The Design of Web Based Information System for 'Bintang Multi Sparepart Store'

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Abstract

The advancements in information technology have provided many conveniences in the process of recording and reporting. Bintang Multi Sparepart Store is a business that sells automotive supplies. Its business process is divided into product sales, product stock fulfilment, and sales report creation. Based on the ongoing business process, sales recordings are done manually with a book, which increases the risk of errors due to spills and dirt on the book, tears, and human error. This results in inaccurate sales report calculations. Information about product availability also often has errors due to inaccurate information. In view of the problems that are occurring, this study designed an integrated information system that can collect, store, and process data to produce accurate information by applying the System Development Life Cycle (SDLC) principles, programming language PHP and MySQL for database storage, and through unit testing, integration testing, system testing, and acceptance testing. The designed information system is operating well, and the entire process in the information system meets the user's needs in terms of functionality and usability. The implementation of the proposed information system allows the owner to monitor all business processes, including transaction data and product data. The proposed information system is also capable of storing, summarizing, and presenting the entire sales transaction data in real time. In addition, the designed information system can process calculation on transaction data to be presented in the form of an accurate sales report, and there is a manual to make the information system operation process easier.

Keywords: MySQL, PHP, Information System, System Development Life Cycle (SDLC)

1. Introduction

The development of the automotive industry, especially motorcycles, continues to grow rapidly in Indonesia. Therefore, many businesses are growing following the rapid growth of the automotive industry. This opportunity is widely utilized by business actors to develop their businesses, one of which is the motorcycle spare parts sales business. One of the businesses that sells motorcycle spare parts in Depok City is the Bintang Multi Spare Parts Store. This business was established in 2017 and is still running to this day and has a total of 3 employees. The employees of Bintang Multi Spare Parts Store work full time, starting from 8:00 AM until 5:00 PM Western Indonesian Time. The items that are sold are spare parts consisting of machine equipment and various parts for various types of motorcycles. The customers of this store are usually the owners of nearby workshops and regular customers. Typically, Bintang Multi Spare Parts Store is busy during the hours of 2:00 PM to 5:00 PM Western Indonesian Time, when the store is busiest. The prices of the items sold also vary, depending on the type of item. When making a sale, the store employees will make a record of the sold items on a receipt to be given to the customer. Next, a record is made in a recording book according to the quantity, type, item code and price. Every day after the store closes, the owner will summarize the sales data based on the records and calculate it using a calculator. In addition to the daily calculation, a calculation is also made at the end of the month. However, it cannot be denied that errors still often occur due to human error. Another common problem is the occurrence of a book that is stained by a substance, slipped, torn, and the information of the stock of goods that is often incorrect, resulting in the situation where the stock of goods is not fulfilled for a long time due to forgetting to order by the business owner and there is waste of time and energy in conducting stock checks carried out by employees. To overcome the frequent problems, it is necessary to have an information system that aims to make it easier for the owner of Bintang Multi Spare Parts

Store in recording sales and managing stock, thus problems such as ordering stock errors can be minimized because information on stock availability can be more easily accessed and more accurate, and it makes it easier for the business owner to manage finances.

The proposed design as a solution to this problem can be done by applying the principles of the System Development Life Cycle (Abdullah, 2017). According to Dennis et al. (2012), SDLC consists of 4 phases: planning, Analysis, Design, and Implementation in the process of developing the information system. In the planning stage, planning is carried out by identifying business processes as a first step and followed by building the information system. Then, in the analysis stage, the process of designing a model of the information system to be developed is carried out, which consists of process modelling and data modelling. In the design stage, the design process of the information system to be developed is carried out, where in this stage the process is more detailed compared to the previous processes because in this process the determination of the devices to be used in the information system development process takes place (Dharmawan, *et al*, 2018). In the implementation stage, the implementation process of the information system design results is carried out for further use by parties who experience problems with the hope of solving the problems faced. After implementation, testing is performed on the performance of the information system and evaluation is carried out as a quality control effort. In addition, the information system designed as a proposal is developed using the PHP programming language because the PHP programming language is easier to develop compared to other programming languages, is open source which allows users to access it without charge and can be used on various operating systems, is easier to understand than other programming languages, and web servers that support PHP are easily found (Anhar, 2020;). As for the database, MySQL is used because MySQL is open source, so it can be accessed without charge, is the fastest server, can be accessed by all clients simultaneously, can store databases with a large capacity, and can run on various operating systems (Pujiastuti et al, 2020).

