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Production Operational Monitoring Application (Case Study: CV.Chavasindo Jaya)

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Abstract

CV. Chavasindo Jaya is engaged in production which is located at Jl. Paya Geli, Sunggal, Deli Serdang Regency, North Sumatra 20351. The products produced are soap and hair vitamins. The problem that occurs is that the head of production cannot always monitor production operations because there are many operations handled and the head of production tends to only see based on reports received from the production administration on weekends, so production operational errors often occur, for example production results are not balanced with operational needs and this can be detrimental to the company because the leadership does not directly know the operations that occur every day. This study aims to make it easier for the head of production to monitor production operations so that errors in production operations no longer occur. This study uses Web and Android applications for monitoring the production operations of CV. Chavasindo Jaya. With the production operational monitoring application, it can make it easier for the head of production to monitor production operations.

***Keywords** : Application, Monitoring, Operations, Production, Web, Android*

1. Introduction

Operations is a system in a business that performs management and all processes in the manufacture of products or services. Operational or production processes are the steps needed to turn a material into a finished product and can increase its use value. The operational variable indicators are the availability of raw materials, the use of raw materials, the availability of production equipment, the maintenance of production equipment, the use of modern equipment. (Purwaningsih and Haryono, 2019: 395). Operations in this study discusses the production section including employee salaries, machine maintenance, production raw materials, electricity, water, promotion, and transportation costs.

CV. Chavasindo Jaya is engaged in production which is located at Jl. Paya Geli, Sunggal, Deli Serdang Regency, North Sumatra 20351. The product produced is hair vitamins. Every production that is carried out requires good production operations so that production results continue to run and provide benefits. Employee salaries are given every month, machine maintenance is carried out if there is damage and maintenance of all machines in the production section, production raw materials are used every working day and recorded as expense reports, electricity and water costs every month depend on electricity and water usage every day for 1 month, promotion costs are needed to introduce and offer products to the public and costs transportation is issued for the

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delivery or pick-up of products or raw materials needed, then the report is presented every month. All operations are monitored by the leadership so that the production process runs well. The problem that occurs is that the leadership cannot always monitor production operations because there are many operations handled and the leadership tends to only see based on reports received from the production administration at the end of the month, so that production operational errors often occur, for example production results are not balanced with operational needs and this can detrimental to the company because the leadership does not directly know the operations that occur every day. Therefore we need a method that can make it easier for leaders to monitor production operations so that errors in production operations no longer occur.

This study uses Web and Android applications for monitoring the production operations of CV.Chavasindo Jaya. With the production operational monitoring application, it can make it easier for leaders to monitor production operations.

2. Methodology

Method is a systematic way to work on a problem. This research will go through several stages. The several stages used in this study are as follows:

2.1. Data collection

The data collection that the researcher did was divided into several stages as follows:

1. Field Research

a. Research Observations

Researchers made research observations to CV.Chavasindo Jaya is located at Jl. Paya Geli, Sunggal, Deli Serdang Regency, North Sumatra 20351 to obtain the necessary data regarding monitoring of production operations.

b. Research Interview

The researcher conducted research interviews with Mr. Rofindo Chandra Purba as the Director to inquire about production operational monitoring.

c. Research Data Samples

Researchers took several examples of previous research and data from research sites to be used as examples for this study.

2. Library Research

The library research that the researcher did aims to collect references used for this research.

2.2. Fish Bone Research Methodology

The stages carried out in this study were formed and modeled into a fishbone diagram. Some of the stages used in fishbone are as follows:

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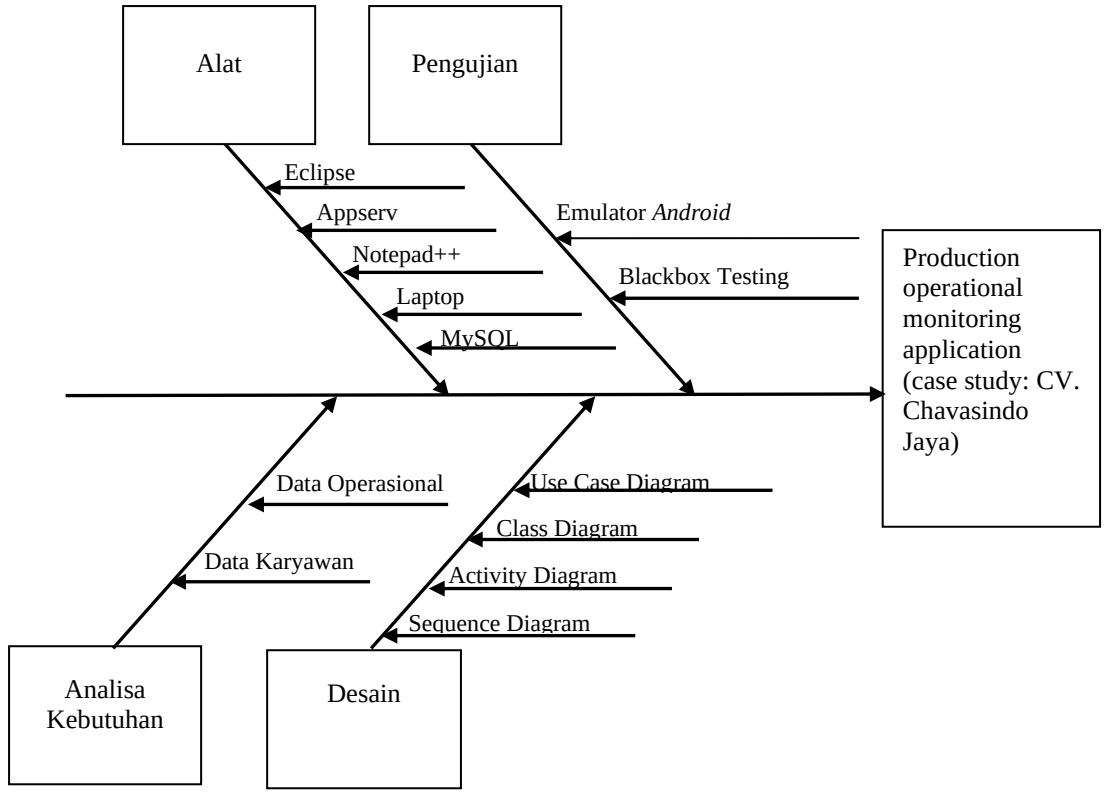

Figure 1. Fishbone Framework

Information:

1. Needs Analysis

At this stage the researchers conducted a needs analysis for research related to monitoring production operations at CV.Chavasindo Jaya.

2. Tools

At this stage the tools that the researcher uses are Eclipse, Appserv, Web Browser and Notepad++ as programming language platforms.

3. System Design

At this stage the system design that researchers use in theory is UML modeling, namely use case diagrams, class diagrams, activity diagrams and sequence diagrams.

4. Testing

At this stage the researchers tested the system that had been created using theory and practice testing. Testing the theory of researchers using blackbox testing for theoretical application testing and practical testing of researchers using localhost and the Android emulator.

5. Results

At this stage the research has been completed, the results of this research are Web and Android-Based Production Operational Monitoring Applications (Case Study: CV.Chavasindo Jaya).

3. Results and Discussion

The problem that occurs is that the leadership cannot always monitor production operations because there are many operations being handled and the leadership tends to only see based on reports received from the production administration on weekends, so that production operational errors often occur, for example production results are not balanced with operational needs and this can be detrimental to the company because the head of production does not directly know the operations that occur every day. How can this happen, because the leadership cannot check the whole thing in one day. Production operations must be monitored for reports to superiors so that the reports presented must benefit the company. When should the report be given, namely at the closing of cash at the end of each month. Therefore we need a method that can make it easier for leaders to monitor production operations so that errors in production operations no longer occur. This study uses Web and Android applications for monitoring the production operations of CV. Chavasindo Jaya. With the production operational monitoring application, it can make it easier for leaders to monitor production operations.

