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RESEARCH ARTICLE

Information System for the Registration of the Poor in Blang Bintang Subdistrict at the Blang Bintang District Office, Aceh Besar

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Abstract
The process of data collection for the poor at the Blang Bintang Subdistrict Office has been computerized for some time; however, it still relies on Microsoft Excel, which leads to time inefficiencies and employee fatigue in conducting the data entry. This issue can result in delays in data management, subsequently affecting the timely distribution of various forms of assistance to the community. The aim of this study is to analyze and design an Information System for the Registration of the Poor in the Blang Bintang Subdistrict at the Blang Bintang District Office, Aceh Besar, using Microsoft Visual Basic 6.0. Data collection was carried out using several methods, including field studies and library research. The conclusion drawn from the analysis of the Information System for the Registration of the Poor is that the system will be used to process data for the poor at the Blang Bintang Subdistrict Office, Aceh Besar, enabling functionalities such as adding, editing, and searching for data. Additionally, the system will be equipped to generate reports, such as lists of beneficiaries, among others. This application is intended to serve as an alternative tool for processing the data of the poor at the Blang Bintang Subdistrict Office, Aceh Besar.

Keywords
Information System; Registration; Visual Basic 6.0.

1 | INTRODUCTION

The rapid development of information technology and information systems has significantly transformed various sectors, particularly in data management and operations within government institutions. The use of efficient technology is essential for enhancing the speed and accuracy of administrative processes. In data management, having an integrated system is crucial for reducing the errors that often occur in manual data processing. Studies have shown that incorporating information technology into these processes improves data management efficiency and minimizes the mistakes typically found in manual operations (Dharmawan, 2023). A relevant example can be seen in employee management information systems, which simplify the organization and management of personnel data, making the entire process more streamlined. These systems help integrate data more effectively, reduce redundancy, and make it easier to manage large volumes of information. Additionally, such systems allow for real-time updates, ensuring the accuracy of the data used by decision-makers. The need for adopting technological solutions to enhance the speed, accuracy, and dependability of public administration data management is clear. Studies have demonstrated that applying information systems in government operations is an effective way to increase efficiency, reduce human error, and enable faster, more informed decision-making (Safelia, 2023).

Despite the rapid development of information technology, many government agencies still rely on manual methods for data collection. For example, in some subdistrict offices, manual systems for registering the poor continue to be used (Safelia, 2023). Using more advanced software, such as Microsoft Visual Basic 6.0, can address issues like data duplication and the slow pace of data entry (Apriliah *et al*., 2019). The implementation of technology-based systems in other sectors, such as village library management (Tabrani *et al*., 2022) and outgoing letter management in government offices (Kamil *et al*., 2022), has proven that digitalization increases operational efficiency.

Some recurring issues in data collection, such as duplicate data and delays in data management, require a more systematic solution. Therefore, designing an integrated and innovative information system is essential to reduce errors in manual data management and speed up the registration of the poor. A well-designed system will eliminate data duplication and accelerate data processing. In this case study, the application of a Visual Basic-based information system aims to digitize the poor data registration process in the subdistrict office. A more structured system will minimize errors in data entry and significantly reduce the time required for data processing. This, in turn, will speed up the distribution of assistance to the people in need (Wahid & Homaidi, 2023). Experiences from other information system implementations show that digital transformation can have a positive impact on public service. For instance, in education and healthcare, the use of technology-based systems has proven to enhance efficiency and service quality. The application of information systems based on technology has also improved the accuracy of data used for quicker and more precise decision-making.

Through the design of a Visual Basic-based information system for registering the poor, it is expected to be not just a technological solution, but also to create a better work culture among employees. Implementing the right system will enhance the overall efficiency of public services. Furthermore, an effective system will accelerate the delivery of aid to those in need with greater accuracy and timeliness. Both the government and the public will benefit from a more efficient system, as faster and more accurate processes will reduce delays and errors in data management (Safelia, 2023). In conclusion, the implementation of technology-based information systems, such as Microsoft Visual Basic, is a strategic step toward improving efficiency and accuracy in the registration of the poor at the Blang Bintang Subdistrict Office. Additionally, this system will enhance overall public service and provide direct benefits to society, especially in speeding up the distribution of aid to those in need.