The proposed information system is web-based, this is because it has many advantages, such as accessible from anywhere with an internet connection, easy to use, and does not require special software to be installed (Sa'ad, 2020). In addition, web-based systems can be used by multiple users at the same time, allowing for easier collaboration and communication. Additionally, web-based systems can be easily maintained and updated, making it easier to add new features or fix bugs as needed (Christianto, 2017).

2.   Methods

Research begins with conducting a preliminary study. In the preliminary study stage, it provides an overview of the conditions currently experienced by the Bintang Multi Spare Parts Store, so that the challenges faced by Bintang Multi in running its business can be identified. The preliminary study stage is conducted by observing the location directly and conducting interviews with the business owner. Based on the results of the observation and interview, it can be determined that the sales recording process is still done using a manual method, resulting in some challenges such as difficulty in summarizing sales, recording, and the process of fulfilling stock which is less effective and efficient. The next stage is to conduct a literature study. The purpose of creating a literature study is to enhance understanding of the research topic and steps that need to be taken in order to ensure that the research progresses well and achieves the desired results. The theories supporting this research consist of systems, information, information systems, accounting information systems, SDLC and its types, stages of building an information system and the software needed in designing and building the proposed information system .

The next step is data collection. Data collection is a stage of collecting the data required in the research process. In the data collection stage, the process of identifying the business processes currently applied is carried out, as well as identifying the user needs of the design and construction of the proposed information system. The steps taken in data gathering are the identification of current business processes and systems, the analysis of information needs, and the identification of users. In this stage, the identification of the business processes currently being implemented in the business is included. The identification is carried out by directly observing the location and conducting interviews with the business owner, so that information can be obtained regarding the problems that occur and become obstacles for the business owner in running their business. The current business process will be presented in the form of a flowchart diagram in order to make it easier to read and understand the process flow, so that it can be well understood. The interview process will be conducted with the owner of the Bintang Multi Spare Parts Store and will be carried out in March 2022. The stage of information needs analysis contains user data on information needs. This data is obtained by conducting direct interviews with users, which in this case is the business owner, to determine the user's needs regarding

information that is in line with the functions available in the proposed information system. The stage of user identification contains the determination of the system users (users) based on the results of an interview with the business owner regarding the role and tasks of each employee involved in the business. Therefore, it can be determined the authority and limitations in operating the system. The fourth stage is the design and development of the system. The design and development of the system is based on the business process and user needs data that have been identified previously. The design and development of the system is carried out in several stages, including: the flowchart design of the proposed system, designing use case diagrams, context diagram, data flow diagram (DFD), entity relationship diagram (ERD), balancing DFD and ERD with CRUD (Create, Read, Update, Delete) Matrix, design of proposed system user interface, and performing the construction of proposed system (Edi & Betshani, 2019; Herlambang & Setyawati, 2015).

