Design Of Management Information System For Covid-19 Direct Cash Assistance Recipients

Melda Agnes Manuhutu, Sherly Gaspersz, Abraham Manuhutu, Jalmijn Tindage, Samuel Y. Warella

Abstract: The data management information system for direct cash assistance recipients contains a list of recipients with their name, address, date of birth, age, difficulties during COVID-19 and a description of when to receive assistance. Also provided a search menu to perform data search quickly. This study provides information about the data collection management information system for direct cash assistance recipients that is effective, efficient and able to provide optimization in official or related work. This system development model is a prototype model. It is used because the development process with this model is shorter and easier. As well as enabling communication between developers and customers, so that the results of the system will be in accordance with user needs. There is also a system flow that describes how this system is functioned. There is also a use case diagram that describes what functions an administrator can perform, including input, edit and delete. This system is built using Adobe Dreamweaver, and the database is built with MySQL, and the program language is PHP.

Index Terms: Management Information System, Direct Cash Assistance Recipients

1. INTRODUCTION

Corona Virus Disease 2019 or abbreviated as COVID-19, has become a new phenomenon that has changed many human life arrangements today. The slogan Stay At Home becomes a force to fight and reduce the spread of COVID-19. There are three implications for Indonesia related to the COVID-19 pandemic namely the sector tourism, trade and investment [1]. This is also not only a world phenomenon that has an impact on the world of health, but of course also greatly impacts various aspects of life, namely social impacts. The Indonesian state that upholds togetherness and mutual cooperation must change this culture and adapt to a new culture called social distancing. Education is also affected by this. Students and teachers who usually study together at school, must learn through online applications. The report of Organization for Economic Co-operation and Development (OECD) states that Covid-19 pandemic has implications for the threat of crisis large economies are characterized by stopping production activity in many countries, the fall in the level of public consumption, loss consumer confidence, fall of the stock market which ultimately leads to uncertainty [2]. The economic impact, there were difficulties in life everywhere, there were terminations of work relations that caused many people to be unable to meet their family needs such as food and clothing. This is certainly not an individual burden which must be borne by each individual, but a burden shared as a nation and part of the Indonesian State. In facing this global challenge, the Indonesian Government certainly does not remain silent and let the people bear it themselves. Various programs are initiated and arranged so that the people are able to overcome this challenge. The awareness of the decline in the people's economy is also the decline in the country's economy, so the government is there to guarantee its presence to get through this difficult situation. One of the programs initiated by the Indonesian government and currently running is direct cash assistance. This is given to people who meet key requirements such as being affected by COVID-19 such as termination of employment or being laid off. As well as the status of recipients who have not received this assistance before. This was given to recipients in bulk. Seeing this government's need, the presence of a management information system to collect data on beneficiaries is needed. An information system exists to provide efficiency in work such as reducing work time and energy. When previously an assessor needed to provide a book to register the list of beneficiary names, this information system designed to replace the book's existence. The data management information system for direct cash assistance recipients contains a list of recipients with their name, address, date of birth, age, difficulties during COVID-19 and a description of when to receive assistance. Also provided a search menu to perform data search quickly. This study provides information about the data collection management information system for direct cash assistance recipients that is effective, efficient and able to provide optimization in official or related work.

2 REVIEW OF LITERATURE

2.1 Management

Management is expected to devise a plan for countering significant weaknesses in control [3]. Every institution has the elements to form a good managerial system. These elements are called management elements. If one of them is imperfect or does not exist, it will result in reduced efforts to achieve organizational or company goals. The main reason management is needed in an organization / business: To facilitate the achievement of goals, both organizational goals and personal goals. Management is needed to achieve organizational goals and individual goals within the organization.

2.2 Information System

Information is an essential factor for the company in that the possession or otherwise of opportune information will be a determining factor in the quality of the decisions it adopts, and as a result, of the strategy that it might design and put into practice at any given moment [4]. Information is data that has been processed into an important form for the recipient and has real value that can be felt in current decisions or future decisions [5]. Information costs can be estimated by taking the following into account [6]:

1. The information content required
2. How urgently the information is needed
3. The amount of information needed
4. How accessible the information is.

