MONTHLY REPORT INFORMATION SYSTEM PROSECUTOR'S INTELLIGENCE FIELD

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Keywords	Abstract
Information System, Waterfall Method, Monthly Report	The intelligence department of the state attorney general's office recapitulates monthly reports on information obtained through the prosecutor's intelligence activities. Each incoming report will be managed using Microsoft Word and saved as a file. But in reality, the management process is a bit hampered because of the many report formats and even the file has the potential to be lost or damaged. The purpose of the research is to develop a monthly report information system in the field of Intelligence to help manage report data and recapitulate monthly reports. In the development of this monthly report information system using the waterfall method. Analysis of system requirements requires communication that aims to understand the software expected by users and the limitations of the software. System design is needed to assist in the system implementation process. The implementation of this information system uses the PHP programming language and uses MySQL as the Database Management System. Testing the system using User Acceptance Testing (UAT), which is to ensure the verification process that what the system does is appropriate for the user. From this research resulted in a web-based information system that can assist in the management of monthly reports in the field of prosecutor's intelligence

INTRODUCTION

The Prosecutor's Office is a government institution that carries out state power in the field of law enforcement by enforcing the law by adhering to the laws and regulations and policies set by the government. One of the activities in the field of Intelligence is to recapitulate monthly reports regarding what activities have been carried out in that field.

At the time this research was conducted, the data processing of the monthly report in the field of Intelligence was still using Microsoft Word, so that the management of monthly reports in the form of documents could be damaged. Not only the damage to the document but also the device that stores the document is damaged, in other words all the documents in it are also lost. The problem also reflects on the incident that occurred at the Attorney General's building which was on fire, for which

Several documents were burned.

Based on the existing problems, a web-based system was created that aims to help manage monthly reports that can be accessed online so that reports can be managed periodically with a digitalization system.

RESEARCH METHOD

The method of developing this report information system is using the waterfall model. The stages of developing the system can be described as follows.
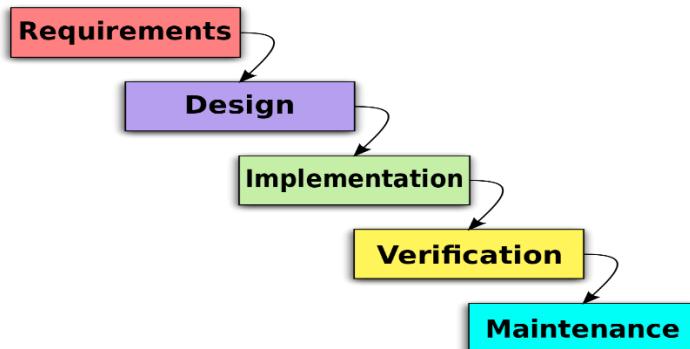

Figure 1. Waterfall model

Needs Analysis

At this stage the researcher conducts an analysis that aims to understand the software expected by the user and the limitations of the software. This information was obtained through interviews, direct observations in the field of Intelligence. Observation focuses on problems that become obstacles in the process of managing intelligence reports.

System Design

The results of the analysis from the previous stage will be studied in this stage and the system design is prepared. This system design helps in defining the overall system architecture.

Implementation

At this stage, the implementation of the program code is carried out using various tools and programming languages according to needs. This implementation phase focuses more on technical matters, where the results of the system design will be translated into a programming language.

Test

The testing phase aims to determine whether the system created is in accordance with the design, and the functionality of the application is running well or not, as well as preventing errors or errors in the system before entering the operation stage.

Operation and Maintenance

After testing the system, it will enter this stage and be used by users. For the maintenance process, it is possible to make repairs to errors found in the application after being used by the user.

