

## **DESIGN OF SALES AND SERVICE INFORMATION SYSTEMS AT THE DELIMA BIKE SHOP**

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### **ABSTRACT**

Delima Bike Shop is a shop that sells various bicycles and bicycle accessories. In the current system, the Delima Bike Shop in recording sales and purchase data uses writing on paper, namely notes, while stock calculations still use the traditional system using a stock book. Therefore, this study aims to design a sales and service information system using the PHP programming language, MySQL database. This research has stages, namely problem identification, literature study, problem formulation, data collection, system design and report generation. So as to produce a system that can overcome the problems that occur at the Delima Bike Shop in managing its operational activities such as data on suppliers, users, stock of goods, buying and selling, and making reports, making it easier to control data so that it helps the Delima Bike Shop in managing data to be better and orderly.

**Keywords:** Design, System, Information, Information System, Sales

### **INTRODUCTION**

The development of technology today has progressed very rapidly, and almost everything or activities that we do on a daily basis cannot be separated from the use of technology. Computerized technology is currently growing rapidly and is something that must be implemented in a company. This information system is implemented to simplify, speed up, and improve performance on the current system, as well as to produce more accurate data and information. However, there are also many companies or business fields that have not implemented computerized information systems because of human resources who have not been able to run it or lack of knowledge of computerized information systems.

Computer-based information systems in various fields have now become a necessity, this is one of the competitive advantage strategies, so that companies or organizations do not miss out on utilizing computer-based information systems to realize increased productivity (Hutahaean, 2014). With the advancement of information technology, it plays an important role for every organization that has a high level of routine and has data that must be processed.

With this information system, it can certainly facilitate work and business development because this information system is made according to user needs. One of the most developed is the sales information system. Currently, almost all companies or shops that are engaged in sales are already using information systems, so that they carry out computerized records and make it easier to find reports and search data.

Pomegranate Bike Shop is one of the shops engaged in the sale of bicycles and bicycle spare parts. The Delima Bike Shop is located at Jalan Hayam Wuruk No. 09 - 10, Talang Jauh, Kec. Jelutung, Jambi City. Currently, the Delima Bike Shop in its operations, the process of making purchase, sales and stock reports takes time because it still has to be calculated one by one and data recording is still using books and notes so that it is vulnerable to recording errors and losing notes. The current system is certainly less effective and efficient.

Based on the above problems, the authors try to design an information system at the Delima Bike Shop with the research title "Designing Sales and Service Information Systems at the Delima Bike Shop", with the hope that this system can assist owners in managing their business, besides that the author also hopes that the system which is built can perform data processing properly, able to present reports quickly and accurately, so as to streamline time and can solve problems that occur.

## **LITERATURE REVIEW**

### **Information Systems**

An information system is a group of interrelated components that work to carry out input, processing, storage, output and control actions to convert data into information that can be used to support forecasting, planning, control, coordination, decision making and operational activities within an organization. And the following is a description of the information system, namely:

According to (Hutahaean, 2014), "The information system is a system within an organization that meets the needs of an organization and provides certain outside parties with the required reports."

According to (Sutabri, 2012), "Information System is a system within an organization that brings together the daily transaction processing needs that support the managerial operational functions of the organization with the strategic activities of an organization to be able to provide certain outside parties with the necessary reports."

According to (Kadir, 2014) "Information system is a series of formal procedures in which data is grouped, processed into information, and distributed to users"

Based on some of the opinions expressed above, it can be concluded that the Information System is a set of procedures to provide information and provide useful information.

The information system consists of several components, including:

1. Hardware: CPU, Disk, Terminal, Printer
2. Personnel: System operator, Input provider, Output user
3. Data: Data stored within a certain period of time
4. Procedure: Instructions and policies for operating the system

### **Sales**

Sales is an activity between sellers and buyers in product or service transactions. In the process of selling, the seller or provider of goods and services gives ownership of a commodity to the buyer for a certain price. According to (Nafi'ah, 2019), "Sales are the purchase of a (goods or service) from one party to another by getting money from that party."

According to (Farid, 2017), "The definition of sales shows that sales can be created because of a process of exchanging goods/services between the seller and the buyer."

According to (Fachrurrazi, 2015) "Sales are the science and art of personal influence carried out by the seller to invite others to be willing to buy the goods or services he offers."

From the explanations of these experts, it can be concluded that selling is a transaction process that changes the value of goods into money value, where there is an agreement to fulfill the needs of buyers and sellers through the transaction process.

### **System Design Tools**

#### **Use Case Diagrams**

Use case is a modeling or series of interconnected groups that form a system that will be created to explain the interactions carried out by an actor. Use case serves to form a picture of the system that will be shaped like the behavior of objects that are realized by the developer, generally use cases are made in the form of an ellipse that contains meaning. Use cases describe system processes and there are also several definitions according to experts, including:

According to (Salahuddin, 2019) "Use case is a model for the behavior (behavior) of the system to be made. Use cases describe an interaction between one or more actors and the information system that will be created. According to (Rusmawan, 2019) " Use Case is a technique for recording the functional requirements of a system"

There are two main things in use cases, namely defining what is called an actor and use case. (Shalahuddin, 2013), namely:

1. An actor is a person, process, or other system that interacts with the information system that will be created outside the information system that will be created itself, so even though the symbol of the actor is a picture of a person, the actor is not necessarily a person.
2. Use cases are functionality provided by the system as units that exchange messages between units or actors.

### **Class Diagram**

Class Diagram is a static model that can prove between classes and the relationship between them and is always constant throughout the system. And the following is an explanation of the Class Diagram, including:

According to (Shalahuddin, 2013) states that "Class diagrams or Class diagrams describe the structure of the system in terms of defining the classes that will be created to build the system".