2 | BACKGROUND THEORY

A system is essentially a set of components that interact and work together to achieve a specific goal. Each component plays a vital role in ensuring the smooth functioning of the overall process. For a system to work properly, it is crucial that all its components such as people, hardware, software, data, and procedures are well integrated. Effective management of each part is key to ensuring that the system operates efficiently and meets its objectives. One practical example of such a system can be found in libraries, where evaluating aspects such as performance, data handling, security, efficiency, and user service is an important part of assessing the system's effectiveness (Junaedi, 2018). By focusing on these factors, libraries can streamline their operations and improve service quality. Furthermore, the use of web-based systems in population administration has proven to be highly beneficial. These systems simplify tasks like creating official documents and managing data, which ultimately enhances the efficiency of administrative services and allows for faster, more accurate processing (Rohman & Wahyuningtyas, 2022). When systems are properly integrated

and managed, they contribute to more effective decision-making and smoother operations. Proper implementation of technology, aligned with well-established procedures, plays a major role in improving the performance of any organization. Whether in libraries, public administration, or other sectors, a well-functioning system is essential to achieving goals efficiently and providing high-quality services to the public.

Accurate data processing is an essential element of information systems. Raw, unprocessed data does not offer maximum utility. Proper processing converts this raw data into valuable information that is crucial for quick and accurate decision-making. For instance, in the evaluation of academic information systems (SIAKAD), it was observed that user perception and satisfaction are critical factors in determining the effectiveness of data processing. A system must be designed to produce high-quality information, which significantly influences both user satisfaction and the overall effectiveness of the system (Suryawan & Prihandoko, 2018). When users trust the system to deliver reliable information, their satisfaction increases, which in turn leads to better utilization of the system. In contrast, executive information systems (EIS) provide decision-makers with easy access to both internal and external data. This accessibility facilitates more informed strategic decision-making at the executive level (Rantung *et al*., 2020). The ability to quickly access relevant data enables executives to make decisions based on real-time information, which is crucial for effective leadership. These two examples underscore the close relationship between efficient data management and the ability to make more accurate, effective decisions. When data is processed correctly and effectively organized, it significantly contributes to improving decision-making and the overall performance of any organization.

The application of an integrated system significantly contributes to enhancing operational efficiency and minimizing the risk of errors in data processing. In sectors such as healthcare, one notable example is the implementation of Hospital Management Information Systems (SIMRS). The successful adoption of SIMRS largely depends on the seamless integration of technology, procedures, and human resources. When these components are aligned and well-organized, the system operates effectively and efficiently. However, if the system is not structured properly, data processing can become slow and prone to inaccuracies, which increases the risk of errors. In the healthcare industry, errors in medical data processing can lead to serious consequences. For example, inaccurate patient information or delayed data entry can affect medical diagnoses, treatment plans, and patient safety. Therefore, a well-functioning and reliable system is essential to ensure smooth healthcare services and accurate decision-making. An efficient SIMRS helps streamline hospital operations, improves data management, and enhances communication between departments, ultimately leading to better patient care. To avoid harmful errors and ensure timely decision-making, healthcare organizations must prioritize the implementation of an integrated information system. Such systems help in managing medical data effectively, leading to more precise and informed decisions, and enhancing the overall quality of healthcare delivery (Roaini, 2022). The fundamental principle that a system is a collection of interconnected components working together is essential in producing accurate and useful information for decision-making. In academic, public administration, and healthcare contexts, the proper organization of each component within an information system greatly impacts operational efficiency and the overall performance of an organization. Proper management of data, systems, and procedures reduces errors, improves efficiency, and supports more accurate decision-making. With the rapid advancement of technology, the implementation of effective information systems will continue to improve operational quality and services across various sectors, ultimately supporting organizations in achieving their goals more effectively.