After the information system has been designed, the testing and evaluation phase is carried out on the system by its users, which is a functional testing. The testing of the information system involves unit testing, integration testing, and system testing applied with black box testing using manual methods, as well as applying acceptance testing using usability testing that covers learnability, efficiency, memorability, errors, and satisfaction. In the testing phase, the entire planned testing process is applied. This testing phase is conducted by asking the system users to run a series of processes on the system by providing a scenario case, so that an evaluation can be conducted to identify the weaknesses in the system that need to be fixed. The success of the implementation of unit testing, integration testing, and system testing can be stated if all the given scenario cases are successfully executed in the created scenario case. When measuring learnability, it can be done by completing a scenario case, and system users are asked to perform the replication so that the results can be compared. The comparison can be seen in terms of the time between events, that is, if the time produced gets smaller for each replication, then it can be stated that the measurement has been successful. Efficiency measurement can be done by measuring the speed of system users, and by applying the Time-Based Efficiency formula using scales that indicate the measurement has been successful. Memorability measurement can be done by testing the system with a pause after the learning process. The results of this measurement can be seen in terms of time, that is, if the time produced gets smaller or is the same as the time at the beginning of the learning process, then it can be stated that the measurement has been successful. Error measurement can be done by calculating the number of errors that occur in the process of running the given task scenario (Nidhra & Jagruthi, 2022). Satisfaction measurement can be done by providing a questionnaire to be filled out and using the System Usability Scale (SUS) score as a parameter (Brooke, 1996). After conducting the testing and evaluation phase on the system, and the system has been declared successful and can be operated according to the expected functions, the next step is to create a guide module. The guide module serves as a reference or guide in the process of operating the information system so that if there are obstacles in running the system, the system users can use the guide module to overcome them.

3. Result and Discussion

The first step is to identify the current business process, identify opportunities for improvement, and design the proposed business process. Based on the ongoing sales business process at Bintang Multi Sparepart Shop, it can be gathered that there are processes that are considered inefficient, such as the process of checking product stock and the process of delivering customer orders. The process of checking product stock takes a considerable amount of time because employees need to visit the product storage location to check the availability of the products in stock that match the customer's order. The product storage location is quite far from the customer service location, so if the customer's ordered products are not available, it results in a waste of time and energy. In addition, the process of delivering customer orders also takes a lot of time and energy, because after the employee hands over the money and the receipt to the owner, they must wait for the owner to record the sale in the book before getting confirmation that the product can be handed over to the customer. Certainly, the manual process of recording sales in a book can increase the risk of errors in sales summary such as inaccurate information, loss of sales data due to spilled or torn book, or human error and waste of time and energy.

In addition to the product sales process, there is also a product stocking process carried out by the owner of Bintang Multi Sparepart Shop. The product stocking process is carried out at regular intervals when the warehouse stock runs out, in order to maintain the continuity of the business process at Bintang Multi Sparepart Shop. When employees report that the stock of a product has run out, the owner will make a list of the required items to be ordered from the supplier via mobile conversation, and the product stocking is done

using the make-to- stock system. The flow of the current product stocking process at Bintang Multi Sparepart Shop includes the steps shown in Figure 4.3:

1. The employee will check the product stock before handing it over to the customer. If the product stock is insufficient, the employee will report it to the owner.
2. The owner creates a list of required items that includes the name of the product along with the quantity needed and then places an order with the supplier.
3. When the ordered product stock arrives, the owner will receive and check the completeness of the order.
4. The supplier provides an invoice to the owner for the payment process.
5. The owner receives a payment receipt for the purchase of the product stock.

Based on the flowchart, it can be seen that the product stocking process at Bintang Multi Sparepart Shop is carried out by the owner and the supplier. After a successful transaction, the owner will receive a purchase receipt in the form of a purchase note from the supplier. This note is then kept by the owner to calculate expenses.

The current flow in the process of making financial reports is as follows Figure 4.4:

1. The owner compiles and processes sales data based on the sales records in the book, which is then created in the form of a daily sales report.
2. At the end of each month, the owner will create a monthly sales report in order to obtain information about the gross profit from sales results.

The ongoing business process of creating sales reports is based on the sales records, which represent the revenue. The process of creating sales reports is done daily, which is every day after the store closes, and monthly, which is done at the end of each month. The process of creating sales reports is done by reconciling the amount of money earned with the amount of money recorded in the sales book after being counted, as well as calculating the overall sales both daily and monthly. Expenditures in the form of notes for fulfilling stock products are not included in the sales report because the cost price of the products tends to fluctuate. Additionally, due to the application of a large-scale make-to-stock system, the accuracy of profit and loss calculations tends to be inaccurate. Therefore, the owner applies an estimated profit percentage of 10% of the total sales as the nominal profit earned.