According to (Satzinger et al., 2016)] " Class diagram is a diagram that describes the relationship between classes and the attributes that complement the class "

So it can be concluded that Class Class diagrams or diagrams explain the system structure of classes that can help us to build a system

### **Activity Diagrams**

Activity Diagram is a design flow of activity or work flow in a system that will be run. Activity Diagrams are also used to define or group the flow of the system's display. Activity Diagrams have components with certain shapes that are connected by arrows. The arrows point to the sequence of activities that occur from start to finish.

According to (Salahuddin, 2019)" Activity diagrams or activity diagrams describe the workflow (workflow) or activities of a system or business process or menu in the software".

According to (Sommerville, 2011) states that " activity diagram which describes the related activities in a process or in data processing".

According to (Herlina, 2019) " Activity Diagrams are used to describe application workflows in more detail where the workflow described is still at a general level and this diagram is more used to explain business processes and applications."

So it can be concluded that the activity diagram is a diagram that can model the processes that occur in a system.

Activity diagrams are also widely used to define things according to (Salahuddin, 2019), the following:

1. Business process design in which each sequence of activities described is a defined system business process
2. Sequence or grouping of views of the system / user interface where each activity is considered to have a display interface design
3. A test design in which each activity is considered to require a test for which test cases need to be defined.
4. The menu design displayed in the software

### **System Creating Tools**

#### **PHP**

PHP was first created by Rasmus Lerdroft, a C programmer. At first he used PHP to count the number of visitors on his web. Then he took out Personal Home Page Tools version 1.0 for free. This version first came out in 1995.

PHP is a server side that is specially designed for web applications. PHP is inserted between the HTML language and because it is a server side language, the PHP language will be executed on the server, so that what is sent to the browser is the finished result in HTML form and the PHP code will not be visible. PHP is dynamic. PHP can be run on various operating systems such as Windows, Linux, and MacOS. Apart from Apache, PHP also supports several web other servers, such as Microsoft ISS, Cadium, and PWS. PHP can utilize databases to generate dynamic web pages. The database management system that is often used with PHP is MySQL. However, PHP also supports Database management system Oracle, Microsoft Access, Interbase, d - Base, and PostgreSQL. And there are also several definitions according to experts, including:

According to (Solichin, 2016) defines that "PHP is a web-based programming language written for web development".

According to (Saputra, Agus dan Agustin, 2012), revealed that PHP stands for "PHP Hypertext Preprocessor is a programming language that is used to build a dynamic website".

According to (Sadikin & Irawan, 2020) "PHP is a programming language for creating web. With PHP you can create dynamic web pages. In addition to supporting the Windows operating system, PHP can also be used on Mac OS, Linux, and other operating systems.

Based on the opinions of the experts above, it can be concluded that PHP is a programming language that is devoted to the creation and development of the web.

## **MySQL**

MySQL is a relational database management system that can be used to suppress several functions such as files, memory, subsystems and networks.

In its development, MySQL is also called SQL which stands for Structured Query Language. SQL is a structured language that is specifically used to process databases. MySQL is a relational database management system. That is, the data that is managed in the database will be placed in several separate tables so that data manipulation will be much faster. MySQL can be used to manage databases ranging from small to very large.

SQL is also a programming language that is specifically designed to send a query command (accessing data based on a certain address) to a database. The following understanding MySQL according to experts.

According to (Saputra, Agus dan Agustin, 2012)" MySQL is a database that is able to run on all information systems and is powerful and uses a database language ".

According to Arbariah et al. [23] "MySQL is a database management system that is often used with PHP. PHP also supports Microsoft Access, Oracle Database, d-Base, and other database management systems. "

According to (Fitri, 2020), " MySQL is an open source DBMS with two licenses, namely Free Software and Shareware (proprietary software whose use is limited) "

As a software developer there are several reasons to use MySQL to create a database or database, namely as follows:

1. Speed, MySQL provides a high-speed database system that is perfect for small to medium-sized projects. It works well for start-ups, but doesn't have as many features as Oracle. However, most of the companies that use MySQL do not need the features provided by Oracle because they build functionality at the mid-level.
2. Open \_ Source, MySQL can be used for free. However, there is also a commercial version which of course has been given additional features in the form of specific capabilities and technical support services from MySQL.
3. Scalability, Can handle databases on a large scale with the number of records more than 50 million.
4. Connectivity - and - Security, MySQL database can be accessed from any place on the internet with certain access rights. MySQL is a database that uses password encryption, so this database is quite safe because it has a password to access it.
5. Flexibility/Portability, MySQL can be used to develop desktop-based applications and web-based applications using various technologies. This shows that MySQL has flexibility in the technology that will be used to build applications, namely using PHP, Java, C++, and others. Building applications is done by providing plugins and drivers that are specific to each of these technologies.
6. Cross - platform - operating - system, MySQL can run stably on various operating systems such as Windows, Linux, Unix. If necessary, the process of migrating data between operating systems can be done easily.

Based on the definitions of the experts above, it can be concluded that MySQL is a DBMS (Database Management System) using SQL (Structured Query Language) commands which are widely used today in making web-based applications.

## **XAMPP**

XAMPP was developed from a project team called Apache Friends, which consists of the Core Team, Development Team & Support Team. XAMPP is free software, which supports many operating systems, is a compilation of several programs. Its function is as a stand-alone server (localhost), which consists of the Apache HTTP Server program, MySQL database, and language translator written in the PHP and Perl programming languages. The name XAMPP stands for X (any four operating systems), Apache, MySQL, PHP and Perl. The following is the understanding of XAMPP from the experts:

According to (Sadikin & Irawan, 2020) "XAMPP is free software, support for multiple operating systems, which is a compilation of several programs."