3 | METHOD

Based on interviews conducted with government employees at the Blang Bintang Subdistrict Office in Aceh Besar, several issues have been identified. One of the main problems is the backlog of poor family reports from each village every month, which causes the administrative staff at the subdistrict office to be overwhelmed. These reports must be submitted to the Baitul Mal institution, while the staff is also busy managing the monthly reports for the higher-level organizations. Furthermore, data processing at the Blang Bintang Subdistrict Office is still done manually using physical records, typed forms, and handwritten notes, as there are no sufficient computer facilities. This makes the data processing very slow and time-consuming. Additionally, inaccuracies in the processing of poor family data create difficulties in generating reports, as the reports often do not match the data that should be managed each month, thus hindering the timely submission of accurate reports. The process of registering poor families at the Blang Bintang Subdistrict Office follows several established procedures. When the forms are received by the RT (neighborhood unit), they are checked for completeness. If the form is complete, it is archived in the RT record book. However, if any data is missing, the form is returned to the individual for completion. Once archived by the RT, the form is passed to the RW (community unit) head to be recorded and stored in the RW archive. The form is then forwarded to the administrative staff at the village office for archiving in the village

administration records, after which it is presented to the village head for signature. Once signed by the village head, the form is returned to the administrative staff to create three copies. One copy is kept by the village administration, the second is sent to the subdistrict office, and the third is given to the concerned individual.

Non-functional requirements analysis is conducted to determine the specifications needed for the system to be implemented. These specifications include the expected outputs, required inputs, and the scope of processes used to convert inputs into outputs. Additionally, this analysis covers the volume of data that will be handled, the number of users, user categories, and the necessary controls over the system. For the hardware, the minimum specifications required are an Intel Pentium 4 processor, 512 MB of RAM, 100 MB of free disk space, a CD ROM, and a 15" SVGA monitor. As for the software, the system will use Microsoft Windows and the .NET Framework development platform. With the current system in place at the Blang Bintang Subdistrict Office, the manual processing of poor family data indicates an urgent need for system improvement. By implementing a more organized and efficient computer-based information system, it is expected that the registration and reporting of poor families will become faster, more accurate, and more accessible. The appropriate hardware and software implementation will help employees carry out their tasks more efficiently, ultimately resulting in more timely and accurate reports.

4 | RESULTS AND DISCUSSION

4.1. Results

4.1.1 Analysis of Poor Information System

System analysis is the stage after analysis in the system development cycle that is defined based on functional requirements to prepare the implementation design. This describes how a system is formed, which can include depicting, designing, and sketching or arranging several separate elements into a whole and functioning unit, and includes the configuration of hardware and software components. At this stage, it is explained about making sketches or arranging several separate elements into a whole, functioning, and useful unit. System design is divided into two types, namely conceptual design or general design, and detailed design or physical design. The general design that will be applied aims to provide a general overview to users of the system to be built. This general design identifies the components of the information system that will be designed in detail. This design stage begins with the creation of a proposed flowchart. The design of the Poor Information System at the Blang Bintang Aceh Besar Sub-district Office aims to produce a product in the form of an application that can handle data processing for calculating production values from raw materials to recording ice block sales, which will later be used as a consideration in decision making. In addition, this system can also process all existing input data and produce output that is in accordance with needs, such as data from the Poor Information System at the Blang Bintang Aceh Besar Sub-district Office and related reports. The table of the system that is currently running is as follows:

1) NIK
2) Name
3) Age
4) Status
5) Number of Dependents
6) Description
7) Gampong
8) Mukim
9) Sub-district
10) Regency
11) Year

In terms of the system running on the Poor Information System at the Blang Bintang Aceh Besar Sub-district Office, the application for the poor data collection process has not been computerized properly. The author still finds obstacles in calculating the number of aid recipients that do not match the desired reporting at the Blang Bintang Aceh Besar Sub-district Office. The following are some of the shortcomings of the information system that is currently running.

1) The unavailability of an application system for managing the poor.
2) Lack of human resources, especially poor managers who have a background in Information Technology.