Use Case Diagram of Web & Android-Based Production Operational Monitoring Application (Case Study: CV. Chavasindo Jaya) can be seen in Figure III.4.

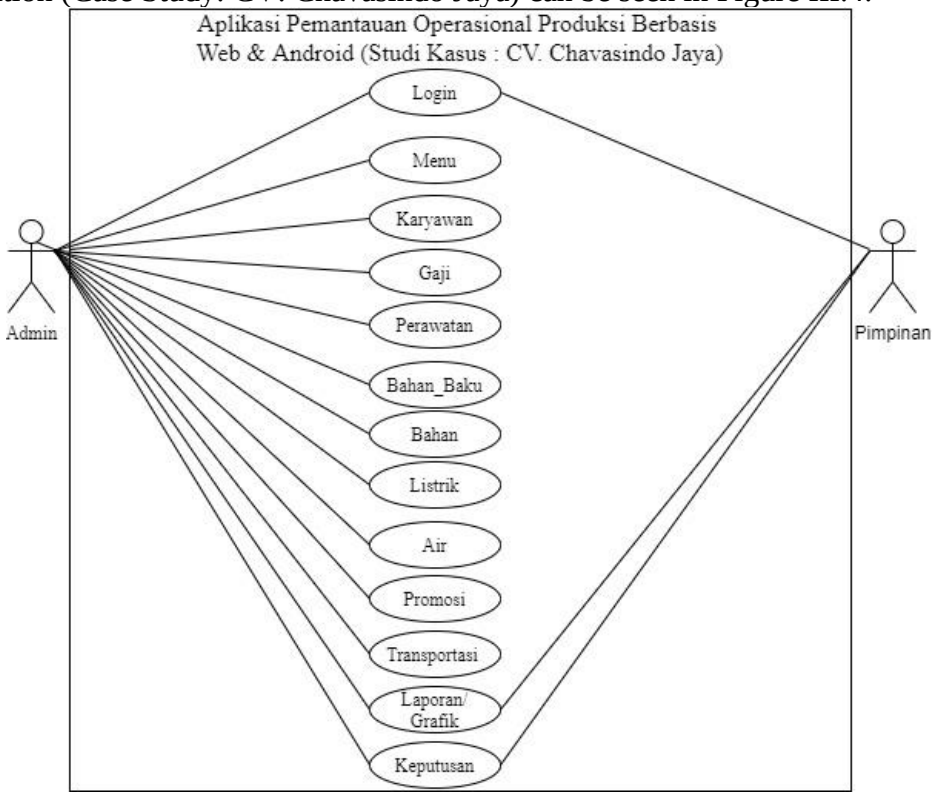

Figure 2. Use Case Diagram

Figure 2. is a use case diagram of the Web and Android-Based Production Operational Monitoring application. There are 2 actors namely admin and user. Admin can access and manage login data, home, salary, maintenance, raw materials, electricity, water, promotions, transportation, sales, reports/graphs and decisions. Leaders can access logins, reports/graphs and decisions.

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Web and Android-Based Production Operational Monitoring Application Class Diagram (Case Study: CV. Chavasindo Jaya) can be seen in Figure 3.