RESULTS AND DISCUSSION

The State Prosecutor's Office is one of the state institutions that carries out state power, especially the implementation of duties and authorities in the field of prosecution. The District Attorney's Office is domiciled in the capital city of a district or city and its legal area covers the district or city area. The District Prosecutor's Office is led by a head of the state prosecutor's office as the person in charge of the prosecutor's office who leads, controls the implementation of the duties, and authorities of the prosecutor's office in his jurisdiction. Intelligence Sector The Prosecutor's Office carries out judicial intelligence activities in the social, political, economic, defense and security fields to support law enforcement and justice policies, both preventive and repressive in order to create public order and peace. One of the activities in the field of Intelligence is managing monthly reports on what activities have been carried out in that field. At the time this research was conducted, the data processing of monthly reports in the field of Intelligence was carried out using a web-based Intelligence Monthly Report Information System which can assist the management of monthly reports that can be accessed online so that reports can be

managed periodically with a digitalization system. As well as facilitating the process of managing reports in a digitalized system and providing information about monthly reports making it easier to get the information needed. This system is also useful as a consideration in efforts to improve problems related to monthly reports in the intelligence sector of the District Attorney and can manage information or reports on intelligence activities at the District Attorney's Office.

Planning

In February the researcher conducted an analysis that aims to understand the software expected by users and the limitations of the software. This information was obtained through interviews, direct observations in the field of Intelligence. Business process analysis to describe the current system with the new system in the form of business process diagrams. In the description of this system will use BPMN. The proposed system business process can be seen in Figure 2.
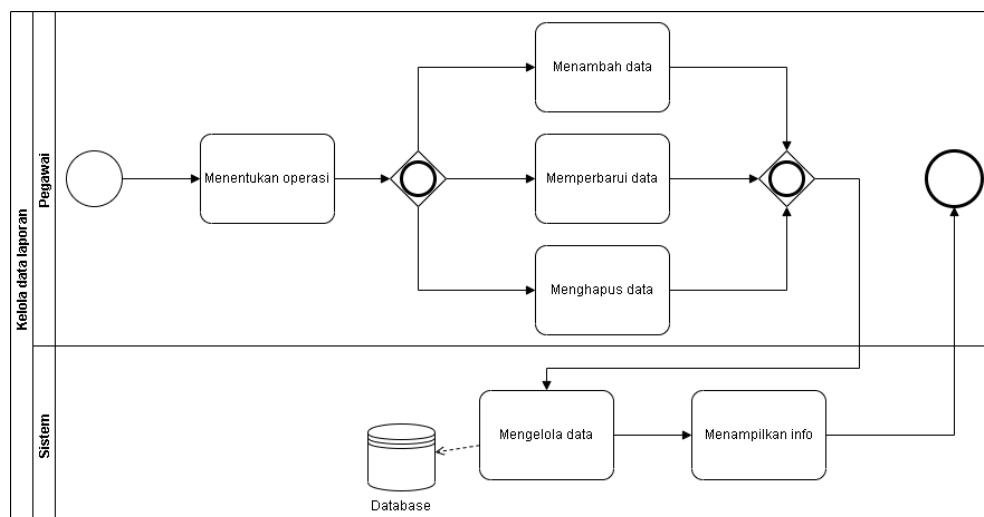

Figure 2. The proposed system for managing report data

Observation focuses on problems that become obstacles in the process of managing intelligence reports. The following month, March, the researchers carried out this stage and the system design was prepared. This system design helps in defining the overall system architecture. The design of this system architecture is to describe the design of the relationship between software and hardware and the flow of data communication used to run the system that has been created. The system architecture design can be seen in Figure 3.
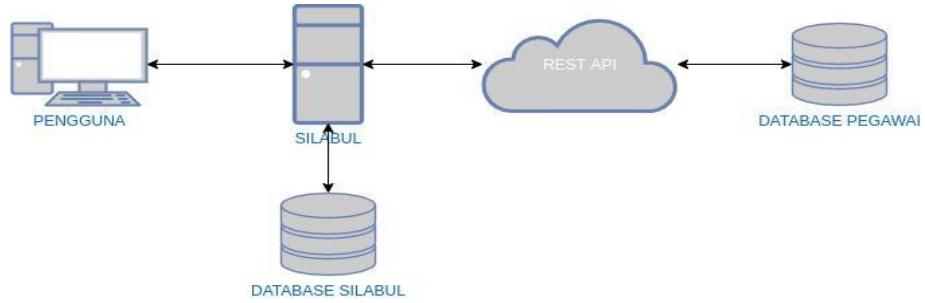
Figure 3. System architecture design