Based on the results of observations and interviews with related parties, the system to be developed is an integrated poor management system, starting from raw material calculation management to determining selling

prices. Several things that can be described from the Poor Information System process at the Blang Bintang Aceh Besar District Office are as follows:

1) User creation and user settings by administrator.
2) The technology used in developing this system is a desktop-based application.
3) Report creation.
4) The process of registering the poor by the admin.

4.1.2 Data Structure Design

The data structure design outlined in the table is intended to manage user information within the system. It includes key fields that define user data. The User Code field, which has a text type and a size of 20 characters, serves as the primary identifier for each user in the system. This field is crucial because it ensures that each user has a unique identity and prevents duplication. The User Name field, also with a text type and a 30-character limit, stores the full name of the user, helping to clearly identify them within the system. Another important field is Status User, with a text type and a size of 20 characters, used to define the user's role within the system, such as "Admin" or "User". This field plays an essential role in managing access rights and controlling what features each user can access. Lastly, the Password User field, which has a text type and a size of 20 characters, is used to store the user's password. This ensures security within the system, and the password must be protected, often through encryption methods. Together, these fields ensure that the system can effectively manage user data, facilitate user identification, and maintain security and access control.

Table 1. User Data Structure

No	Field Name	Data Type	Size	Description
1	User Code	Text	20	Primary Key
2	User Name	Text	30	
3	User Status	Text	20	
4	User Password	Text	20	

This table illustrates the data structure used for the registration of the poor within the system. The data structure consists of several fields, each serving to store important information regarding the recipients of assistance. The first field is Nik, which has a Text data type and a size of 10 characters. This field functions as the Primary Key, ensuring that each data entry has a unique identifier and preventing duplication. Next, Name uses a Text data type with a size of 10 characters, storing the name of the assistance recipient. For age data, Age uses a Text data type with a size of 2 characters. This field records the recipient's age in a two-digit number format. Status, also a Text data type and 10 characters in size, holds information about the recipient's status, such as "Fakir" or "Miskin" (poor). The Number of Dependents field stores the number of dependents of the recipient. This field uses a Text data type with a size of 2 characters. Furthermore, Description is used to store additional notes or information about the recipient with a size of 100 characters. Location data of the recipient is stored in the fields Gampong, Mukim, Kecamatan, and Kabupaten, each with a size of 30 characters. These fields record the name of the village (Gampong), the residential area, the subdistrict, and the district where the recipient resides. Finally, Year is used to record the year of data processing, with a Text data type and a size of 4 characters. This table is designed to store the necessary information systematically, making it easier to process and report data for the poor in the system being developed.

Table 2. FamilyData

No	Field Name	Data Type	Size	Description
1	Nik	Text	10	Primary Key
2	Nama	Text	10	
3	Umur	Text	2	
4	Status	Text	10	
5	Banyaknya Tanggungan	Text	2	
6	Keterangan	Text	100	
7	Gampong	Text	30	
8	Mukim	Text	30	
9	Kecamatan	Text	30	
10	Kabupaten	Text	30	
11	Tahun	Text	4	

4.1.3 Information System Design for the Poor

The purpose of this information system is to streamline the process of registering and reporting poor families in Blang Bintang Subdistrict by leveraging information technology. The system is expected to enhance efficiency and accuracy in data management for poor families and assist authorities in making well-informed decisions. A crucial part of the system is the login feature, which controls access based on user roles and permissions. The login feature has been designed to ensure secure and validated access to the system. Users, including administrative staff from the village, RT, RW, and village heads, will receive verified accounts. To gain access, users must input a unique username and password, which are tied to their assigned role. An account recovery option is also available for users who forget their credentials, using the registered email for verification. This authentication process prevents unauthorized access and safeguards the sensitive data within the system. The login system ensures that only authorized users can access and modify the poor family data. Additionally, the system logs login activities, enabling effective monitoring and oversight of how users interact with the system.