According to (Santoso & Nuralina, 2017) stated that : "XAMPP is an open source-based PHP package developed by an Open Source community. By using XAMPP is not confused with the installation of other programs, because all the needs have been provided by XAMPP.

According to (Riyanto, 2011) "XAMPP is an open source-based PHP and MySQL package that can be used as a PHP-based application development support tool".

Based on the definitions of the experts above, it can be concluded that XAMPP is an apache web server software which includes a MySQL database server and PHP programming support.

### **Dreamweaver**

Adobe Dreamweaver is a web page editing program released by Adobe Systems, formerly known as Macromedia Dreamweaver, produced by Macromedia. The following is the understanding of XAMPP from the experts:

According to (Madcoms, 2011), " Dreamweaver is an application that is used as a professional HTML editor for visually designing web "

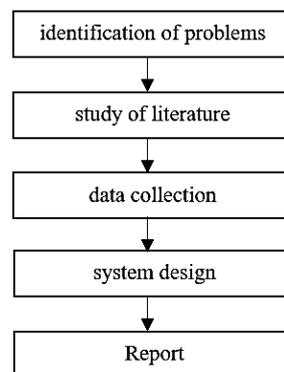
According to (Agusvianto, 2017) "Dreamweaver is a professional HTML editor that functions to visually design web and manage sites or web pages."

Based on the description above, it can be concluded that Dreamweaver is a web page editing program from Adobe System which is used to design and manage websites or web pages with complete features and ease of use.

## **RESEARCH METHOD**

### **Research Framework**

For the preparation of the research framework, it is necessary to have a clear framework for the system of stages. This framework is the steps that will be taken in solving the problems that will be discussed. The research framework used is as follows:



**Figure 1. Research Framework**

Based on the research framework in the picture above which has been described above, it can be described the discussion of each stage in the research framework is:

1. Identification of Problems, at this stage identify problems with the process of buying and selling transactions that occur at the Delima Bike Shop. This identification aims to examine the problems that occur in the data processing of purchases, sales and stock related to the needs of information systems.
2. Literature Study, at this stage the author searches for data and conducts a literature study by studying theories and concepts from good literature and in accordance with the research being conducted.
3. Data Collection, at this stage the authors collect data using interviews, observation, and document analysis to collect data and information about the transaction system at the Delima Bike Shop

4. System Design at this stage, the authors design a system with the waterfall method, because the method is more systematic and effective in making information systems.
5. Reporting at this stage, a report is prepared based on the results of the study so that it becomes a research report that can provide a complete picture of the system being built.

## RESULT AND DISCUSSION

### Ongoing System Analysis

The author analyzes the current system, to find out how the process of buying and selling products that are currently running at the Delima Bike Shop and what problems arise using the system that is currently running. For more details, it is described as follows:

#### 1. Purchase

Starting from the owner of the bicycle shop ordering bicycles or spare parts to distributors and distributors sending bicycles or spare parts to the store and store employees counting the number of bicycles or spare parts that come, if the receipt is received, then recording the receipt of goods in the product stock data report and the results of the recap are given to owner. For more details can be seen in Figure 2.

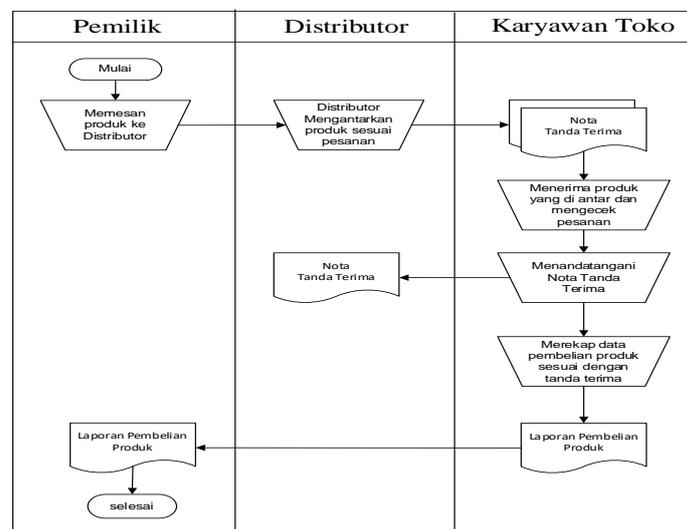


Figure 2 Product Purchase Document Flowchart

#### 2. Sales

Sales is the purchase of a (goods or service) from one party to another by getting money from that party (Nafi'ah, 2019). Service is any action or performance offered by one party to another, which is essentially intangible and does not result in the ownership of anything (Darmawan et al., 2020). Starting from the customer coming to the store to buy a bicycle or buying spare parts, the employee asks the product they want to buy and looks for the product, after releasing the product according to the customer's order, the store employee makes a sales note, after that the sales note is recapitulated into the agenda book that will be given to the owner. For more details can be seen in Figure 3.

