

Database Model of Distribution of Direct Cash Assistance to Communities Affected by the COVID-19 Pandemic

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ABSTRACT

The purpose of this study was to determine Database Model of Distribution of Cash Assistance to Communities Affected by the Covid-19 Pandemic. This type of research is the library method, which is the method carried out by studying and collecting data from libraries related to the tool, both in the form of books and information on the internet.

Key words: COVID-19 pandemic, coronavirus, Database Model, Distribution of Cash Assistance, Communities

1. INTRODUCTION

Covid-19 or Corona comes from the Latin word meaning crown, because the corona virus form has prominent nails resembling a crown. Scientists first isolated the corona virus in 1937 which caused infectious bronchitis in poultry and in 1965 researchers Tyrrell and Bynoe found evidence of corona virus in humans who had the common cold, through culture of embryonic tracheal organs obtained from the flu's respiratory tract. Covid-19 or corona virus is a virus that attacks humans. According to the World Health Organization (WHO), COVID-19 is transmitted through people who have been infected with the corona virus. The disease can spread through small droplets from the nose or mouth when someone infected with this virus sneezes or coughs. The drops then land on an object or surface that is touched and the healthy person touches their eyes,

nose or mouth. Corona virus can also be spread when small droplets are inhaled by someone when close to infected with corona. This virus can affect anyone, whether babies, children, adults, the elderly, pregnant women, or nursing mothers. According to public health epidemiologist from Harvard T.H. Chan School, Marc Lipsitch, Covid-19 is estimated to infect 40-70 percent of the population worldwide.

The government's strategy in tackling Covid-19 is by using a mask when outside the home, the second is tracing contacts of positive cases that are treated using Rapid Test. Among these are the closest people, health workers who care for COVID-19 patients, as well as in communities in areas where many cases are found.

In the case of COVID-19 people in Indonesia were affected in economic terms, many workers lost their income after being temporarily laid off. The government made a solution to provide assistance to the people affected by co-19 by involving local leaders, RT, RW in their respective regions.

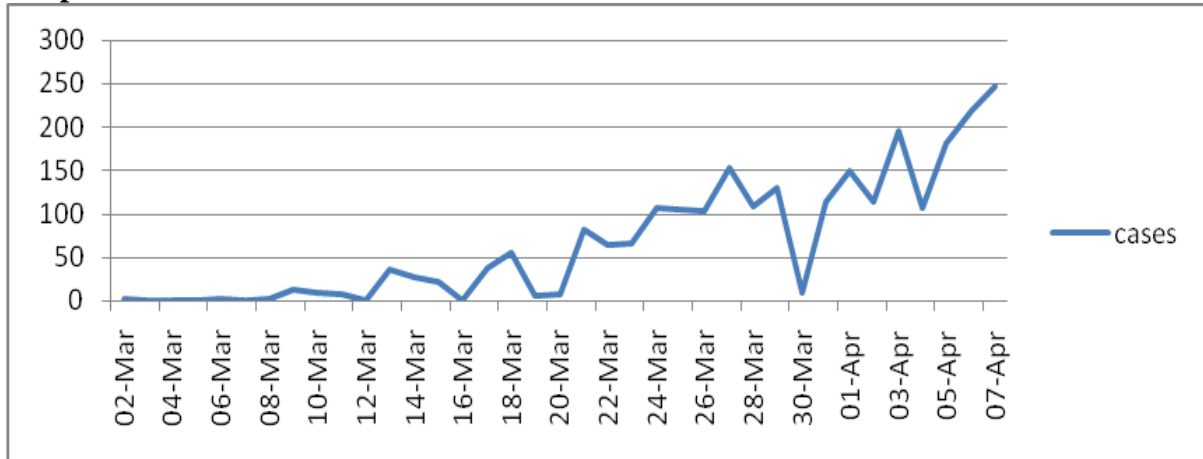
Table 1. Cases Of Covid-19 in Indonesia

Confirmed	In the treatment	Convalesce	Died
2738+247 cases	2313	204	221

Source : www.covid19.go.id

Covid cases that occurred in Indonesia up to 7th of April 2020 were 2738+247 people, in which there were 2313 people 84.487% of the confirmed, 204 patients recovered 7.451% of the confirmed, and patients who died there were 221 8.072% of confirmed.