Entity Relationship Diagram (ERD) Figure 4 describes entity relationships, from the figure it is known that each employee has one user account. This type of report has several report fields. And there are details in the report, each report contains a type and field.
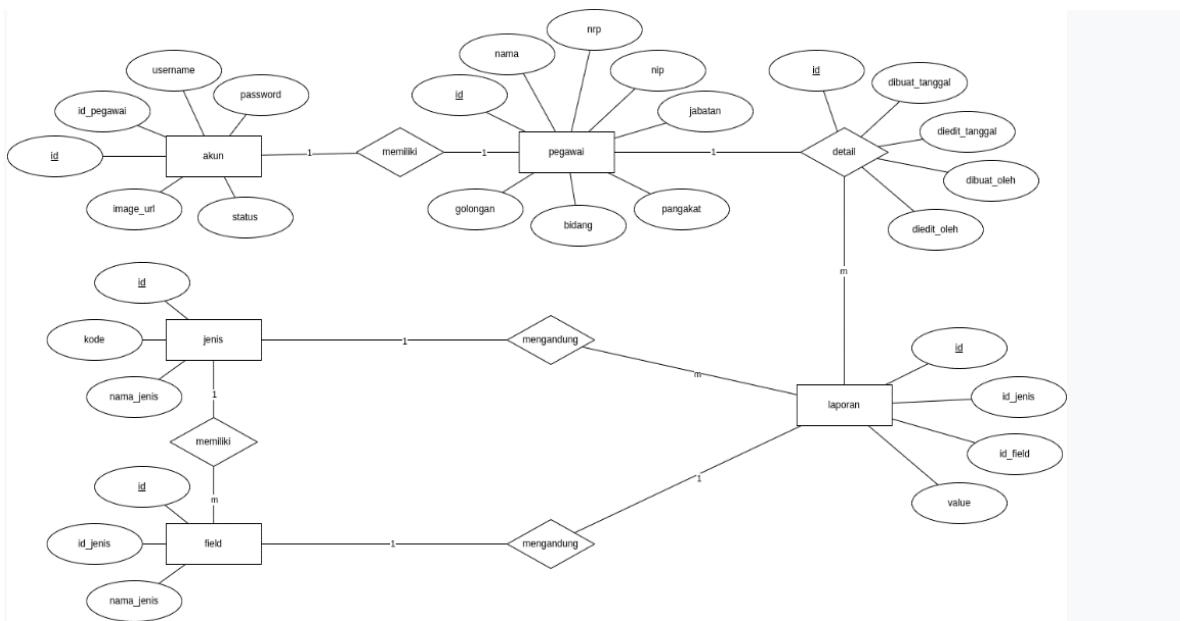

Figure 4. Entity Relationship Diagram

DFD level 0 (context diagram) Context diagram is a DFD with the top level in the information system. The context diagram contains only one process that shows the system as a whole. In the picture below illustrates that, employees log into the system, then the system will provide information about the login status. If successfully logged in, employees can access the system to manage report type data, report field data and report data. The system will provide results in the form of a report recap and the results of the report recap can be submitted to the Head of Intelligence. DFD level 1. In the picture below is explained how the flow of data in the entire system process as a whole. Process 1 employee logs in, process 2 employees manages master data, process 3 employees manages reports, and in process 4 employees can see the results of the report recap and provide the printout to the intelligence officer. DFD level 2 master

