

# Information System Application Development Analysis One East Java Province Poverty Data

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**Abstract**— In order to implement the policy programs of the East Java Provincial Government to reduce poverty, information on areas indicated by the poor category is very important and will become the basic capital in the policies of the East Java Provincial Government. To determine the amount of poverty data in an area, several poverty indicators are needed covering various fields, namely economic, social, health, education, and basic infrastructure. The importance of these indicators can be determined in order to obtain priority indicators. Therefore, this study aims to analyze an existing system development at BAPPEDA (Regional Planning Agency) of East Java Province, using the System Development Life Cycle (SDLC) method to provide a clear picture of the poor population data according to priority indicators. It is hoped that the system will provide a decision reference for the East Java Provincial Government

**Keywords**— Information System Application, One Data Information System, SDLC.

## I. INTRODUCTION

In order to implement the policy programs of the East Java Provincial Government to reduce poverty, information on areas indicated by the poor category is very important and will become the basic capital in the policies of the East Java Provincial Government. To determine the amount of poverty data in an area, several poverty indicators are needed covering various fields, namely economic, social, health, education, and basic infrastructure. The importance of these indicators can be determined in order to obtain priority indicators. Considering that it is currently very difficult to get information about poverty in East Java Province because of its large area, it takes a lot of time to collect information and the existing data is less accurate because the data sources are not integrated properly and correctly. Therefore, the existence of information technology can provide a more advanced solution with the existence of an information system application service for one poverty data that is connected (online), users can obtain the information they need just by accessing the internet. In addition, the existence of a Geographic Information System that has mapping capabilities along with spatial and non-spatial information combined with web-based applications, of course produces useful things for the regional government of East Java Province. This proves that the poverty data information system is required to be able to make a meaningful contribution.

## II. LITERATURE REVIEW

### A. Basic Concepts of Information Systems

Information is very important in supporting decision making. Information can be obtained from information

systems or also called processing systems or information processing systems or information generating systems. Information systems are defined by Robert A. Leitch and K. Roscoe Davis [JOG05] as follows:

An information system is a system within an organization that brings together the daily transaction processing needs, supports operations, is managerial and strategic activities of an organization and provides certain outside parties with the necessary reports.

The information system itself has a number of certain components. As stated by Robert and Donald Symanzky [JOG05], that information systems consist of several different components, namely, people, data, hardware, and software. As a system, each of these components interact with each other to form a single unit to achieve its goals.

### B. System Development

Information is a very important resource for organizations, computer-based information systems can facilitate data processing so that the information produced is faster and better than the information produced by information systems that are managed manually. System development can mean compiling a new system to replace the old system as a whole or improving an existing system. The old system needs to be replaced or repaired due to several things, namely:

1. There are problems (Problems) that arise in the old system. The problems that arise can be:

- Irregularities in the old system caused the old system to not operate as expected.
- Inefficient operation.
- Non-compliance with established management policies.
- Organizational Growth

2. To seize opportunities (Opportunities)

Information technology has developed rapidly. Organizations are beginning to feel that this information technology needs to be used to improve the provision of information so that it can support decision making. The speed of information or time efficiency will determine the success or failure of the strategies and plans that have been prepared to seize the opportunities that exist.

3. There are instructions (Directives)

The development of a new system can also occur due to instructions from above or from outside the organization, such as government regulations.

### C. SDLC (System Development Life Cycle)

The System Development Life Cycle (SDLC) is a concept model used in project management to describe the steps

involved in a project. Various SDLC methods have been developed to guide system development including the waterfall model (original SDLC method), Rapid Application Development (RAD), Joint Application Development (JAD), Fountain model and Spiral model and so on. The model that the author uses in developing this information system is the waterfall model (Henry Ronald Karunia Tampangela, 2017).

SDLC consists of several general stages consisting of 6 stages, namely:

- Planning (Planning)
- Analysis (Analysis)
- Design (Design)
- Implementation (Coding)
- Testing & Integration (testing and integration)
- Maintenance (maintenance)

### III. RESEARCH METHOD

Research methodology can be defined as the knowledge that is passed to achieve a certain understanding (Information, Mapping, & Agriculture, 2016). In this study, the methodology used is the waterfall methodology. The stages in this research can be seen in the image below.