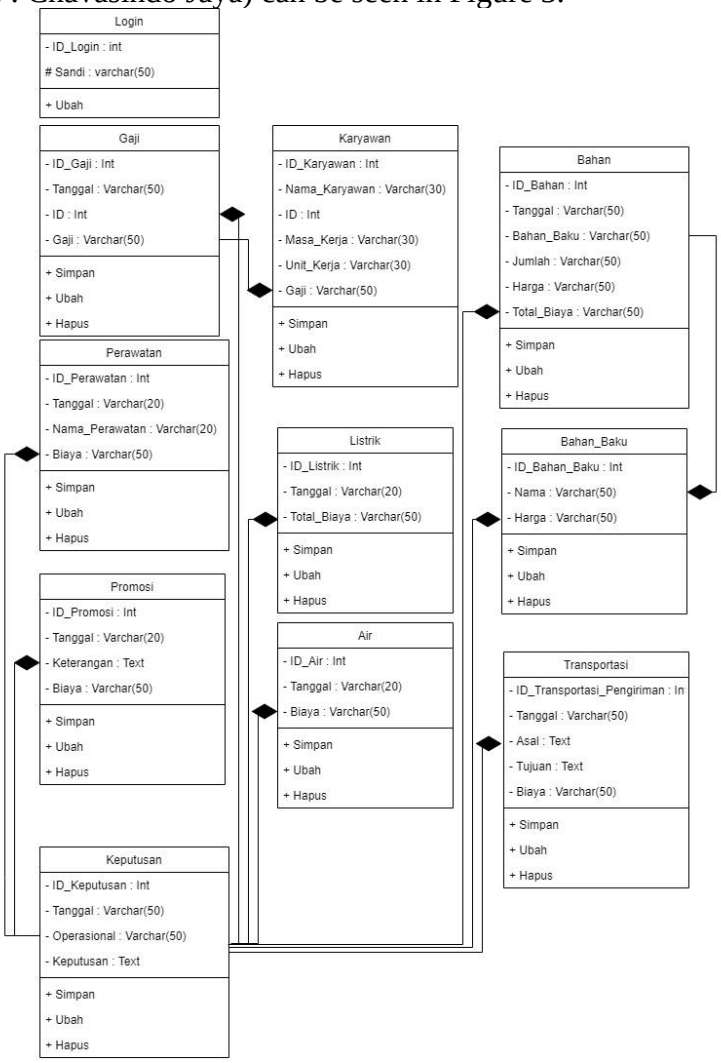

Figure 3. Class Diagram

Figure 3 is a class diagram that explains classes, attributes and methods of Web and Android-based production operational monitoring applications.

Display of the results of the administration section of the Web & Android-Based Production Operational Monitoring Application (Case Study: CV. Chavasindo Jaya) can be seen as follows:

1. Display Login Form

The display presented by the system to display the Login Form can be seen in Figure

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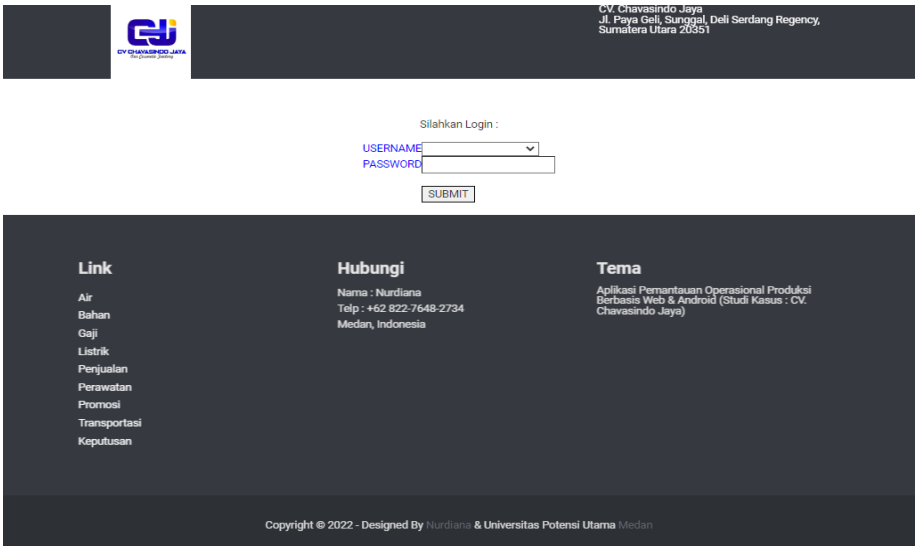

Figure 4. Login Form display

2. Display Form Home

The display presented by the system to display the Form Menu can be seen in Figure

