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DESIGN INFORMATION SYSTEM ONLINE REGISTRATION VACCINE COVID-19 AT RSAU DR. M. SALAMUN

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Abstract: The entry of Covid-19 into Indonesia has caused many people to be affected, for example is delay in many activities and the increasing spread of the virus that affects public panic. One way to prevent the spread of the virus is the vaccination. Vaccination is the process of administering the vaccine that is useful for providing immunity to a certain disease in a person's body. With vaccination, it will strengthen the community's immune system. To make it easier for the public, vaccination registration can be done online now. Filling in the data can be done from home, so that it does not cause long queues that allow the risk of new clusters. The public will get proof of registration, which must be screenshots in the form of a barcode accompanied by a queue number and any prerequisites that must be brought when they come to. On the other hand, it will also be easier for health workers to confirm the suitability of the registered data with the person who came for the vaccine. The research used is descriptive research with observational and interview methods. The design of this system using the web with PHP programming language and MySQL database.

Keywords: information system; registration; vaccination

Abstrak: Masuknya Covid-19 ke Indonesia menyebabkan banyaknya masyarakat yang terkena dampaknya, contohnya yaitu terhambatnya banyak aktivitas dan meningkatnya penyebaran virus mempengaruhi kepanikan masyarakat. Salah satu cara untuk mencegah penyebaran virus ini adalah dengan melakukan vaksinasi. Vaksinasi adalah proses pemberian vaksin yang berguna untuk memberikan kekebalan terhadap suatu penyakit tertentu ke dalam tubuh seseorang. Dengan adanya vaksinasi, maka akan memperkuat sistem imun masyarakat. Untuk mempermudah masyarakat maka saat ini pendaftaran vaksinasi dapat dilakukan secara online. Pengisian data dapat dilakukan dari rumah, agar tidak menyebabkan antrian panjang yang memungkinkan adanya resiko cluster baru. Masyarakat akan mendapatkan bukti pendaftaran yang harus di screenshoot berupa barcode disertai nomor antrian dan persyaratan apa saja yang wajib dibawa saat akan datang melakukan vaksinasi. Di sisi lain, petugas kesehatan pun akan lebih mudah dalam mengonfirmasi kesesuaian data yang terdaftar dengan orang yang datang melakukan vaksin. Penelitian yang digunakan adalah penelitian deskriprif dengan metode observasional dan wawancara. Perancangan sistem ini dilakukan menggunakan web dengan bahasa pemrograman PHP dan database MySQL.

Kata Kunci: registrasi; sistem informasi; vaksin

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INTRODUCTION

Coronavirus can cause respiratory tract infections in humans. Infections that occur are generally mild infections, such as colds and coughs. But it can also cause some diseases that are more serious and considered deadly, for example, SARS, MERS, and Covid-19 caused by a new type of Coronavirus [1].

Covid-19 or Coronavirus Disease first appeared in Wuhan, China. It's a contagious disease that spreads quickly through physical contact from the mouth, nose, and eyes. Several signs need to be wary of contracting this virus, such as mild flu, afternoon throat, body temperature rises, and if this virus reaches the lungs, it will make it difficult for sufferers to breathe [2].

One way to prevent the increasing spread of the virus is to vaccinate. Vaccination can prevent transmission that occurs quickly and continuously even though it is very likely that we can still expose due to certain conditions. One of the reasons is not carrying out health protocols according to what is required, such as not wearing a mask outside the house. We may have contact with people who unknowingly have contracted the Covid-19 virus. Then accidentally rub your nose or hold your mouth without washing your hands or hand sanitizer, touching an item that gets splashed by the saliva of a Covid-19 sufferer and not washing your hands thoroughly.

Supporting factors for the hospital's progress can also be by providing the best service to the community or patients who come for treatment. Patient satisfaction is crucial because it is one of the indicators of health service quality. [3].

Efforts that we can do to facilitate health services are with creating an online registration system to make it easier for people who will register and for health workers who will check the data. Participants who register online do not need to come to health facilities which can cause long queues. Online registration is using electronic devices connected to the internet network [4]. The design of this vaccination information system uses the web, MySQL database, PHP, HTML, and CSS programming languages, and uses the Xampp web server-based software.

With OOP (Object Oriented Programming) we can see the perspective when analyzing systems and problems in programming [5]. *Object-Oriented Programming* has its advantages for designing a system, or a program, one of which can improve the quality of the system or software [6]. The online registration information system uses a web and a simple display by entering data and following the directions on the system so that it is easy for the public or patients to register at any time.

It is to overcome problems in the system. With this design, then expected that all matter in the old system could be resolved well [7]. The basic systems relate to each other by interrelated procedures. This system can facilitate an activity [8]. In a system, there is a collection of elements that are integrated and interdependent in a dynamic environment to achieve a certain purpose [9]. One of the elements of achieving a system is the environment. The environment can affect the system's operation that can be detrimental or beneficial even though the environment itself is outside the system that we make but has an intense

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influence [10]. The purpose of this research was to design a website-based vaccination information system that serves to provide convenience in registering vaccines, facilitate health workers and hospitals, and also reduce costs such as buying paper or ballpoint pens or pens.