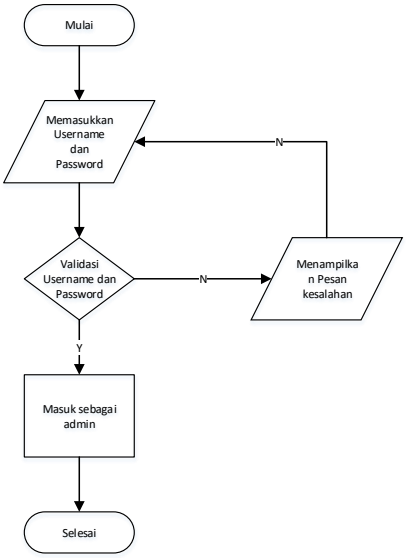

Figure 1. Login Data Flow Diagram (Flowchart).

The Admin menu in this information system is designed to provide full control to administrators in managing data and system operations. In the main interface, the admin can view various menus organized by function and task categories. The primary menu includes management of poor family data, user registration, reports, and system settings. The management of poor family data allows the admin to input, update, and delete information related to registered families, as well as view the status of data verification reports. This feature also enables the admin to monitor the overall registration process. The user registration menu is designed to add or remove authorized user accounts and manage each user's access rights based on their permissions. The admin can determine who has access to certain data or who can make changes to the system. The reports menu allows the admin to generate reports on the status of poor family registrations, track data errors, and view system usage statistics. The system settings feature enables the admin to configure system settings, such as security options, data backups, and software updates. With this organized menu design, the system ensures efficient and secure management of data and operations for administrators.

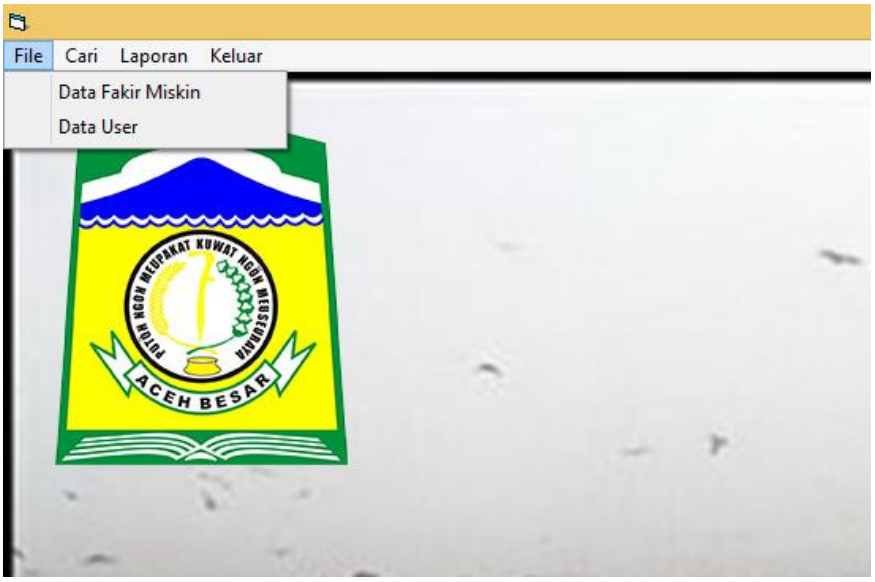

Figure 2. Main Menu Form

The form appears once the user has successfully logged in and serves as the primary interface for managing poor family data. It offers options to input, edit, and delete records related to poor families. Upon accessing the form, users are presented with an intuitive layout that allows them to add new family data, modify existing information, or delete records when necessary. The interface is designed to ensure smooth navigation between tasks. To input data, users fill out fields with information such as household composition and income level. The editing function enables users to update previously entered details, ensuring accuracy. If necessary, users can delete records that are no longer relevant or contain errors. This main menu form streamlines the process of data management, reducing time spent on administrative tasks while improving overall user efficiency. The clean design minimizes the risk of errors during data entry and enhances the user experience.