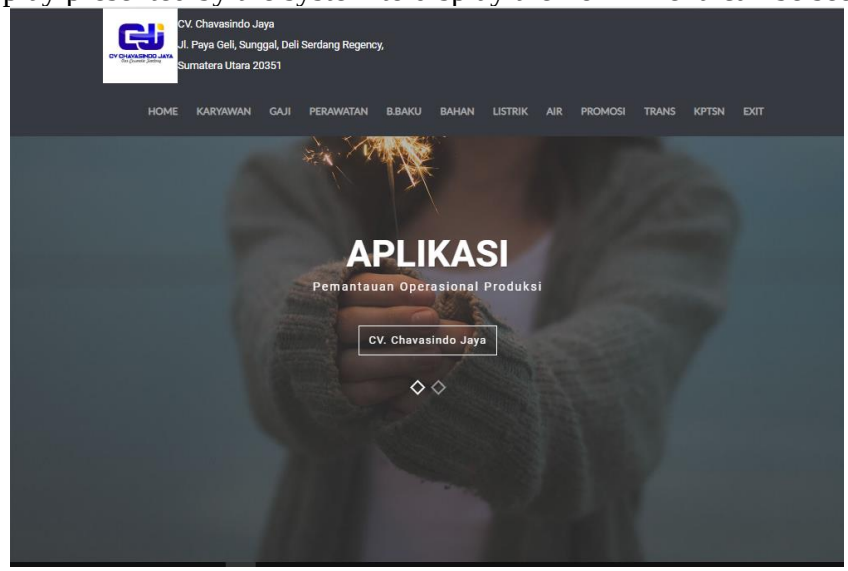

Figure 5. Form Home view

3. View the Employee Form

The display presented by the system for displaying the Employee Form can be seen in Figure 6.

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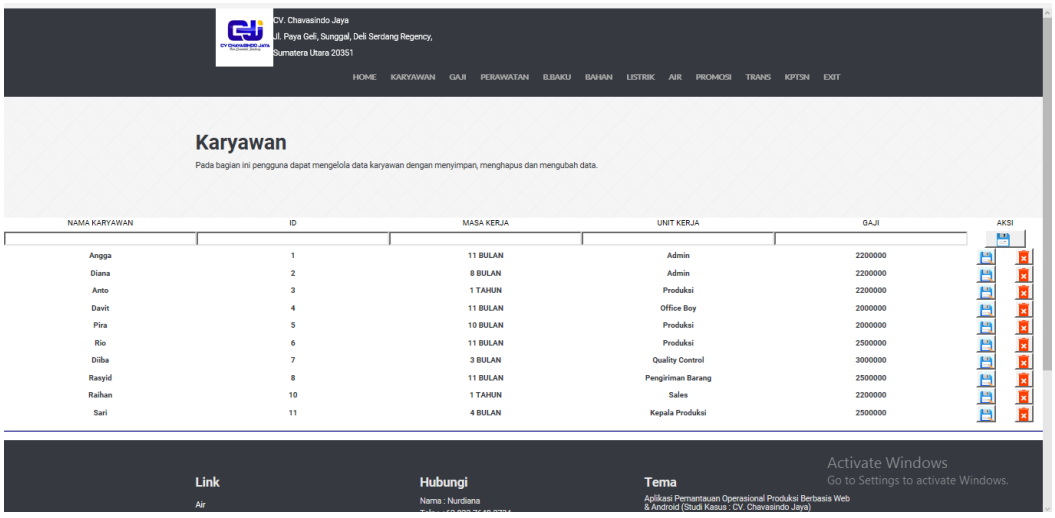

Figure 6. Display Employee Form

4. View the Salary Form

The display presented by the system to display the Salary Form can be seen in Figure