data management process. The picture describes the process of managing master data by employees. When managing types of reports, employees must enter report type data into the system and the system will display information on the type of report. And when managing the employee report field, enter the report field data and the system will display information about the report field.
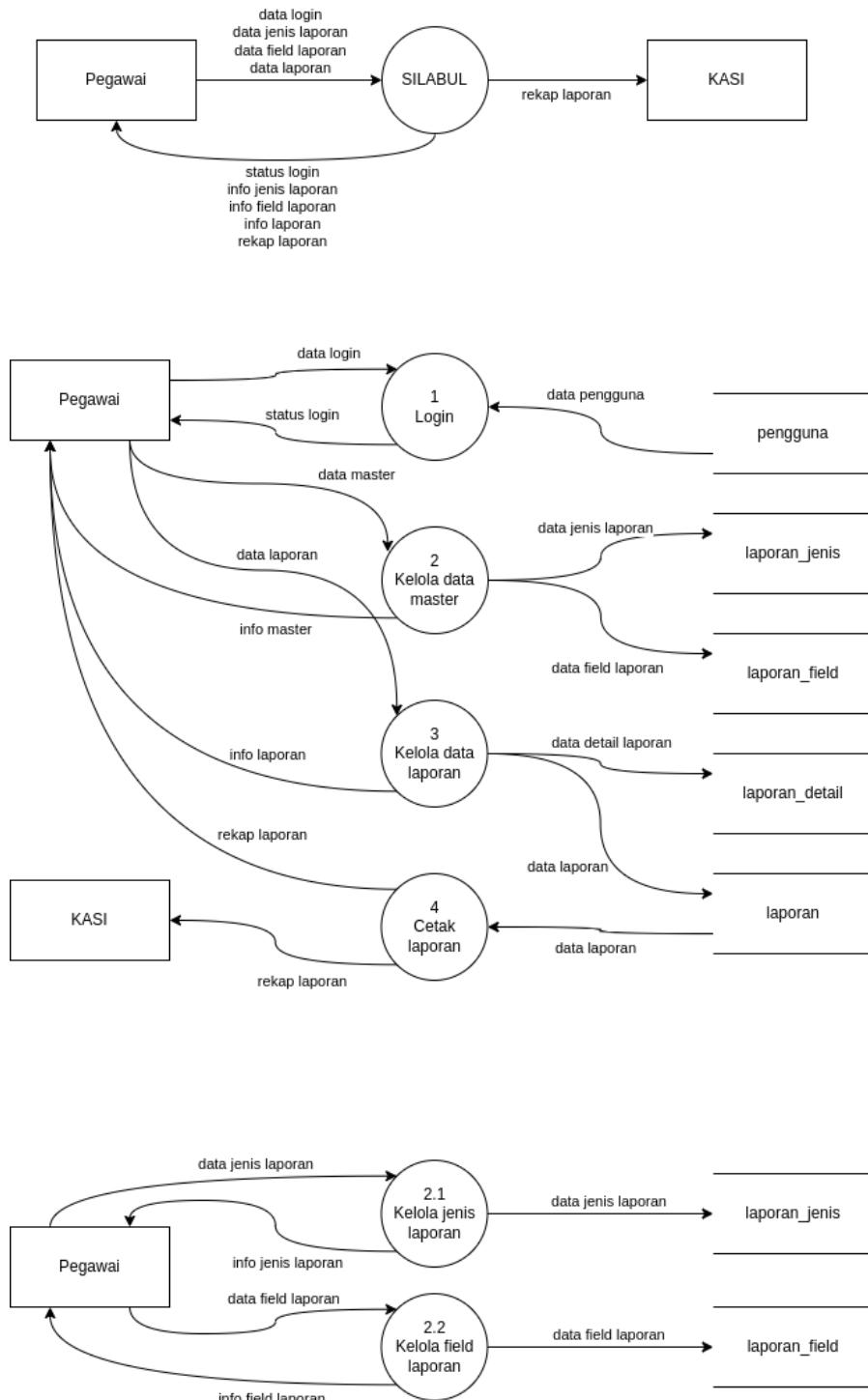

Figure 5 DFD level 0 Context diagram, DFD level 1 and DFD level 2

As well as carrying out the program code implementation phase using various tools and programming languages according to needs. This implementation phase focuses more on technical matters, where the results of the system design will be translated into the PHP programming language, the implementation phase is carried out for 2 months. The testing phase was continued in May for 2 weeks aiming to find out whether the software was in accordance with the design, and whether the functionality of the application was running well or not, so it could prevent errors or errors in the program before entering the operation stage. Finally, Operation and Maintenance, namely the maintenance process, allows to make repairs to errors found in the application after being used by the user.