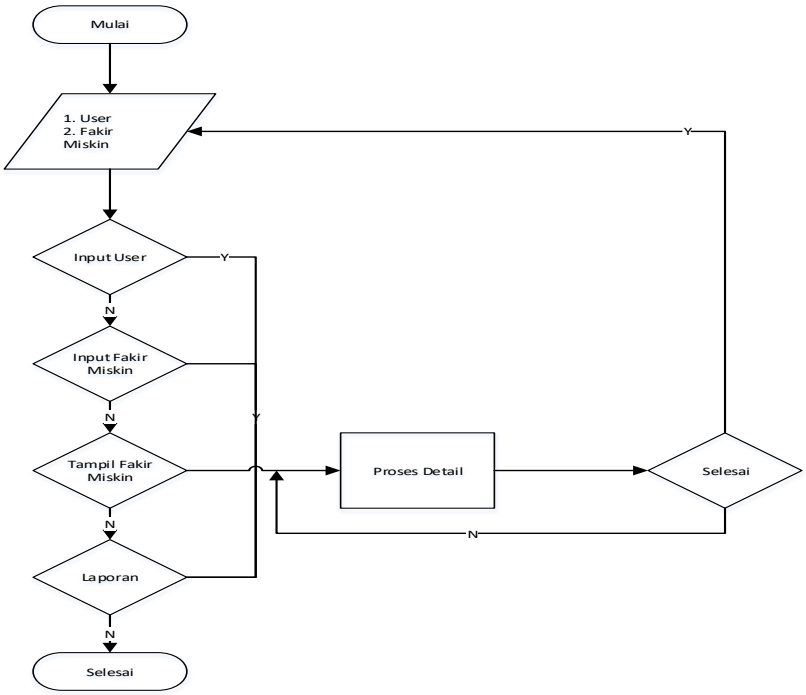

Figure 3. Main Menu Data Flow Diagram (Flowchart).

The output design for printing poor family data aims to provide clear and organized reports that can be easily accessed and printed by authorized users. This feature allows administrators to generate printable documents containing essential details about registered poor families, which can be used for official purposes or

further processing. The printed report includes key information such as family names, household members, income levels, and other relevant data. Each report is formatted to ensure readability and professionalism, with appropriate headings and sections clearly indicating different categories of information. The data is arranged in a structured manner to allow quick reference and ensure no important details are overlooked. The print function is designed to be user-friendly, with a simple interface for selecting which data to include in the report. Users can choose specific records or generate a full list, depending on their needs. The system also allows for customization of report content, enabling users to filter data based on specific criteria such as income range or family size. This output design ensures that printed reports are accurate, well-organized, and easy to understand, supporting efficient management of poor family data.

NAMA-NAMA PENERIMAAN BANTUAN LANGSUNG TUNAI (BLT)

GAMPONG	COT MALEM		
KEMUKIMAN	-	**TAHUN**	**2015**
KECAMATAN	BLANG BINTANG	**KABUPATEN**	ACEH BESAR

NO	NAMA	UMUR	KETERANGAN
1	ROHANI COT	56 Tahun	-
2	BASYARIAH	56 Tahun	-
3	KHAIRANI AZIZ	58 Tahun	-
4	AISYAH HARUN	72 Tahun	-
5	WARDAWATI	40 Tahun	-
6	NURHAYATI	58 Tahun	-
7	HASBI	38 Tahun	-
8	ROSLAINI	50 Tahun	-
9	IDRIS IBR	65 Tahun	-
10	MARDIANA	40 Tahun	-
11	ISMAI DAUD	56 Tahun	-

Figure 4. Cash Assistance Receipt Name Report

4.1.4 Efficiency and Effectiveness of the Information System

This section analyzes the advantages of implementing the designed information system (support application) using Visual BASIC 6.0 and Microsoft Office Access, compared to the current system in use by the company. The analysis covers various aspects such as efficiency, accuracy, and user experience, which directly impact the overall performance of the system. The new system offers significant improvements in time management by automating tasks that were previously done manually. This reduces human error and ensures more consistent and accurate data handling. Additionally, the system provides better reporting features, enabling users to generate detailed reports with ease. Using Visual BASIC 6.0 and Microsoft Office Access creates a more accessible interface, allowing employees to interact with the system without requiring extensive training. This results in a quicker adaptation process and enhanced productivity. A comparison between the existing system and the newly implemented one is shown in the table below. This table outlines key improvements, such as processing speed, accuracy, and usability, highlighting how the new system delivers greater efficiency in data management.