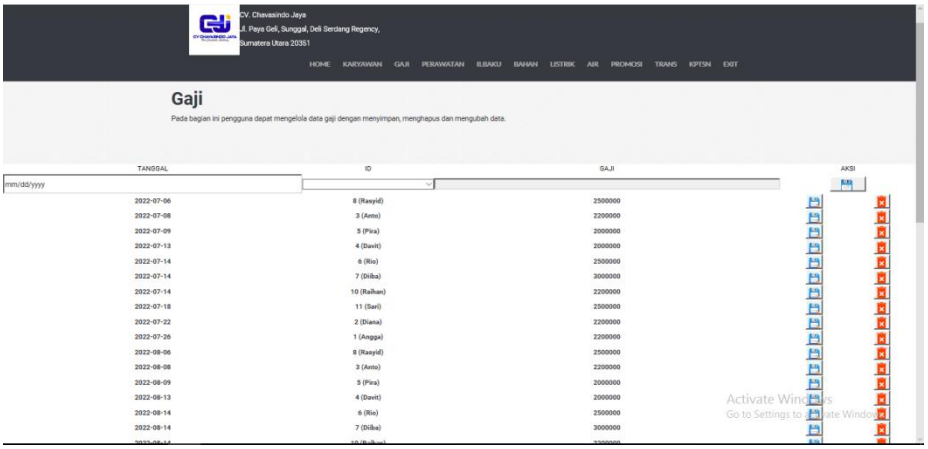

Figure 7. Salary Form Display

5. View the Treatment Form

The display presented by the system to display the Treatment Form can be seen in Figure 8.

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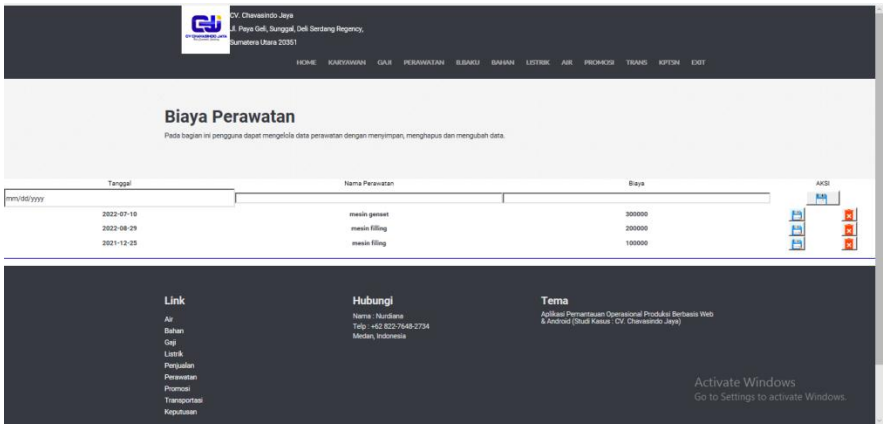

Figure 8. Treatment Form Display

6. View the Raw Material Form

The display presented by the system for displaying the Raw Material Form can be seen in Figure 9.

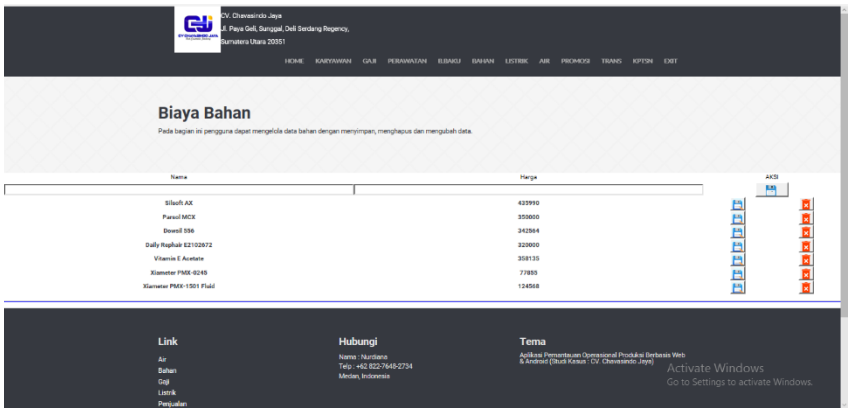

Figure 9. View the Raw Material Form

7. View the Material Form

The display presented by the system for displaying Material Forms can be seen in Figure 10.