Control or supervision

The system that has been completed and fulfills the required functions will be tested. The test uses User Acceptance Testing (UAT), which is to ensure the verification process that what the system does is appropriate for the user. UAT is a type of blackbox testing, often categorized as functional testing. For testing, use the test case contained in.

Table 1. System test results

No	Process			Succeed/Fail	Tested by	Date
1	Test Name	:	Login	Succeed	Ajeng	3 May 2021
	Test Description	:	Verification of access rights can only be accessed by registered users			

Table 2 Continued system test results

No	Process			Succeed/Fail	Tested by	Date
	Test Case	:	Username: admin - Password: admin			
	Expected results	:				
2	Test Name	:	Add report data	Succeed	Ajeng	3 May 2021
	Test Description	:	Verify enter report data			
	Test Case	:	Type of report: Implementation			

No	Process						

			of Intelligence Sector Tasks - Date: 03-05-2021 - Sector: Fostering law- abiding communities - Number & SP. Assignment: SP.Tug-01/Etc.4/03/2021 - Implementing Officer: Zalmianto S.H, M.H - Information Source: Intelligence - Problems: Counseling and legal information for the prosecutor's school program - Description of the Problem: As a resource person			

Table 3 Continued system test results

No	Process			Succeed/Fail	Tested by	Date
	Expected results	:	- If successful it will display a notification 'Data has been added' and display the data entered in the report table - If it fails will display a notification 'Failed to add data'			
3	Test Name	:	Update report data	Succeed	Ajeng	3 May 2021
	Test Description	:	Verify enter report data			
	Test Case	:	- Sector: Fostering law-abiding communities - Number & SP. Assignment: SP.Tug-01/Etc.4/03/2021 - Implementing Officer: Novan S.H, M.H - Information Source: Intelligence - Problems: Counseling and legal information for the prosecutor's school program - Description of the Problem: As a resource for counseling - Description: Has been implemented			

Table 4 Continued system test results

No	Process			Succeed/Fail	Tested by	Date
	Expected results	:	- If successful it will display a notification 'Data has been updated' displaying the data entered in the report table - If it fails will display a notification 'Data failed to update'			
4	Test Name	:	Delete report data	Succeed	Ajeng	3 May 2021
	Test Description	:	Deleted data verification			
	Test Case	:	Click 'Delete data'			
	Expected results	:	- If successful it will display a notification 'Data has been deleted' and the data is deleted from the report table			
5	Test Name	:	Displaying report data according to filter	Succeed	Ajeng	3 May 2021
	Test Description	:	Verification displays report data			
	Test Case	:	- Date: 03-04-2021/03-05-2021			

Table 5 Continued system test results

No	Process			Succeed/Fail	Tested by	Date
	Expected results	:	- If successful, it will display report data according to the filter date			
6	Test Name	:	- If it fails will display the information 'Data does not exist'	Succeed	Ajeng	3 May 2021
	Test Description	:	Print monthly report			
	Test Case	:	Printed report verification - Period: 03-05-2021			

Expected results	:	- Click "Print"			

Implementation

System Implementation

1. Login display
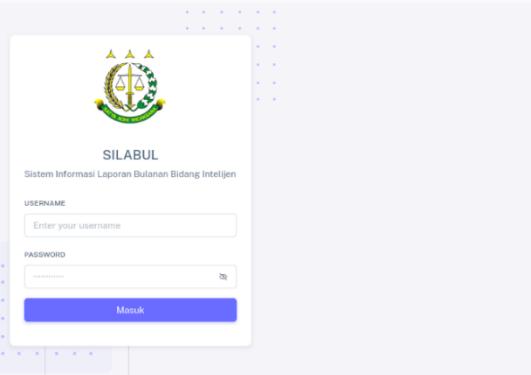
Figure 6. Login display

The login view is used to get usage access to the system. Contains the username and password input form.