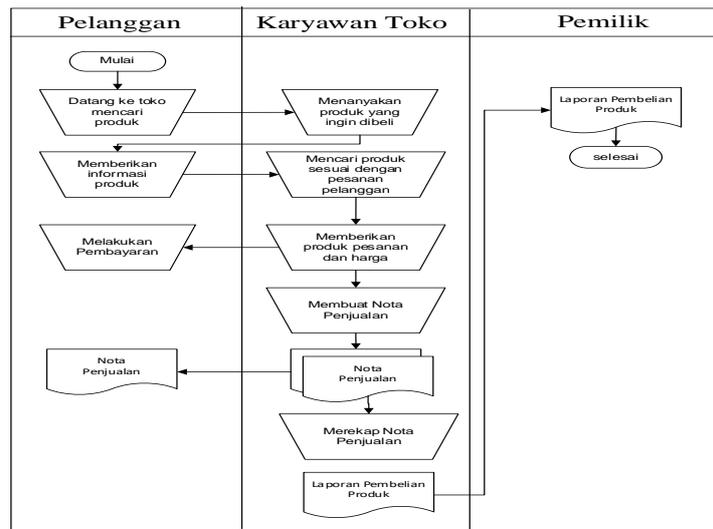


Figure 3 Product Sales Document Flowchart

### Use case diagrams

Use case is a model for the behavior (behavior) of the system to be made. Use case describes an interaction between one or more actors and the information system that will be created (Shalahuddin, 2013) Use Case is a technique to record the functional requirements of a system (Rusmawan, 2019). The following is a Use Case Diagram created to describe the new system where the use case diagram is for the system of buying, selling, and service services at the Delima Bike Shop. In the system there is one main actor, namely the owner, and also the system has 11 main processes, namely logging in, managing user data, managing distributor data, managing brand data, managing type data, managing product data, managing service data, managing purchase data, managing data transactions, print reports, and logout.

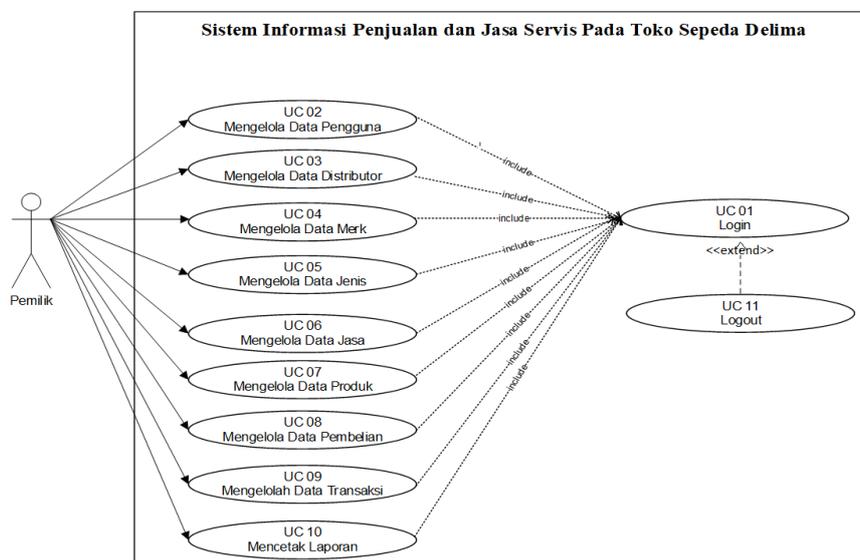


Figure 4 Use Case Diagram of Sales and Service Information Systems

### Class Diagrams

Class Diagram is a relationship between classes and a detailed explanation of each class in the design model of a system, also shows the rules and responsibilities of entities that determine the behavior of the system. (Satzinger et al., 2016). Class diagram is a diagram that describes the relationship between classes and the attributes that complete the class (Robinson, 1982). The data requirements for the software to be created can be described by a Class Diagram which is a relationship between classes on a system which can be seen in the following figure:

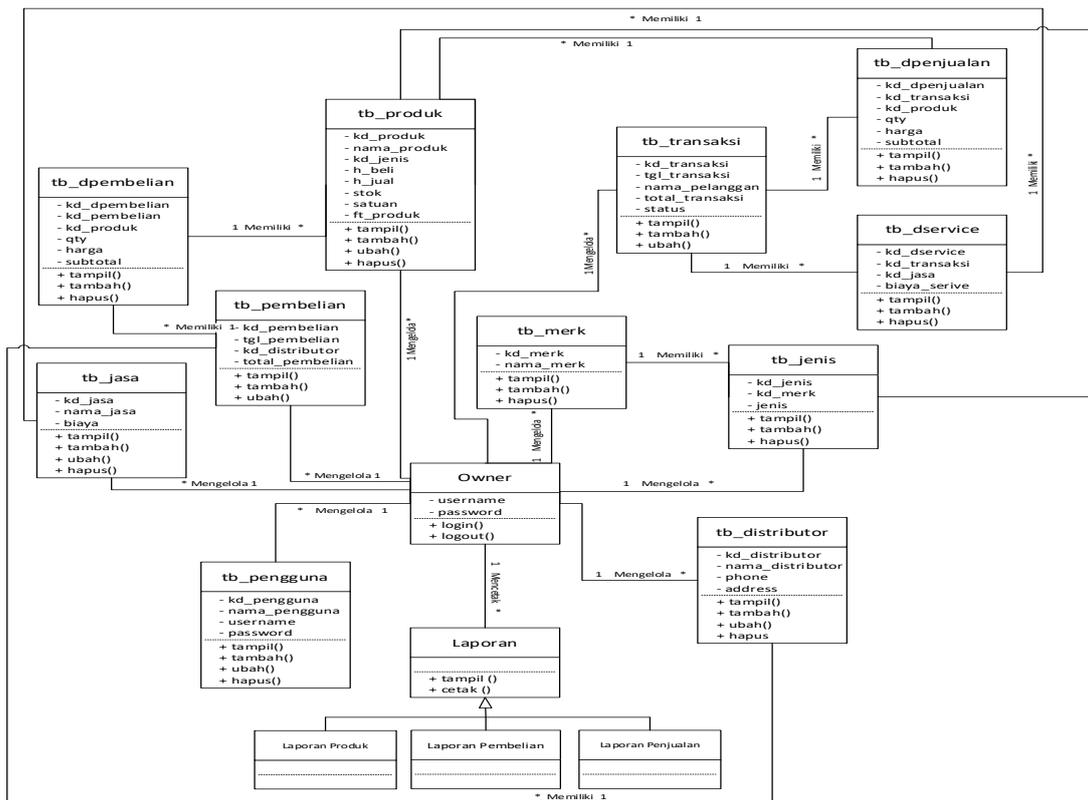


Figure 5 Class Sales Information System Diagram at the Pomegranate Bike Shop

### Program Implementation

Program implementation is a design activity that is translated into an operable program. In this activity, coding the program using the PHP programming language, MySQL database, and Dreamweaver CS 5, XAMPP and browser software (firefox, chrome, etc.). PHP is a web-based programming language written for web development (Solichin, 2016). MySQL is a database that is able to run on all information systems and is powerful and uses a database language (Saputra, Agus dan Agustin, 2012). Dreamweaver is an application that is used as a professional HTML editor for visually designing web (Madcoms, 2011). XAMPP is free software, which supports many operating systems, which is a compilation of several programs (Sadikin & Irawan, 2020). The results of program implementation can be seen as follows:

#### 1. Homepage

This home page is a page that contains information about the day and date and there are menus and links to open to other pages.



Figure 6. Home Page

## 2. User Page

This user page is a page that can be accessed by users to manage user data.

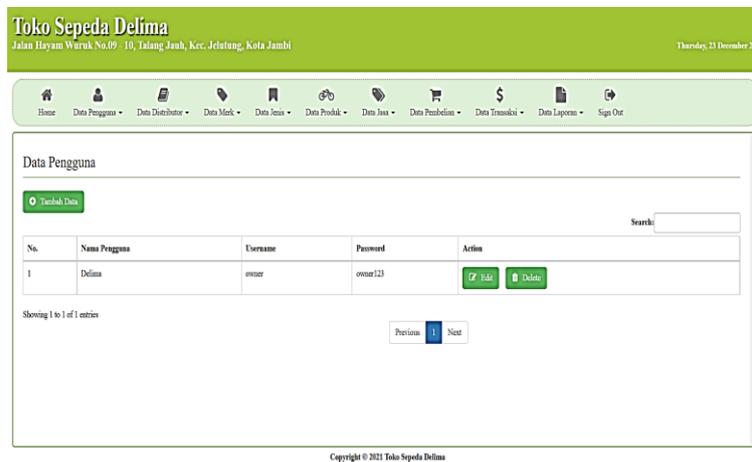


Figure 7. User Pages

## 3. Distributor Page

This distributor page is a page that contains distributor data contained in the system.

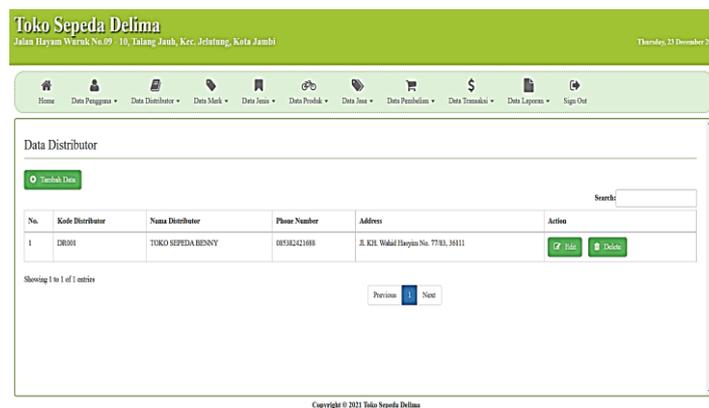


Figure 8. Distributor Pages

## 4. Brand Page

This brand page is a page that contains brand data contained in the system.

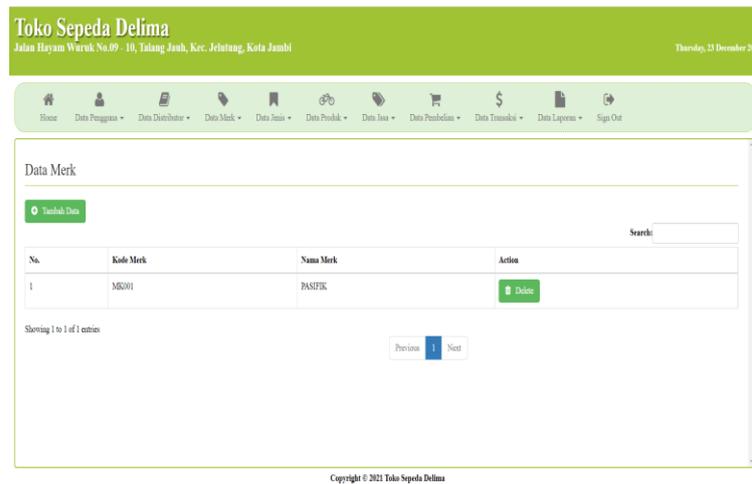


Figure 9. Brand Pages

### 5. Type Page

This type of page is a page that contains the types of data contained in the system.