The process of creating a sales report requires a considerable amount of time and effort because if there is a discrepancy between the amount of money received and the sales record after being calculated, it is necessary to recount to ensure that no errors have been made. In reality, discrepancies between sales records and the money obtained often occur due to errors in the information recorded in the sales book caused by human error or dirt. This is important to note because bookkeeping is a benchmark and material for evaluating decisions related to business.

The information needs analysis stage is a stage in which the information needs are identified based on the system that is currently being used and ongoing. The process of identifying information needs includes the information that is needed, the parties who need the information, the parties who provide the information, the timing of when the information is provided, the condition of the system that is currently ongoing, and the consequences that arise from the current system condition. The main information needs are the stock product report, customer order list, and sales report. The stock product report is essential to provide information about the inventory of products sold, whether the product is still available, or the stock has run out. In reality, there is currently no stock product report available, so when there is an order from a customer, employees are required to check the stock of the products in the storage area, which is quite far from the service location. Therefore, there is a considerable waiting time for customers, and employees experience wasted effort. The sales report is essential to provide information about the gross revenue obtained based on the transactions that have occurred. In addition, the sales report also serves as supervision of the ongoing business. In reality, the calculation of the sales report is still done manually, so the process of recording and processing sales data still takes a considerable amount of time. Besides, because the sales records are presented in a book, there are often errors in the information due to difficult-to-read handwriting, spills, or dirt.

The next step is to determine the proposed business process. There are several sales processes that have been eliminated, including the process of calculating the total payment of customer orders carried out by employees,

the process of recording sales in a book, and the creation of daily and monthly sales reports carried out by the owner. In addition, the proposed system also eliminates manual processes and replaces them with an information system. The proposed business process flowchart has made changes to several previously manual processes, now done with the help of an information system, although there are still half of the business processes that are done manually. The proposed business process that is done with the help of an information system includes checking the availability of product stock, displaying product stock data, updating stock, inputting sales based on note records, processing total payments, printing receipts, and displaying sales report data. Meanwhile, the processes that are still carried out manually are not mentioned in the description.

The following is the sales process flow performed based on the proposed business process flowchart.
1. Customers approach employees to place an order for products manually.
2. Employees check the product stock through the system, so they do not need to go to the storage area to check the stock amount.
3. If the ordered product is available in stock, the employee prepares the order manually.
4. The employee records the product code and quantity based on the customer's order in a note, which is then forwarded to the owner manually.
5. The owner receives the note and enters the sales data into the system according to the note provided by the employee. Then, the owner processes the total payment using the system and informs the employee.
6. The employee conveys information about the total payment to the customer manually.
7. The customer receives information about the total payment and makes the payment to the employee manually.
8. The employee receives the payment and forwards it to the owner manually.
9. The owner receives the payment and prints a receipt using the system as proof of payment, then forwards it to the employee manually.
10. The employee provides the ordered product and receipt to the customer manually. The transaction is considered complete when the customer has received the ordered product and the receipt.
11. The sales process is repeated until there are no more customers coming to the business place or the store is closed.

The stock fulfillment process has also undergone changes, where the stock checking process is now done with the help of the system, making it possible to obtain faster and more accurate information. Additionally, there is a stock update process in the system that facilitates product stock control. The process flow of product stock fulfillment is as follows.
1. If a situation arises where the product stock quantity reaches the minimum limit, the owner will inspect the product stock through the information system. After that, the owner will create a list of product supply requirements and then manually initiate the product ordering process to the supplier.
2. Once the ordered products have arrived, the owner will receive an invoice from the supplier, which will be paid manually.
3. The owner will receive a receipt of expenditure from the supplier as proof of payment and update the stock in the system.