2. Display of report data

Figure 7. Display of report data

The report view is on the report menu. There is a view that contains report data and also buttons for adding data, editing data and deleting data and also page

navigation. Report data can be filtered through form input based on time range or based on report type.

3. Display the report input form
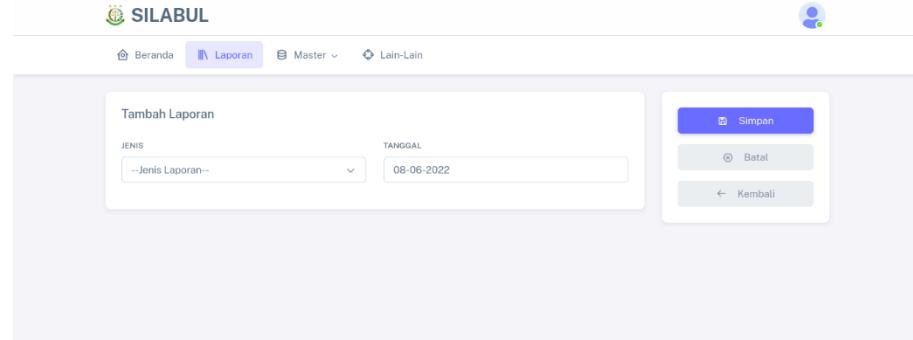
Figure 8. Display of the report input form

The report form contains input to determine the type and input the date the report was made. When the report type is selected, a report field for each type of report will appear. Report data will be inputted through the fields that appear.

4. Display the report type input form
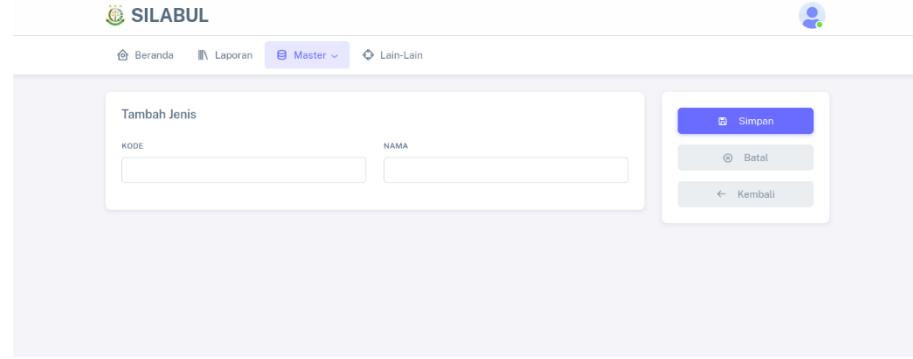
Figure 9. Display of the report type input form

The report type form contains input to determine the code and name of the report type. This type of report is used as a grouping of reports and as a reference for making report fields.

5. Display the report input field form
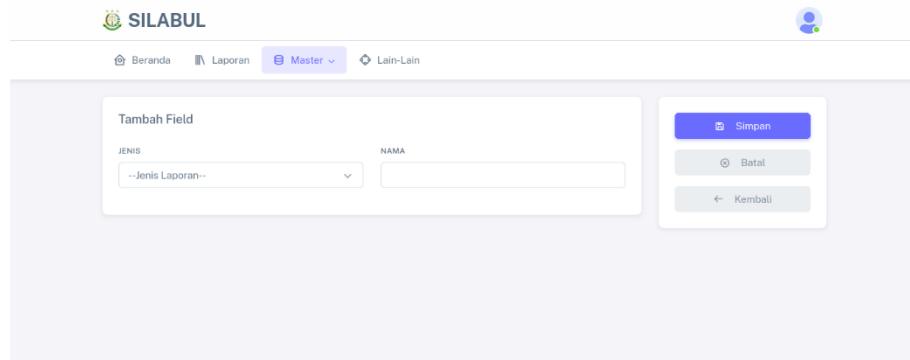
Figure 10. Display of the report input field form

The report form field contains input to determine the type of report and the name of the report field. Report fields are used to fill in report data, each type of report can have more than one field in it.