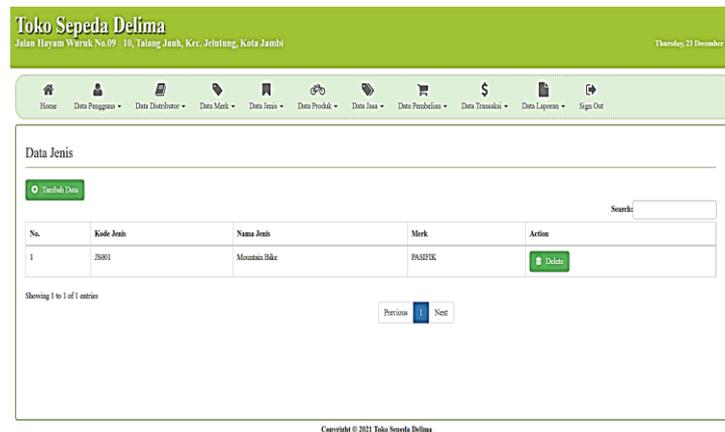


Figure 10. Page Type

### 6. Product Page

This product page is a page that contains product data contained in the system.

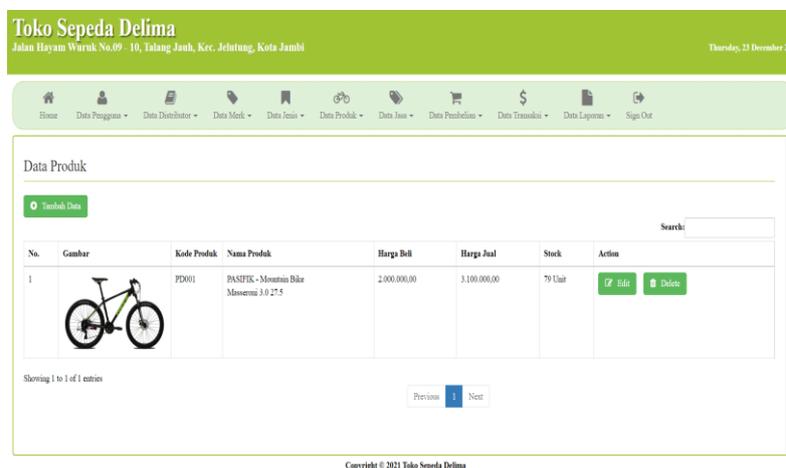


Figure 11. Product Pages

## 7. Service Page

This service page is a page that contains service data contained in the system.

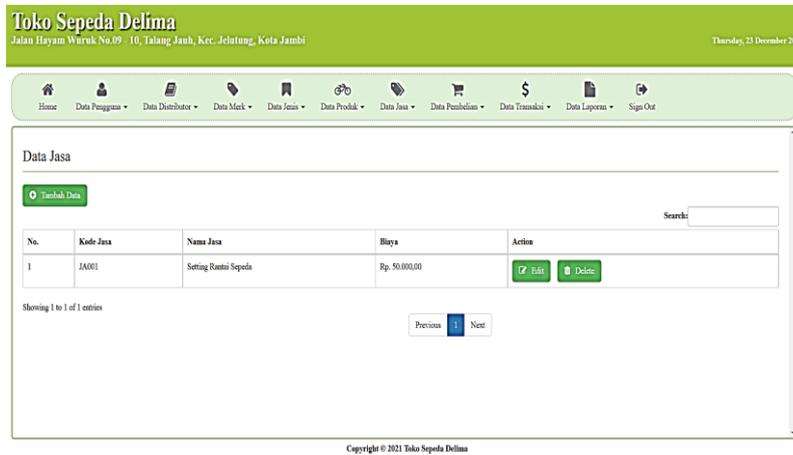


Figure 12. Service Pages

## 8. Purchase Page

This purchase page is a page that contains purchase data contained in the system.

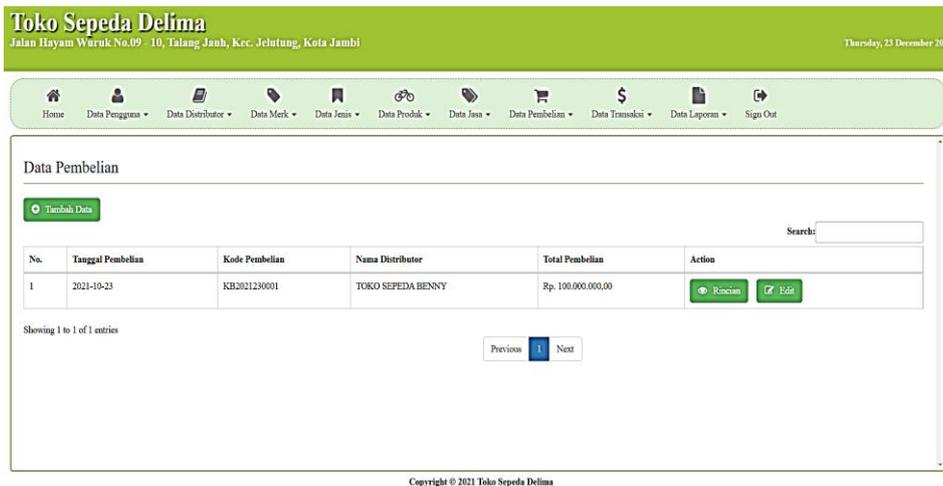


Figure 13. Purchase Page

## 9. Transaction Page

This transaction page is a page that contains transaction data contained in the system.

**Toko Sepeda Delima**  
Jalan Hayam Wuruk No.09 10, Talang Jaub, Kec. Jelutung, Kota Jambi  
Thursday, 23 December 2021

Home Data Pengguna Data Distributor Data Merk Data Jenis Data Produk Data Jasa Data Pembelian Data Transaksi Data Laporan Sign Out

Data Transaksi

Tambah Data Penjualan Tambah Data Service

Search:

No.	Tanggal Transaksi	Kode Transaksi	Total Transaksi	Jenis Transaksi	Action
1	2021-10-23	KJ2021100001	Rp. 3.100.000,00	Transaksi Penjualan	Pencarian Edit
2	2021-10-23	KS2021100001	Rp. 50.000,00	Transaksi Service	Pencarian Edit

Showing 1 to 1 of 1 entries

Previous 1 Next

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Figure 14. Transaction Pages

#### 10. Purchase Report Page

This purchase report page is a page that displays information about purchase data that has been added to the system.