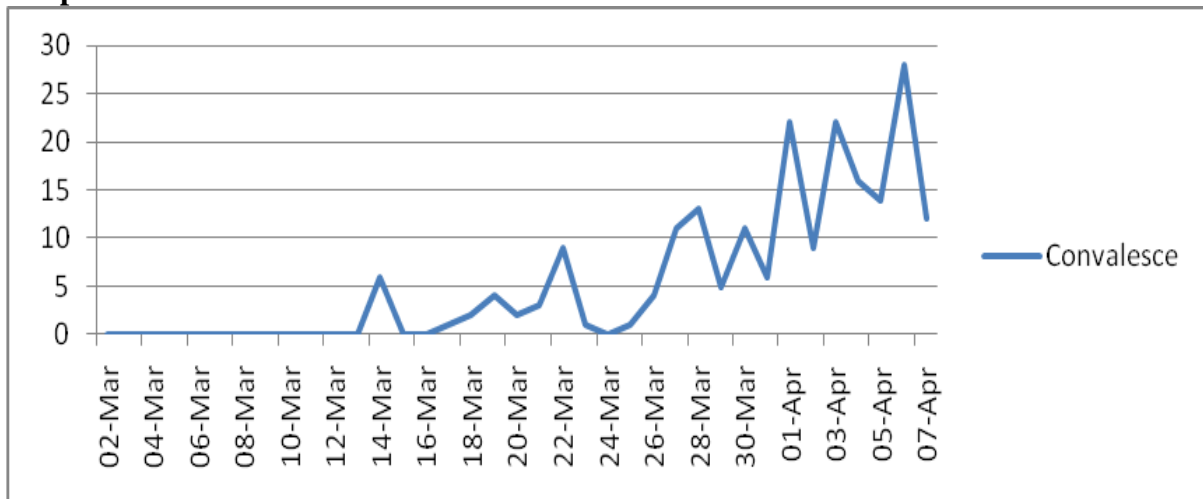
Graph of Covid-19 cases in Indonesia



Source : www.covid19.go.id

Judging from the graph of the Covid-19 case on March 22-28, it has increased and on the 30th it has decreased, and on 01st to 07th April 2020 the graph of the Covid case has increased again.

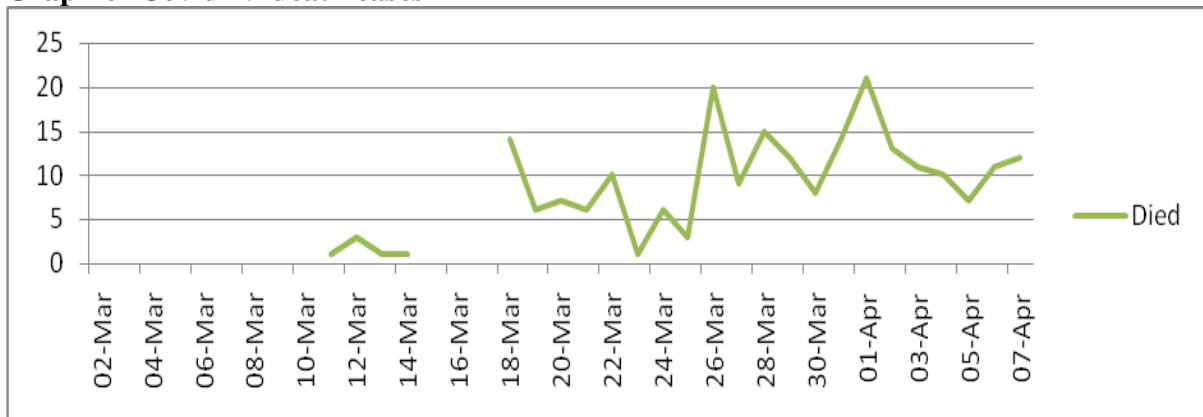
Graph of Cured Covid-19 Case



Source: www.covid19.go.id

Seen from the graphs of Covid patients who recover are increasing.

Graph of Covid-19 death cases



Source : www.covid19.go.id

Judging from the graph of Covid-19 death cases is still unstable until 07th April

2. LITERATURE REVIEW

2.1 Product quality of theory

• DATABASE

According to Gordon C Everest, Database is a collection or collection of data that is mechanical, shared (shared), formally defined and also centrally controlled in an organization.