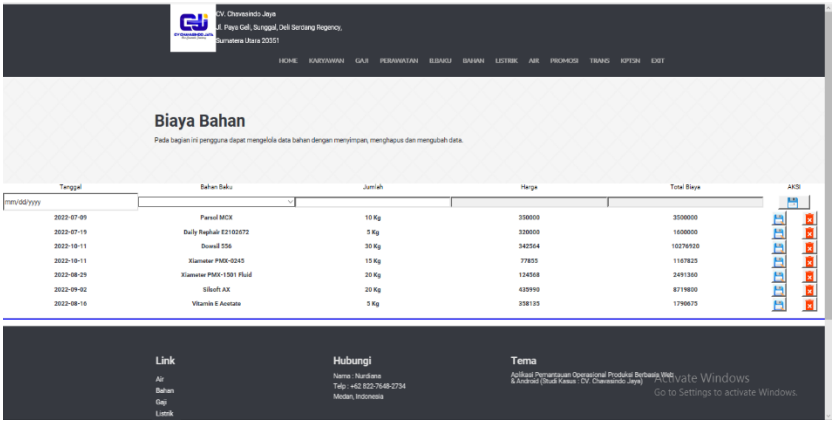

Figure 10. Material Form View

8. Display the Electrical Form

The display presented by the system for displaying the Electric Form can be seen in Figure 11.

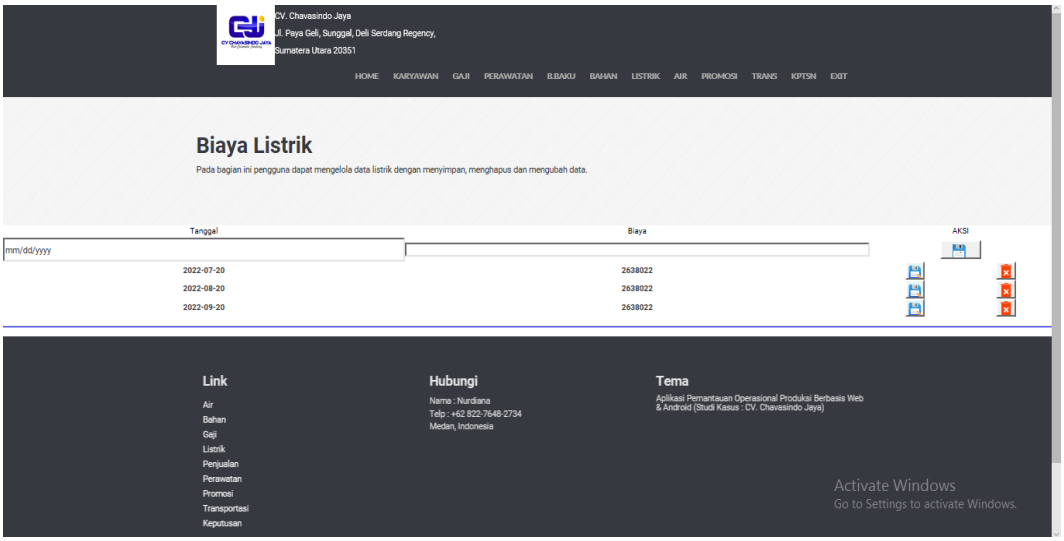

Figure 11. Electrical Form Display

4. Conclusion

Based on the discussion of the previous chapters that have been carried out, the following conclusions can be drawn:

1. By using the Web and Android-Based Production Operational Monitoring Application (Case Study: CV.Chavasindo Jaya), the head of production can always monitor production operations.
2. By using the Web and Android-Based Production Operational Monitoring Application (Case Study: CV.Chavasindo Jaya), production operational errors no longer occur.
3. By using Web and Android programming, the Web and Android-Based Production Operational Monitoring Application (Case Study: CV.Chavasindo Jaya).

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