The sales report creation process has also undergone changes, where the process that was previously done manually by the owner is now automated and processed by the information system. With the information system in place, the process is certainly easier and simpler, and the data becomes more accurate. Based on the proposed business process flowchart, it can be seen that there have been several changes in the process to improve and solve problems faced by business actors, where some processes have been eliminated and some have been modified due to the existence of the information system. The processes that have undergone changes are the ones that were previously done manually and have now become automated because they are processed by a computerized system, making the information delivery process faster and more accurate.\

Based on the previously created proposed business process flowchart, it can be inferred that there are many changes in the current condition as well as in the proposed condition of the business process, where many improvements are made to make the business process better. The next step is to create a proposed information system flowchart to depict the data flow in the proposed system, where the proposed information system flowchart is divided into 3 processes, namely the sales process, product stock fulfillment process, and sales report creation process. In carrying out these three processes, the system user is required to log in to the system

using a username and password that is stored in the admin database, which contains the user's name, username, password, and access type. The proposed information system can only be accessed by parties whose identities are registered in the admin database of the Toko Sparepart Bintang Multi information system to increase data security.

Here are the proposed business processes for each of the processes:

1. Sales Process
   a. Product Database Input

In the proposed information system for managing the business process of Toko Sparepart Bintang Multi, it is necessary to input information about the products being sold. This information will be entered by the business owner and serves as a database and master data that will integrate the entire system. The product database includes product codes, names, categories, sizes, brands, stock quantities, selling prices, and descriptions. This data will be used for inputting order data in the transaction process.

   b. Creation of a sales transaction database

The creation of a sales transaction database serves as a master data to provide information about the sales history that has occurred. In the sales transaction database, information about the list of products is obtained from the product database. The filling process in the sales transaction database is done by the business owner, where the transaction contains the invoice number, date, cashier name, product code, product name, price, quantity, subtotal, and total payment. The data from the transaction will be stored in the database and then processed into a sales report.

2. Process of fulfilling product stock

The amount of product stock is included in the product database that has been described earlier. The existence of the product database that contains information about product stock serves as master data to provide information on the availability of product stock at Toko Sparepart Bintang Multi. This information can be used as a reference by the owner to immediately carry out the process of fulfilling product stock with the supplier.

3. Process of Making Sales Reports

The process of creating sales reports is done by creating a sales report database, which functions as master data to provide information about gross income obtained. The database is filled with transaction dates entered by the business owner, so that the system will display sales reports within the specified time range. This sales report is a tool for analyzing ongoing sales and influences the decision-making process related to the business. Sales reports are created based on the recapitulated and calculated transaction history within the specified time range.

The next step is to design the use case diagram. After the requirements analysis phase is completed, the next step is to design the use case diagram. A use case diagram is a diagram that depicts the functional requirements of a system in terms of actors, use cases, and their relationships. Based on the presented use case diagram, it can be inferred that there is an integration between two actors, namely the employee and the owner, and there are six use cases, each of which has interactions. For each use case, a flow of events document will be created to describe the use case, the conditions that the actor must meet to activate the use case, the activities of the actors, and the state of the system when the use case ends. The overall use cases are interconnected to perform login (include), because use cases cannot stand alone and require the login use case to complete them. This is different from the use case of checking product stock, where there is an extension to the update stock use case, because this use case is an additional event that occurs when a certain condition is met. If the product stock runs out, the update stock action will be taken. The explanation or description about one of the use can be seen in the following Table 1. Update Stock Use Case.

Table 1: Update Stock Use Case

Use Case Name: Update Stock	ID: UC-3
Actor: Owner	

Description: Entering the stock quantity of products after the ordered products from the supplier have been received.
Precondition: The products ordered from the supplier have been received.
Normal Course: 1. Performing the login process into the website. 2. Performing the process of updating data on the quantity of product stock.
Post Condition: Obtaining the latest information about the quantity of product stock.