Database Type

To store or retrieve data from a database we need software that is often called a DBMS (database management system). There are at least 12 types of database types, which include:

1. Analytical database, which is a database for storing information and data taken from operational and external databases. This database consists of summarized data and information that is most needed by a management organization or other end-users.
2. Operational database is a database that stores detailed data needed to support the operation of the entire organization. Also commonly called SADB (subject-area databases), transactions, and database production. Examples such as: inventory database, personal database, customer database, accounting database.
3. Distributed databases are local database work groups and departments in offices and other work locations. In this database there are two segments, namely the user database and the operational data used and generated only on the users of the site itself.
4. Data warehouse is a data warehouse that stores data from previous years to the present. Data warehouse is the main source of data that has been integrated so that it can be used and utilized by users of all professional organizations. Recent developments in the data warehouse are being used as a Shared nothing architecture to support and facilitate extreme scaling.
5. End-user database consisting of data files developed from end-users in their workstations. For example, various

collections of documents in word processing, spreadsheets and file downloads.

6. Real time database is a processing system that is designed to handle the workload of a country that is subject to change, contains continuous data and some has no effect on time. This database is useful for legal, accounting, banking, multi-media and scientific DTA analysis.
7. Document oriented database which is one of the computer programs arranged for a document-oriented application. This system can be applied as a layer above a relational database or database object.
8. In memory database. This database relies on memory for data storage in a computer.
9. Navigational database. In navigating this database, queries find objects for those who follow references from certain objects.
10. Hypermedia database on the web is a collection of interrelated multimedia pages in a website, consisting of a home page, and hyperlinks from multimedia such as images, text, audio graphics etc.
11. External database. This type of database provides access to external, privately owned data online - available for fees to end users or organizations from commercial services.
12. Relational database. From 2009 rational databases are business computing standards, and the databases are the most commonly used at present.

The benefit of this database is to avoid duplicate or double data, can be arranged with a standard format of a data, can secure data, can determine the quality of information, and can also overcome data problems that are difficult to access.

Database Models

1. Database Hierarchy

The Hierarchy database model is a data model in which the data is arranged

with a data tree structure. All attributes of the specified record are set with entity type.

2. Database Network

The Network Model is a database model that is believed to be a flexible way of representing objects and their relationships. This model has a special feature which, in the schema, is shown as a graph where object types are nodes, the relationship type is curves, which are not limited to being hierarchical or latticed.

The network database model is basically used with mainframes, more flexible than hierarchical databases because there are different relationships between branches of data. However, the structure must still be defined in advance. Users must be familiar with the database structure. Moreover the number of relationships between records is also limited, and to test a field one must retrieve all records.

3. Relational Database

The relational model is a data model that is currently widely used by system developers. This model makes it easy for programmers to make applications or software, in addition to its simple form, this model is also easy to understand when compared to other data models such as the network model or hierarchy model. A relational database consists of several tables where each table has a unique name or is not the same as each other. Rows in the table represent a connectedness of several values.

While the workings of the Relational database are with data elements stored in other tables that make up rows and columns. In this database model the data is arranged logically, that is based on content. Each record in the table is identified by a field - a primary key - that contains a unique value.

• Direct cash assistance

Direct cash assistances is a government assistance program in the form of giving cash or various other assistance, both conditional (conditional direct cash assistance) and unconditional (unconditional direct cash assistance) for the poor. The

amount of funds provided and the mechanism implemented in the direct cash assistance program varies depending on government policy in the country.

Indonesia is a direct cash assistance host country, with mechanisms in the form of cash compensation, food, health insurance, and education with targets at three levels: near poor, poor, very poor.

3. METHODS

The method used in writing this paper is the library method, which is the method carried out by studying and collecting data from libraries related to the tool, both in the form of books and information on the internet.