6. Display of Employee Data

Figure 11. Display of employee data

Employee data display is on the master menu. There is a display that contains employee data and also a button for synchronizing employee data. When users synchronize data, the system will retrieve data from databases outside of this monthly report system.
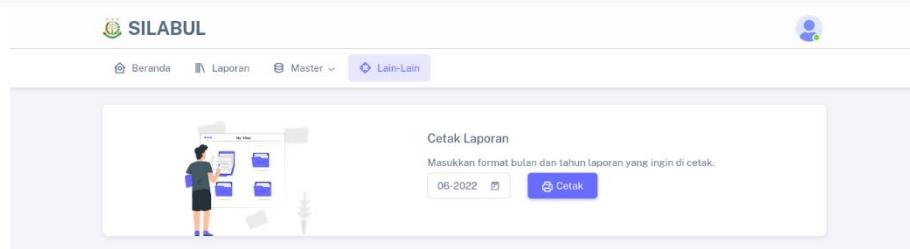
7. Report print display

Figure 12. Report print display

Print view is in the miscellaneous menu. There is a display for printing report data. There is a choice of the reporting period you want to print. After selecting the period, you can generate reports according to the selected period.

8. Report results
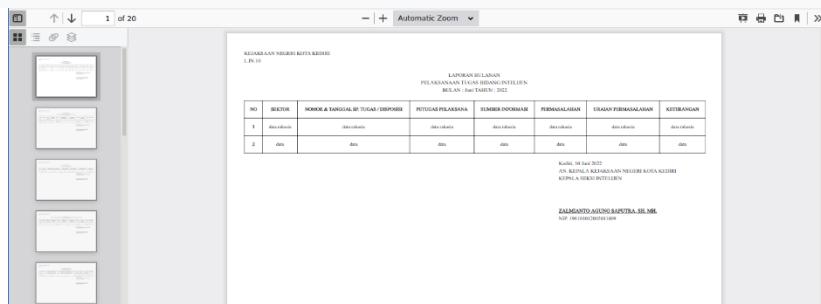
Figure 13. Report results

The display of the results of the printed report contains report data consisting of all types of reports. Report data is printed according to the month and year input format entered by the user.

System Test

The system testing developed uses User Acceptance Testing (UAT), which ensures the verification process that the system is doing is appropriate for the user.

Table 6. System test results

No	Name of test	Description	Test case	Expected results	Information
1	Login	Verification of access rights can only be accessed by registered users	Enter username and password. Click login	If successful will display the main page. If it fails, it will display an error message	Succeed
2	Add report data	Verify report data input	Entering report data into the add data form. Click add	If successful, it will display a notification 'Data has been added' and display the data entered in the report table. If it fails will display a notification 'Failed to add data'.	Succeed
3	Update report data	Verify report data input	Change the report data to a form	If successful will display a notification 'Data has been updated displaying	Succeed

			containing data. Click save	the data entered in the report table. If it fails will display a notification 'Data failed to update.	
4	Delete report data	Deleted data verification	Select the data to be deleted. Click delete	If successful it will display a notification 'Data has been deleted displaying the data entered in the report table. If it fails will display a notification 'Data failed to delete.	Succeed
5	Print report	Verify the printed monthly report according to the format	Choose the format, month and year of the report. Click print	If successful, it will display a report according to the selected format. If there is no data will display the information 'Data does not exist'	Succeed

CONCLUSION

Based on the research that has been done by the author, this research produces an information system that can assist in the recapitulation of monthly reports. Using this monthly report information system will provide convenience or improve the reporting process so as to support the performance of intelligence staff. As for suggestions for further research by adding a feature to perform digital signatures on report documents made.

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