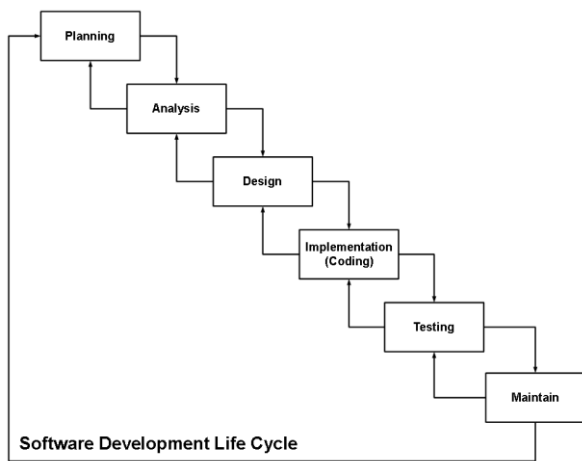


Fig. 1. Waterfall

### IV. DISCUSSION

#### A. Use Case Diagram

The use case diagram in this study shows administrators as designers and registering Bappeda officers who have been appointed as users who will later act as admin officers from Bappeda as data processors and makers of poverty data reports in East Java Province.

#### B. Activity Diagram

Activity Diagrams describe the workflow (workflow) or activities of a system or business process (Hendini, 2016).

#### C. Database Design

Database design is very necessary in a system development. The database serves as a data storage medium needed in a system. RDBMS (Relational Database Management System) is a database consisting of tables that are related to each other.