Table 3. Efficiency and Effectiveness of Information Systems

No	Current System	New Information System Design
1	Requires large operational costs for purchasing equipment or office supplies to support manual data processing	Costs are minimal for office supplies since the application design is automated to support data processing
2	The current system, especially the poor family information system, is manual and lacks structured application	The information system design uses Visual BASIC 6.0 and Microsoft Office Access, which is easy to develop and meet the company's needs due to its structured application
3	Updating data (revisions or edits) takes a long time and requires additional costs such as notebooks or erasers	Updating data (revisions or edits) is faster and requires no additional costs
4	Managing data on a larger scale is difficult because the current system is not automated (manual)	Managing data on a larger scale is easier as the system is automated, especially in utilizing output (reports)

5	Data entry repetition occurs due to manual processes, leading to data duplication since there is no filter function in the manual system	No data entry repetition occurs as the process is automated. Additionally, no data duplication happens because the system has a filter for data entry
6	Leaders or data users lack the necessary material or specific information to perform an initial analysis for policy-making since the manual system lacks specific reports	Leaders or data users have the necessary material or specific information for initial analysis in policy-making because the system is automated and can generate specific reports, allowing for more reports to be created
7	When using Microsoft Excel manually, it requires more memory. For example, entering five (5) records requires 9 KB of memory	When using an application designed with Visual BASIC 6.0 and Microsoft Office Access, it requires less memory. For example, entering five (5) records and converting them into Microsoft Excel takes only 8 KB of memory

The table compares the current system with the newly designed information system, highlighting the differences in efficiency and operational costs. The current system requires substantial operational costs for purchasing office supplies and equipment needed for manual data processing. In contrast, the new system significantly reduces costs by automating these processes through Visual BASIC 6.0 and Microsoft Office Access. Updating and revising data in the old system takes a considerable amount of time and involves additional expenses, such as notebooks and erasers. The new system, however, streamlines this process, making updates quicker and eliminating extra costs. The manual handling of large-scale data in the old system makes management difficult, whereas the automated system simplifies data handling and report generation. Manual data entry in the current system leads to repetition and errors, especially without a filter function. The new system resolves this by automating data entry, incorporating a filter that prevents duplication. In the current system, leaders and users lack specialized reports for analysis, but the new system allows for the creation of customized reports to support better decision-making. Additionally, the new system requires less memory than the manual process, ensuring more efficient data management.

4.2 Discussion

System analysis is a key phase that follows the requirements phase in the system development cycle. It focuses on preparing the system for implementation, outlining how it will be structured and how its components will work together. During this stage, both hardware and software components are defined and designed to ensure they integrate seamlessly. Effective integration is crucial, as it ensures the system operates smoothly and meets the organization's needs. Dharmawan (2023) suggests that properly integrating software and hardware is essential to developing systems that function reliably in operational settings. For Blang Bintang Subdistrict, the goal of the Poor Family Information System is to automate the management of data from poor family registration to the generation of relevant reports. The new system will streamline the process, improve data accuracy, and assist authorities in decision-making. However, the current system is still manual, leading to errors in data processing and inaccurate reports. As pointed out by Wahid and Homaidi (2023), manual systems are prone to human errors, especially when handling large volumes of data. This results in inefficiencies that directly affect the accuracy and speed of decision-making.

One major challenge is the lack of a computerized system to handle poor family data. The current process relies on manual methods and physical records, which are time-consuming and often prone to mistakes. Safelia (2023) mentions that public sector organizations often face similar challenges due to the lack of automation and skilled personnel to manage such systems. These issues hinder the accuracy of data and make it harder for the subdistrict office to meet the needs of the community efficiently. A shortage of IT professionals has further complicated the situation. Without individuals skilled in modern information technology, implementing and managing automated systems can be difficult, which slows down the transition to more efficient systems. According to Safelia (2023), one of the barriers to effective public administration is the insufficient availability of IT expertise, which prevents the successful implementation of automated solutions. This shortage has slowed down the adoption of a more reliable system, causing delays in data processing and reporting.

