms.

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