**TOKO SEPEDA DELIMA**  
Laporan Pembelian  
Periode :01 October 2021 S/D 31 December 2021

No.	Tanggal Pembelian	Kode Pembelian	Nama Distributor	Total Pembelian
1	2021-10-23	KB2021230001	TOKO SEPEDA BENNY	Rp. 100.000.000,00

Cetak Kembali

Figure 15. Purchase Report Page

#### 11. Sales Report Page

This sales report page is a page that displays information about sales data that has been added to the system.

**TOKO SEPEDA DELIMA**  
Laporan Transaksi  
Periode :01 October 2021 S/D 31 December 2021

No.	Tanggal Transaksi	Kode Transaksi	Total Transaksi	Jenis Transaksi
1	2021-10-23	KJ2021100001	Rp. 3.100.000,00	Transaksi Penjualan
2	2021-10-23	KS2021100001	Rp. 50.000,00	Transaksi Service

Cetak Kembali

Figure 16. Sales Report Page

#### 12. Product Stock Report Page

This product stock report page is a page that displays information about product stock data that has been added to the system.

TOKO SEPEDA DELIMA					
Laporan Stock Produk					
Periode :01 December 2021 S/D 31 December 2021					
No.	Kode Produk	Nama Produk	Harga Beli	Harga Jual	Stock
1	PD001	PASIFIK - Mountain Bike Masseroni 3.0 27.5	2.000.000,00	3.100.000,00	79 Unit

Figure 17. Product Stock Report Page

### 13. Login Page

The login page is the main page displayed by the system when it is accessed by the user. On this login page, the user must enter the username and password data according to the username and password data that have been determined by the previous system.

- Log In -

Figure 18. Login Page

### Test Results

To determine the success of the implementation of the system that has been carried out, the authors carry out the testing phase of the system functionally, namely by using Unit Testing which is focused on the module, the smallest module contained in the system, and then continued with the Integrated Testing method which tests the modules that are used. exists in the system as a whole. The several stages of testing that have been carried out are as follows:

Description	Testing Procedure	Input	Output	Results obtained	Conclusion
Testing on Login	- go to login page - enter username and password - click OK button	- username and password	The user logs into the system and can access the system	The user logs into the system and can access the system	Succeed
Testing on Login	- go to login page - wrong username and password input - click OK button	- wrong username and password	The warning message "username and password do not match" appears.	The user does not enter the main menu and remains on the login page	Succeed
Testing on user data	- go to login page - click menu user data - click add user	- username - username - password	The warning message "you have successfully added user data" appears.	The warning message "you have successfully added user data" appears.	Succeed

<b>Description</b>	<b>Testing Procedure</b>	<b>Input</b>	<b>Output</b>	<b>Results obtained</b>	<b>Conclusion</b>
Testing on user data	- go to login page - click menu user data - click add user	- username - username - password if one is not filled	The warning message "you failed to add user data" appears.	The warning message "you failed to add user data" appears.	Succeed
Testing on distributor data	- go to login page - click the distributor menu - click add distributor	- distributor name - phone number - address if one is not filled	A warning message appears "you have successfully added distributor data"	A warning message appears "you have successfully added distributor data"	Succeed
Testing on distributor data	- go to login page - click the distributor menu - click add distributor	- distributor name - phone number - address if one is not filled	A warning message appears "you failed to add distributor data"	A warning message appears "you failed to add distributor data"	Succeed
Testing on brand data	- go to login page - click the brand data menu - click add brand	- brand name if one is not filled	A warning message appears "you have successfully added brand data"	A warning message appears "you have successfully added brand data"	Succeed
Testing on brand data	- go to login page - click the brand data menu - click add brand	- brand name if one is not filled	A warning message appears "you failed to add brand data"	A warning message appears "you failed to add brand data"	Succeed
Testing on type data	- go to login page - click menu type data - click add type	- Species name - brand if one is not filled	A warning message appears "you have successfully added data type"	A warning message appears "you have successfully added data type"	Succeed
Testing on type data	- go to login page - click menu type data - click add type	- Species name - brand if one is not filled	The warning message "you failed to add data type" appears.	The warning message "you failed to add data type" appears.	Succeed
Testing on product data	- go to login page - click the product data menu - click add product	- product name - type - purchase price - selling price - product stock - unit - product pictures	A warning message appears "you have successfully added product data"	A warning message appears "you have successfully added product data"	Succeed

<b>Description</b>	<b>Testing Procedure</b>	<b>Input</b>	<b>Output</b>	<b>Results obtained</b>	<b>Conclusion</b>
Testing on product data	- go to login page - click the product data menu - click add product	- product name - type - purchase price - selling price - product stock - unit - product pictures if one is not filled	A warning message appears "you failed to add product data"	A warning message appears "you failed to add product data"	Succeed
Testing on service data	- go to login page - click the service data menu - click add service	- service name - cost if one is not filled	A warning message appears "you have successfully added service data"	A warning message appears "you have successfully added service data"	Succeed
Testing on service data	- go to login page - click the service data menu - click add service	- service name - cost if one is not filled	A warning message appears "you failed to add service data"	A warning message appears "you failed to add service data"	Succeed
Testing on purchase data	- go to login page - click the purchase data menu - click add purchase	- date - distributor - product code - amount	A warning message appears "you have successfully added purchase data"	A warning message appears "you have successfully added purchase data"	Succeed
Testing on purchase data	- go to login page - click the purchase data menu - click add purchase	- date - distributor - product code - amount if one is not filled	A warning message appears "you failed to add purchase data"	A warning message appears "you failed to add purchase data"	Succeed
Testing on transaction data	- go to login page - click the transaction data menu - click add transaction	- date - customer's name - product code - service name	A warning message appears "you have successfully added purchase data"	A warning message appears "you have successfully added purchase data"	Succeed
Testing on transaction data	- go to login page - click the transaction data menu - click add transaction	- date - customer's name - product code - service name if one is not filled	A warning message appears "you failed to add purchase data"	A warning message appears "you failed to add purchase data"	Succeed