The proposed system aims to solve these problems by integrating all processes, from the initial registration of poor families to the generation of reports. Rohman and Wahyuningtyas (2022) emphasize the importance of integrating different functions in a system to improve efficiency. By automating tasks, the system will minimize human error, speed up the data entry process, and ensure more accurate results. The new system will offer features such as user management, automated data input, calculation of eligibility for aid, and output generation for reporting purposes. The new system will also include role-based access control, ensuring that only authorized users can access sensitive data or make changes. This will help protect the integrity of the data and ensure that it is handled appropriately. Junaedi (2018) highlights the need for secure data management in any public

administration system, especially when dealing with sensitive personal information. The ability to generate accurate reports and monitor changes will enhance transparency and accountability in managing the data of poor families.

Designed to be desktop-based, the system will be user-friendly and easily accessible to administrative staff at the subdistrict office. Kamil *et al*. (2022) stress that user-friendly interfaces are essential for ensuring the success of new systems, particularly in environments where staff may not be well-versed in technology. This feature will help the administrative team transition more smoothly to the new system, reducing training time and boosting productivity. In addition to user management, the system will include features such as report generation, allowing users to produce reports based on specific criteria, such as family size, income levels, or assistance eligibility. The system will also store data in a structured manner, which will facilitate quicker retrieval and reporting. By organizing the data efficiently, it will be easier for users to generate the information needed without having to manually search for specific details.

Another significant advantage of the new system is its ability to validate data entries, minimizing errors and preventing data duplication. This feature addresses one of the most common issues with manual systems, where repetitive data entries and inconsistencies often lead to mistakes. The automation will help eliminate these problems, ensuring that the data is accurate and reliable. The new system will streamline the management of poor family data in Blang Bintang Subdistrict, improving efficiency, reducing human error, and providing accurate, timely reports for decision-making. By automating many of the manual processes, the system will allow staff to focus on higher-level tasks while ensuring that the needs of the community are met promptly and effectively. As noted by Tabrani *et al*. (2022), the transition to an automated system offers significant benefits, particularly when dealing with large volumes of data that need to be processed quickly and accurately.

5 | CONCLUSIONS AND FUTURE WORK

The analysis of the Poor Family Information System reveals several important findings. The system is designed to manage poor family data at the Blang Bintang Subdistrict Office in Aceh Besar, enabling staff to add, edit, and search for registration data efficiently. It also facilitates the generation of reports, such as lists of aid recipients, which is essential for tracking and managing financial assistance. By automating these processes, the system significantly improves the accuracy and speed of data handling, reducing the likelihood of human error. This will streamline the administrative workflow, helping the office meet its objectives more effectively. The application serves as an alternative tool for managing data at the Blang Bintang Subdistrict Office, addressing the challenges of manual data entry and offering a more reliable, organized, and accessible way to manage records. With this system, administrative tasks such as report generation and data updates become easier, ensuring that the office can respond to community needs promptly and efficiently.

Despite the significant improvements, there are areas for future development. Currently, the system generates reports in text format, which is useful but could be enhanced by adding graphical representations, such as charts and graphs. This would help present data trends more clearly, enabling decision-makers to better understand patterns and make informed choices. Another area for improvement is user access. At present, only administrators can access the system. To broaden its usability, future versions of the system could introduce multiple user roles with varying levels of access. By adding user authentication features, such as username and password combinations, data security would be strengthened, and other staff members could use the system for tasks like data entry and generating reports. Additionally, as technology evolves, the system could be enhanced with cloud-based storage for data backup or even expanded to include mobile access. This would improve flexibility and allow users to access the system from different devices, further increasing its accessibility. User feedback will be crucial in identifying areas that need improvement, and regular updates will ensure the system adapts to future needs. While the Poor Family Information System represents a major improvement over the previous manual methods, there is still room for growth. Enhancements such as more advanced reporting features, user role management, and the integration of cloud or mobile capabilities would further optimize the system. These steps will ensure that the system remains relevant, efficient, and effective for managing poor family data at Blang Bintang Subdistrict in the years to come.

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