Information systems comprise hardware and software, telecommunications, databases, human resources and procedures. Here is the explanation [7]:

1. **Hardware**
   The component controlling all the system's units is the central processor, which carries out the instructions given by a program. Other devices are used to introduce data (keyboard and mouse) and produce the system's output (printers).
2. **Software**
   There are two types of computer programs: system software and application software. System software programs are used to manage the computer system's resources and simplify programming. Applications, like spreadsheets or word processors, directly help the user to do his or her work.
3. **Databases**
   A database is a collection of interrelated data, such as an organization's human resource or product databases. A database must be organized so it can be accessed according to its content. Databases are managed by software systems known as database management systems (dbms).
4. **Telecommunications**
   Telecommunications are the means by which information is transmitted electronically over long distances. Various network connections are available to suit the needs of different companies. In a small company, pcs are connected by Local Area Networks (LAN), enabling their users to communicate and share data, tasks and equipment. Wide Area Networks (WAN) are used to connect computers at greater distances, either within the company or in a different location. Internet, the 'network of networks', links up an immense variety of networks from diverse fields worldwide. These connections enable pc users to access the company's databases and other computerized resources.
5. **Human resources**
   Two types of human resources can be distinguished: information systems specialists and end users. Information systems specialists include systems analysts, programmers and operators. End users are the people who use the information system or the output they generate, in other words, the large majority of an organization's members.
6. **Procedures**
   Procedures are the policies and methods that must be followed when using, operating and maintaining an information system. Procedures must be used, for example, to establish when to run the company's payroll program, to determine how many times it should be run, who is authorized to do so and who has access to the reports it produces.

Different types of information systems must be developed to meet the whole gamut of information needs in a company: systems for processing transactions, management information systems and decision support systems [8]. Thus, Management information system is a system designed to provide decision-oriented information by planning, monitoring, and assessing organizational activities in the form of a framework at all stages [9]. Management information system is a system that aims to provide information to simplify the process of operation, management, and decision making within an organization [10].

2.3 MySQL

MySQL is in charge of managing and manage data in the database [11]. MySQL is a database management the most stable used as a medium data storage [12]. MySQL is database management system software on Multiuser Structured Query Language (SQL) [13].

2.4 PHP

PHP stands for PerlHypertext A preprocessor which is a server-side language scripting that resides on the Hypertext page The Markup Language (HTML) is intended for help programmers write web pages fast and easy [14]. PHP is a programming language to program dynamic web site, i.e. capable of operating the web continuously. Hypertext Preprocessor (PHP) is an open source software come under the rule of general purpose licenses (GPL) [15].

2.5 XAMPP

Xampp is the software that it works for running a website with a programming language Hypertext Preprocessor (PHP) and uses MySQL data processor so that it can be used without having to be connected to the internet [16]. Xampp is great software supporting the operating system that serves as web server and opensource based [17].

2.6 Web

Web is a collection of information both static and dynamic from the page created [18]. The web is a system which contains a variety of information in the form of text, images, audio and video and can be accessed through a device commonly called the web browser [19].

3 METHOD

In this section, the system development model is explained and the details of the system design analysis are explained below. The details include the flowchart and Unified Modelling Language (UML).

3.1 System Development Method

A prototype is an early version of a software system that is used to demonstrate concepts, design experiments, and find more problems and possible solutions [11]. The system development model used in building this system is the prototype model. It was chosen because of the short processing time and the excellent cycle of this model, that is, the system developer communicates with the customer, so that the design results will match the needs.

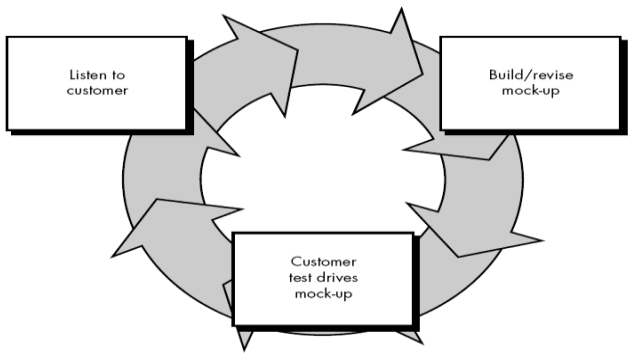

Figure 1. *Prototype Model*

3.2 Needs Analysis

In order to develop the system, an assessment is required initial needs and analysis of ideas or ideas to build or develop a system. Analysis was carried out to find out any components on the system that are running, can be hardware, software, network and system users as the end user level of the system. The next step is to gather the required information end user which includes the costs and benefits of the system built or developed. System requirements analysis defines system requirements in the form of:

1. System input
2. System output
3. Processes running in the system
4. The database used

4 SYSTEM DESIGN

4.1 Flowchart

Flow charts are system design tools used to describe system processes in detail to describe the flow of information systems and system flow diagrams to describe program flow [12]

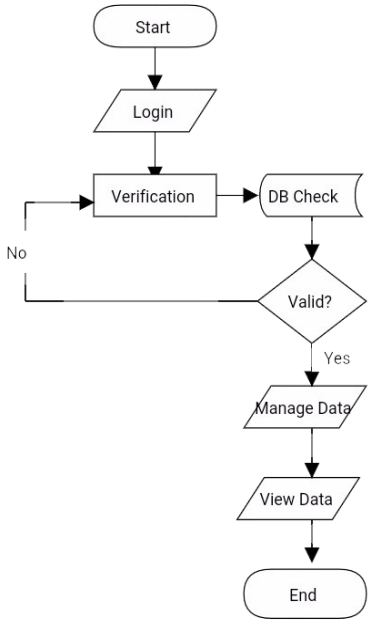

Figure 2. *Flowchart*

The figure illustrates the flow of the data collection system for direct cash assistance recipients. Administrators must go through the login process by entering a username and password. Then the system will perform the account verification process. When the system sees that there is a match, the system page opens. Administrators manage data such as input data, view data and search for data. When finished managing, the admin can press the logout button.

4.2 Unified Modelling Language

UML arises because of the need for visual modeling to specify, describe, build, and document software systems [13]. There are several types of diagrams in UML, but in this study the researcher will only use use case diagrams. A use case or use case diagram is a model for the behavior of an information system to be created [13].

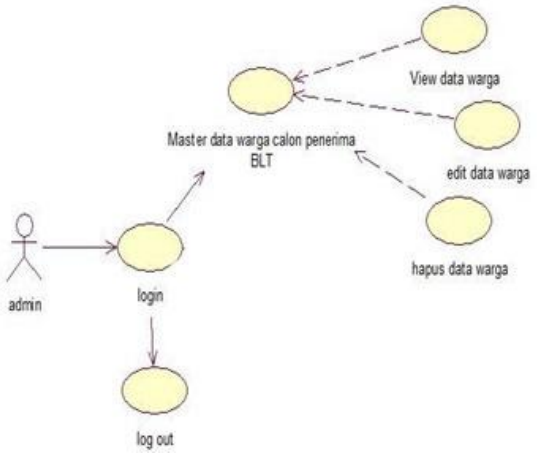

Figure 3: *Use Case Diagram*

This use case diagram explains what data management functions are owned by the administrator. He/she can add, delete and edit the data.

5 IMPLEMENTATION

gure 4: Home Page

The following image is the front page of this system when the admin successfully enters the system after the verification process is successful. On this page, there are input, view and search menus. Then there is a logout button.

Figure 4: *Input Page*

This figure displays the master data page. On this page, administrators can input prospective recipients of Direct Cash Assistance data. Administrators must enter some data requested by the system such as the Population Registration

Number, Name, Address, Economic Status on the Family Card, Verification of data received or not received assistance.

6 CONCLUSION

Support for the survival of its people is the responsibility of the Indonesian government. This system helps the government to collect data on recipients of Direct Cash Assistance. The presence of this system provides efficiency in work. This will increase job optimization. In addition, security in data storage and no data redundancy is also an advantage of this system. And it is very easy to perform data searches.

ACKNOWLEDGMENT

The author would like to thank all those who have provided assistance during this writing.