## CONCLUSION

### Conclusion

Based on the discussion in the previous chapters that have been described by the author, entitled Design of Sales and Service Information Systems at the Delima Bike Shop. So the author draws several conclusions that is, in running its current business, Delima Bike Shop still uses conventional methods which are less efficient in terms of time and energy. With the design of a bicycle sales and service information system, it is hoped that the bicycle sales and repair service system at the Pomegranate Bike Shop can be carried out efficiently and effectively. This research produces a system that will make it easier for the owner to manage transactions in the store because there are features to calculate the total sales, services and purchases desired within a certain time period, services and purchases and financial reports that are automatically created to find out the activities that occur in the store. With this information system, it makes it easy for system users, both owners and employees, to reduce the risk of errors and data redundancy in processing purchase and sales data, assist in recap and report generation required by the owner and also facilitate data retrieval because it has been computerized.

### Suggestion

The author realizes that there are still many shortcomings in the design of the system made. Therefore, the writer would like to give some suggestions. The following are some suggestions that the author can give in this research that is, For the Delima Bike Shop, the implemented system would be better if it was done first for users who will use this system. So that the desired goals can be achieved and can run smoothly as expected. For further researchers, so that this system can be further equipped with a graphic feature to display a comparison of sales data or purchase data every month, and it needs to be equipped with better security system features and also use a multilevel user system.

## REFERENCES

- Agusvianto, H. (2017). Sistem Informasi Inventori Gudang Untuk Mengontrol Persediaan Barang Pada Gudang Studi Kasus : PT.Alaisys Sidoarjo. *Journal of Information Engineering and Educational Technology*, 1(1), 40. <https://doi.org/10.26740/jieet.v1n1.p40-46>
- Darmawan, H., Sadikin, A., & Irawan, B. (2020). Sepeda Motor Pada Bengkel David Motor Jambi. In *Jurnal Ilmiah Mahasiswa Sistem Informasi* (Vol. 2, Issue 1, pp. 28–39).
- Fachrurrazi, S. (2015). Peramalan Penjualan Obat Menggunakan Metode Single Exponential Smoothing Pada Toko Obat Bintang Geurugok. *Techsi*, 6(1), 19–30.
- Farid. (2017). Kewirausahaan Syariah. PT Fajar Interpratama Mandiri.
- Fitri, R. (2020). Pemrograman Basis Data Dengan MySQL. POLIBAN PRESS.
- Herlina, M. dan. (2019). Pemrograman android dengan Android Studio, Photoshop, dan Audition. PT Elex Media Komputindo.
- Hutahaean, J. (2014). Konsep Sistem Informasi. CV BUDI UTAMA.
- Kadir, A. (2014). Pengenalan Sistem Informasi (Revisi). CV Andi Offset.
- Madcoms, L. (2011). Aplikasi Web Database dengan Dreamweaver dan php-MySQL. Andi.
- Nafi'ah, S. and Y. (2019). Akuntansi Keuangan. PT Gramedia Widiasarana Indonesia.
- Riyanto. (2011). Sistem Informasi Penjualan dengan PHP dan MySQL. Gava Media.
- Robinson, J. J. (1982). DIAGRAM: A Grammar for Dialogues. In *Communications of the ACM* (Vol. 25, Issue 1, pp. 27–47). <https://doi.org/10.1145/358315.358387>
- Rusmawan, Uu. (2019). Teknik Penulisan Tugas Akhir dan Skripsi Pemrograman. PT Elex Media Komputindo.
- Sadikin, A., & Irawan, B. (2020). Perancangan Sistem Informasi E-Commerce Pada LTH Store Kota Jambi. In *Jurnal Ilmiah Mahasiswa Sistem Informasi* (Vol. 2, Issue 2).
- Salahuddin, R. A. and M. (2019). Rekayasa Perangkat Lunak (Terstruktur dan Berorientasi Objek). Informatika Bandung.
- Santoso, S., & Nurmalina, R. (2017). Perencanaan dan Pengembangan Aplikasi Absensi Mahasiswa

- Menggunakan Smart Card Guna Pengembangan Kampus Cerdas (Studi Kasus Politeknik Negeri Tanah Laut). *Jurnal Integrasi*, 9(1), 84–91.
- Saputra, Agus dan Agustin, F. (2012). *Membangun aplikasi E-Commerce dan SMS*. PT Elex Media Komputindo.
- Satzinger, J. W., Jackson, R. B., & Burd, S. D. (2016). *System Analysis and Design in a Changing World*. In *Course Technology Cengage Learning* (pp. 1–32).
- Shalahuddin, R. A.. dan. (2013). *Class Diagram, Use Case Diagram, Activity + Simbol*. Informatika Bandung.
- Solichin, A. (2016). *Pemrograman Web dengan PHP dan MySQL*. Budi Luhur.
- Sommerville, L. (2011). *Software Engineering*. Addison-Wesley Publishing Company Inc.
- Sutabri, T. (2012). *Analisis Sistem Informasi*. CV Andi Offset.