The next stage in the design process is the creation of a data flow diagram (DFD), which is a tool that depicts the flow of information in a system. The process of creating a DFD begins with creating a level 0 DFD, which provides an overview of the business process in general, followed by the creation of a level 1 DFD, which represents a more detailed depiction of the business process. The following is a depiction of the level 0 DFD of Bintang Multi Spare Parts Store presented in Figure 1.
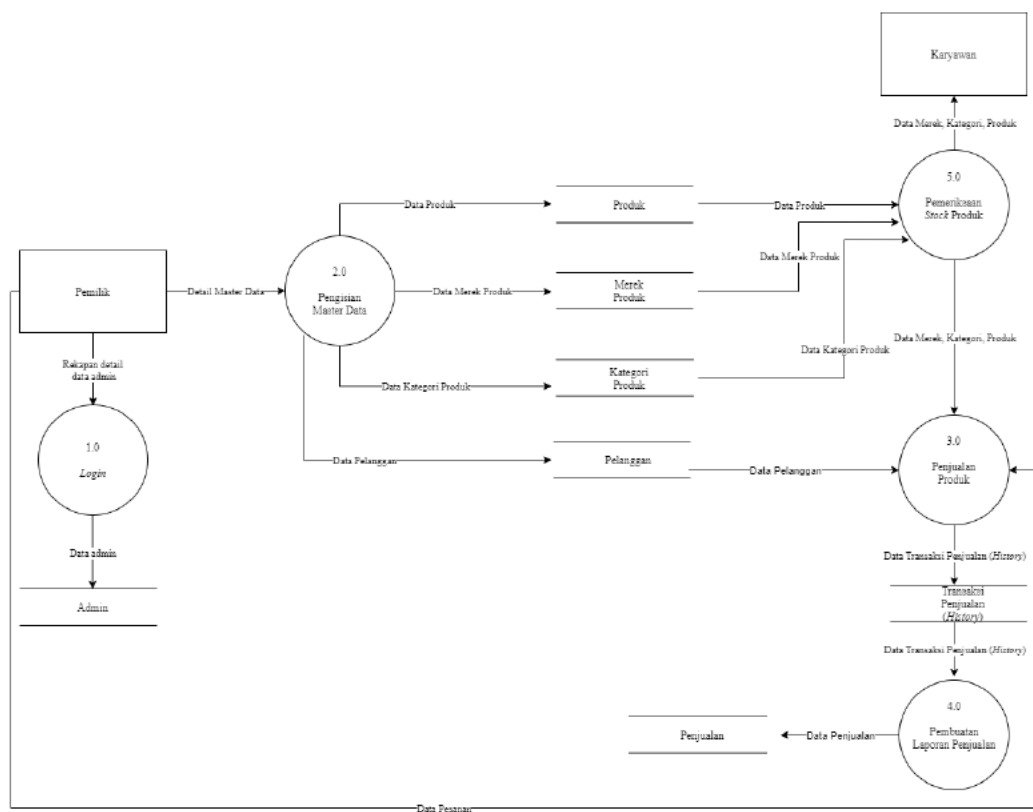