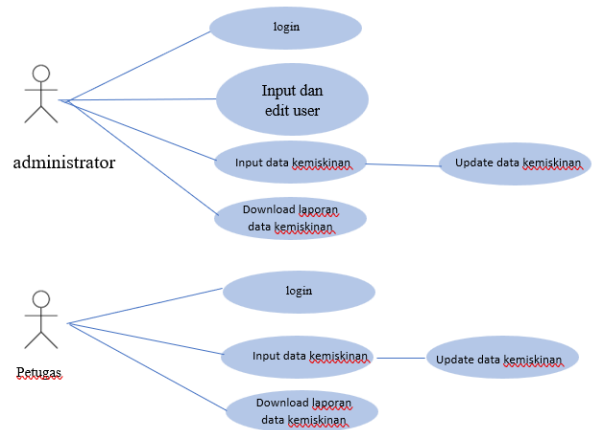


Fig. 2. Use Case Diagram

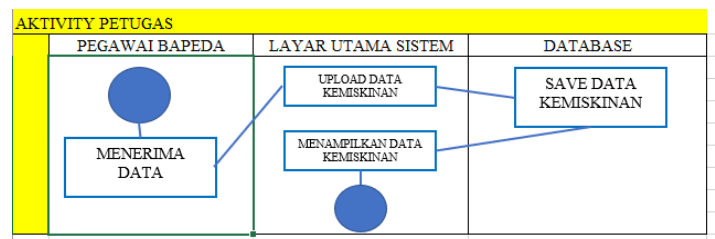


Fig. 3. Activity Diagram

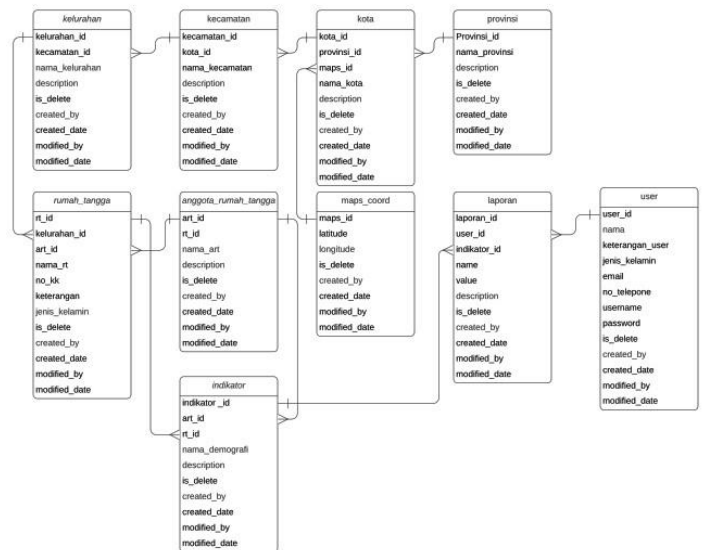


Fig. 4. Database Relations

#### D. System View

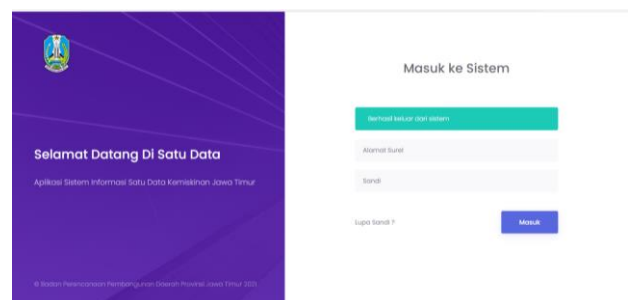


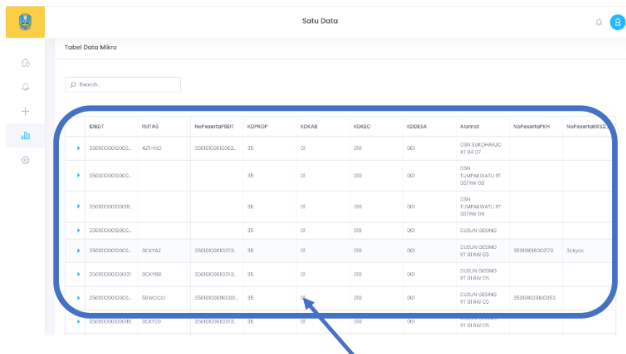
Fig. 5. Page Login



Fig. 6. Dashboard Page



Fig. 7. Poverty Data Chart



KODET	KOTAD	NPSANPRSD	KDPUR	KOKAB	KODIC	KODELA	Alamat	NPSANPRSD	NPSANPRSD2
35000000000000000000000000	471000	000000000000000000000000	35	0	000	000	DIPA SURABAYA	000000000000000000000000	000000000000000000000000
35000000000000000000000000		000000000000000000000000	35	0	000	000	DIPA SURABAYA	000000000000000000000000	000000000000000000000000
35000000000000000000000000		000000000000000000000000	35	0	000	000	DIPA SURABAYA	000000000000000000000000	000000000000000000000000
35000000000000000000000000	300000	000000000000000000000000	35	0	000	000	DIPA SURABAYA	000000000000000000000000	000000000000000000000000
35000000000000000000000000	300000	000000000000000000000000	35	0	000	000	DIPA SURABAYA	000000000000000000000000	000000000000000000000000
35000000000000000000000000	300000	000000000000000000000000	35	0	000	000	DIPA SURABAYA	000000000000000000000000	000000000000000000000000

Fig. 8. Detail Data View Information

## V. CONCLUSION AND RECOMMENDATION

### Conclusion

Based on the analysis of the development of an information system application for poverty data in East Java Province, the following conclusions can be drawn.

1. The analysis of the development of this one-data system proves that it is required to be able to make a meaningful contribution to decision-making that has a positive impact on the community in East Java province.
2. Application of One Poverty Data for East Java Province has micro and macro data analysis features. Micro data is data that is built from small/individual data so that it can be developed and processed according to management needs and produce various useful information for management needs and policies. There are 3 areas that the user must select to ensure the details of the micro analysis results, namely: data, dividers and filters. The data area has 2 selections: data and scope options; divider area there are 2 filters, namely: display and decile; There is 1 selection in the filter area, namely: filter only. While macro poverty data is poverty data whose calculations are obtained through a macro

approach based on the concept of the ability to meet basic needs by collecting data using sample data instead of census data, so that the results are estimates (estimates). The data source used is the National Socio-Economic Survey (Susenas). The results of calculating poverty data through a macro approach (macro poverty data), only show the number and percentage of poor people in each area based on estimates.

### Recommendation

Suggestions for developing a single data application for East Java Province is that it can be developed not only in East Java Province but also for all provinces in Indonesia and for estimated macro data, it can be improved after there is an improvement in national level data so that the results from macro poverty data information are more accurate.

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