4. RESULT AND DISCUSSION

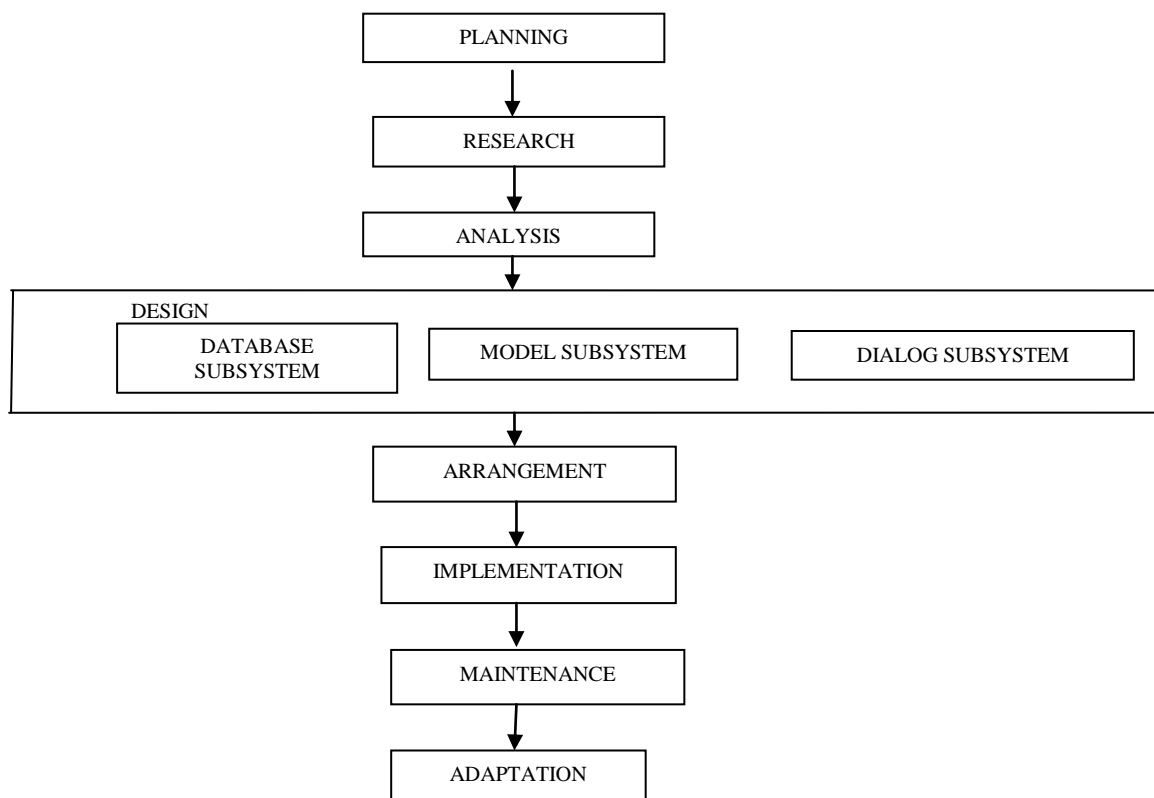
4.1 Result

The decision support system for determining the distribution of Direct Cash Assistance for people affected by the Covid-19 outbreak was carried out by the Central Statistics Agency (BPS) to select the people affected by the covid-19 outbreak who would be given cash assistance.

Decision support system is an interactive, flexible, easily adjusted (adaptable) Computer Based Information System (CBIS) specifically developed to support the resolution of unstructured problems for decision making.

Following are the steps in developing a Decision Support System for the Database of cash transfers for communities affected by the covid-19 outbreak.

Based on the data we obtained, the Ministry of Social Affairs of the Republic of Indonesia will distribute special assistance during the 19th plague. The targets to be given assistance are poor families who are included in the Integrated Social Welfare Data (DTKS), recipients of the Jakarta Smart Office (KJP), contract teachers, honorary, low-income dwellers, and daily workers. The total budget for this cash assistance is IDR 3.6 trillion. Assistance in the form of Rp. 150,000 week per family.



Picture 1. Decision support system steps

Based on data from the Central Statistics Agency the percentage of poor people per September 2019 was 9.22% or 24.79 million people. BPS has collected data on the number of families using their respective variables or indicators as criteria for receiving cash transfers.

4.2 DISCUSSION

Based on the results of our discussion, the government will provide cash assistance to people affected by the covid-19 outbreak by utilizing a database from the Central Statistics Agency and also Integrated Social Welfare Data (DTKS) obtained from the Ministry of Social Affairs of the Republic of Indonesia. This database will be a reference for the government to prepare a cash assistance budget that will be distributed to the public.

The database that has been obtained will show the number of how many people included in the category need cash assistance. After obtaining data obtained based on the Central Statistics Agency

database, the government will channel its assistance through the local Regional Government and the regional government will distribute it directly to the community.

5. CONCLUSION

The database method for distributing cash assistance to the community that is most notorious for the impact of the Covid-19 outbreak is to use an existing database at the Social Welfare Statistics and Integrated Data Center of the Ministry of Social Affairs

REFERENCES

1. covid19.go.id; accessed on 8 April 2020
2. bps.go.id; accessed on 8 April 2020
3. kemensos.go.id; accessed on 8 April 2020

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