METHOD

The method of designing the covid-19 vaccination registration information system used is the Extreme Programming method with a user process that makes it easy for users or users. The description of the stages is as follows:

a) Planning

The design process uses descriptive research with observational methods and interviews regarding the need for vivid data regarding the registration system that must match according to RSAU dr. M. Salamun needs.

b) Design

Perform system design according to needs and use the Unified Modeling Language (UML) method based on an image to help build in software development or Object-Oriented-based software [11].

c) Coding

The programming languages used in the online registration system for the covid-19 vaccination are HTML, CSS, PHP, MySQL database.

d) Testing

This stage is carried out by testing software such as Xampp functionally to ensure the labor of a system by minimizing error conditions that will occur in the future.

RESULT AND DISCUSSION

Process Analysis

Table 1. Actor Identification

No	Actor	Describe
1.	Vaccine Patients	People who have registered and come to be vaccinated.
2.	Registration Officer	The person in charge of verifying patient data that has been registered online following the provisions.

Table 2. *Use Case* Identification

Use Case	Describe
Register	The patient re-register according to the queue number in the online registration.
Provide requirements	Patients provide requirements to officers in the form of a photocopy of KK or photocopy of ID card.
Register patient	The officer register patients who have completed the requirements into the system.
Making a patient card	The officer makes a patient card to be brought during the second vaccine visit in the schedule form.
Patient verification	Officers verify to examine the suitability of patient files.
Patient data input	Officers input patient data into the d*atabase*
Make a report	The officer makes a final report on the visit of the Covid-19 Vaccination patient.

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Table 3. *Activity Diagram* Identification

Activity	**Describe**
Register	The patient re-register according to the queue number in the online registration.
Provide requirements	Patients provide requirements to officers in the form of a photocopy of KK or photocopy of ID card.
Register patient	The officer register patients who have completed the requirements into the system.
Making a patient card	The officer makes a patient card to be brought during the second vaccine visit in the schedule form.
Patient verification	Officers verify to examine the suitability of patient files.
Patient data input	Officers input patient data into the d*atabase*
Make a report	The officer makes a final report on the visit of the Covid-19 Vaccination patient.
Submit a report	The officer makes a final report on the visit of the Covid-19 Vaccination patient to the data management section.
Receive reports	The data management department receives reports and stores them for hospital purposes or if required by the hospital director.

Use Case Business

Use Case is a diagrammatic depiction between actor and system, not actor and actor or system and system.

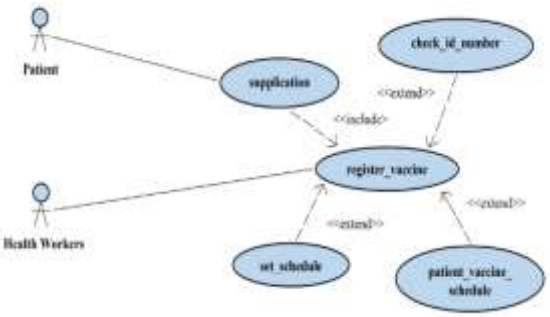

Image 1. *Use Case Business* Covid-19 Vaccination Registration

Activity Diagram

Activity Diagram usually describe a collection of system actions or activities from the start until the end of the actions [11].

Requirement Analysis

Functional Requirement:

The system can manage system user data (patients), even the date and time in an integrated manner with the online service process using the web.

Non-Functional Requirement:

Using a PIECES problem-solving framework (Performance, Information, Economic, Control, Efficiency, Service).

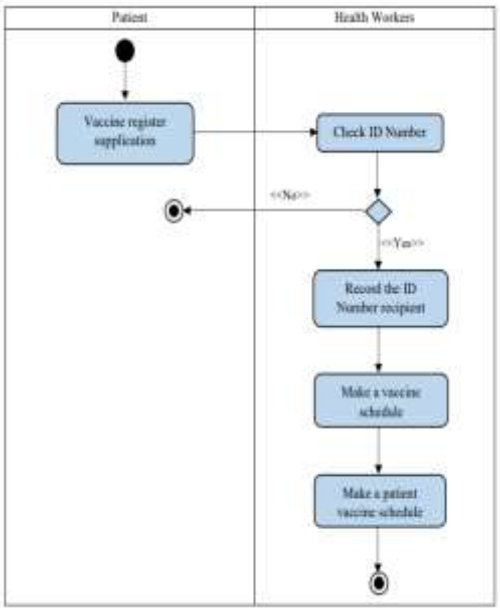

Image 2. *Activity Diagram* Covid-19 Vaccination Registration

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Tabe 4. Non-Functional Requirement

Non-Functional	Describe
Performance	Save time in completing a process.
Information	Provide information clearly.
Economic	Can reduce costs like paper.
Control	Prevents patient data loss and prevents patient data storage from being repeated twice.
Efficiency	The system can make efficient in speeding up the service time process.
Service	Makes it easier for the public or patients who will register because it is *user friendly*.

System View

The public or patients who will registration, log in by clicking start registering.

Image 3. *Login* Page

When you start with the initial page, namely login, the community or patient is required to fill in personal data so that they can complete the online registration for the Covid-19 Vaccination.

Image 4. Covid-19 Vaccination Online Form

In case you have got completed your information, the patient will get proof that must be screenshoots to appear to the officer who will look at it when the patient comes to RSAU dr. M. Salamun.

Image 5. Proof of Successful Registration

Patients must require read recently coming, such as what to bring, the date and time of vaccination determined by RSAU dr. M. Salamun.

CONCLUSION

With the design of the online registration information system for the Covid-19 vaccination, it can help make it easier for RSAU dr. M. Salamun in doing service so that be able to overcome previous problems where there are no web-based Covid-19 vaccination registration media to accelerate the community or patients who will register anywhere and avoid queues that are too long.

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