REFERENCES

[1] Aknolt Kristian Pakpahan. (2020). Tanggung Jawab Pemerintah Pikiran Rakyat, 4 Maret 2020.
[2] SME Policy Responses," OECD 2020, diakses 23 April 2020, https://read.oecdilibrary.org/view/?ref=119_119680-di6h3qgi4x&title=Covid19_SME_Policy_Responses. 2 OECD, "SME Policy Responses."
[3] Kenneth C. Laudon & Jane P. Laudon. (2014). Management Information Systems. England: Pearson Education Limited Edinburgh Gate Harlow Essex British Library Cataloguing-in-Publication Data.
[4] Rafael Lapiedra Alcamí Carlos Devece Carañana. (2012). Introduction to Management Information Systems. Edita: Publicacions de la Universitat Jaume I. Servei de Comunicació i Publicacions Campus del Riu Sec. Edifici Rectorat i Serveis Centrals. 12071 Castelló de la Plana. http://www.tenda.uji.es. E-mail: publicacions@uji.es
[5] Husda, Elfi, Nur. (2012). Pengantar Teknologi Informasi. Cetakan Pertama. Jakarta: Penerbit Boduose.
[6] Menguzzato, M., & Renau, J. J. (1991). La direccio´n estrate´gica de la empresa. Un enfoque innovador del management (1st ed.) (pp. 23 – 99). Barcelona: Ariel Economı´a.
[7] GARCÍA BRAVO, D. (2000): Sistemas de Información en la Empresa. Pirámide, Madrid
[8] Arjonilla Domínguez, Sixto Jesús; Medina Garrido, José Aurelio. (2009). La Gestión Del Sistema De Información En La Empresa. Teoría Y Casos Prácticos. Editorial Pirámide. Madrid.
[9] Pradipta, R., Wibawanto, H., & Mulwinda, A. (2017). Rancang Bangun Sistem Informasi Manajemen Administrasi Surat Menggunakan Framework Laravel Pada Jurusan Teknik Elektro.
[10] Ma'arif, S. (2015). Sistem Informasi Manajemen (SIM) sebagai salah satu pelayanan dalam meningkatkan mutu sekolah: Studi multi kasus di SMA BPPT Darul Ulum dan MAN Unggulan Tambak Beras Jombang. LPPM UIN Sunan Ampel Surabaya.
[11] Haryati, S., & Tjendrowaseno, T. I. (2012). Rancang Bangun Sistem Informasi E-commerce Untuk Usaha Fashion Studi Kasus Omah Mode Kudus. Speed-Sentra Penelitian Engineering dan Edukasi , 3(1).
[12] Anggraini, G., Ardianty, S., & Puji, W. (2014). Rancang Bangun Aplikasi Pariwisata Sumatera Selatan Berbasis Sistem Operasi Android.
[13] Ramadhani, S., Urifatun, A., & Masruro, S. T. (2013). Rancang Bangun Sistem Informasi Geografis Layanan Kesehatan Di Kecamatan Lamongan Dengan PHP MySQL.Jurnal Teknika, 5(2).
[14] Nuh, M. (2017). Pembangunan Sistem Informasi Presensi Siswa Pada Sekolah Menengah Atas (SMA) Negeri 1 Rembang Berbasis Finger Print. Speed-Sentra Penelitian Engineering dan Edukasi, 5(1).
[15] Suhartanto, M. (2017). Pembuatan website sekolah menengah pertama negeri 3 delanggu dengan menggunakan php dan mysql.SpeedSentra-Penelitian Engineering dan Edukasi, 4(1).
[16] Sihotang, H. T. (2018). Sistem Informasi Pengagendaan Surat Berbasis Web Pada Pengadilan Tinggi Medan.Journal of Informatic Pelita Nusantara, 3(1).
[17] Binarso, Y. A., Sarkowo, E. A., & Bahtiar, N. (2012). Pembangunan sistem informasi alumni berbasis web pada program studi teknik informatika universitas diponegoro. Journal of Informatics and Technology, 1(1), 72-84.
[18] Susanti, M. (2016). Perancangan Sistem Informasi Akademik Berbasis Web Pada Smk Pasar Minggu Jakarta.Jurnal Informatika, 3(1)
[19] Sholikhin, A., & Riasti, B. K. (2013). Pembangunan Sistem Informasi Inventarisasi Sekolah Pada Dinas Pendidikan Kabupaten Rembang Berbasis Web.IJNS-Indonesia.
[20] Sommerville Ian. (2007). Software engineering, 9TH EDITIO. Boston: Addison-wesley.
[21] Ladjamudin. (2013). Analisis dan Desain Sistem Informasi. Yogyakarta: Graha Ilmu.
[22] Rosa dan Shalahuddin. (2013). Rekayasa Perangkat Lunak Terstruktur dan Berorientasi Objek. Bandung: Informatika.