Figure 1. Level 0 DFD

The next stage is the design of the Entity Relationship Diagram (ERD), which illustrates the relationship between a piece of data and other data within an entity. In Figure 5.11, there are 8 entities interconnected with each other. In addition, each database has a one-to-one (1:1), one-to-many (1:M), and many-to-many (M:M) relationship. The customer entity is a database that contains data about customers. The customer database is linked to the pj_master database, which contains data on sales history. The relationship between the customer database and the pj_master database is one-to-one (1:1) because one customer data fills in one sales history, and one sales history can be filled by only one customer. The pj_master database is linked to the user database, which contains data on users who can access the system, and the relationship between them is a many-to-many (M:M) relationship. This is because many users can view many pj_master data, and many pj_master data can be viewed by many users.
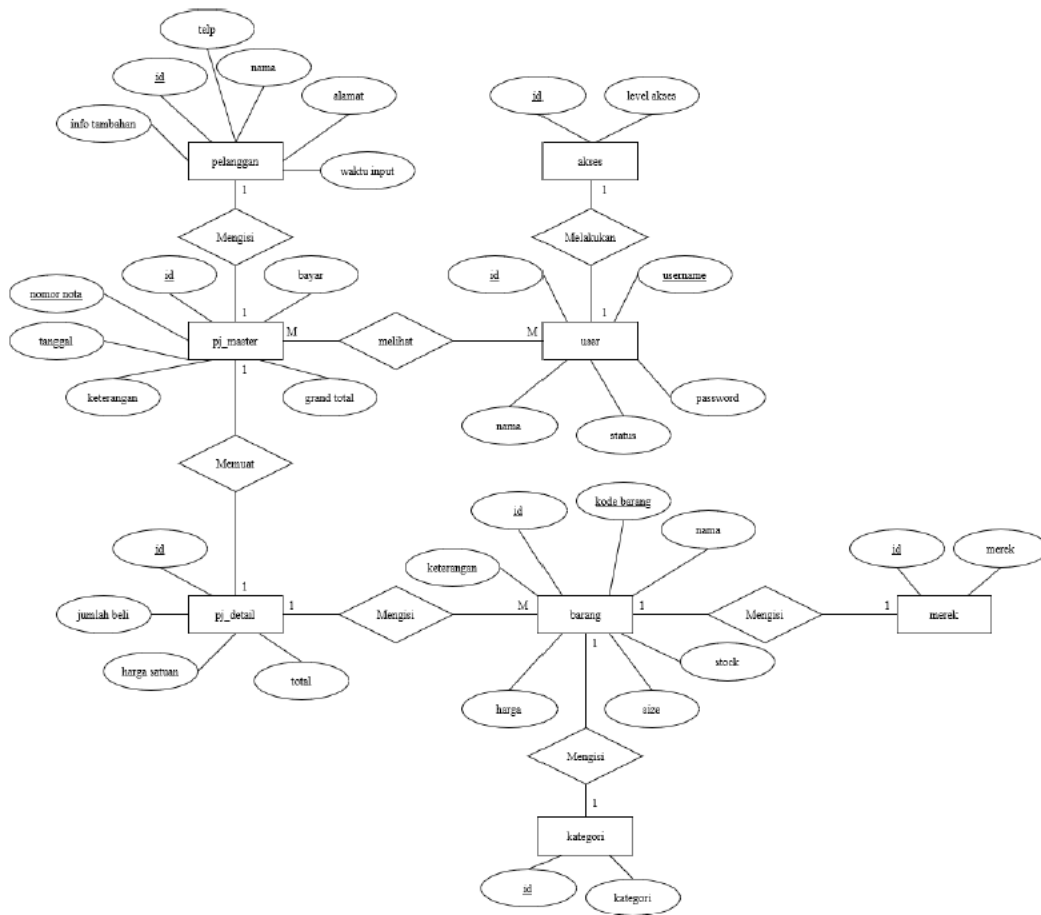
Figure 2. Entity Relationship Diagram

The CRUD Matrix serves to limit and distribute user rights to access the information system, where this distribution is based on the roles and authorities of each business actor in carrying out the business process. The CRUD Matrix includes create (data creation), read (data reading), update (data updating), and delete (data deletion), where the matrix is created based on the processes in the information system. The following is the CRUD Matrix for the Bintang Multi Spare Parts Store information system presented in Table 2.

The next stage is the design of the user interface for the Bintang Multi Spare Parts Store information system, which is designed using Balsamic Mockups 3 software. The design process involves designing the appearance of each page and the features contained in the information system. In the designed information system, it can be accessed by the owner and employees according to their tasks and authorities in carrying out the business process to improve the security of the system. The designed information system has various types of access, such as administrator, finance, cashier, and inventory. The design was requested by the owner in case there is a task delegation for employees in the future, but for now, the types of access used are administrator for the owner and inventory access for the employees. The division of access types is adjusted to the tasks and authorities of the business actors.

The Sales page is the main page that appears when the admin (user) successfully logs into the proposed information system. In addition, there are menus that include sales, goods, reports, and user lists. Each menu has different features depending on its function. The menus that can be accessed are also differentiated based on the authority in running the business as presented in the CRUD Matrix table. The sales menu has sub-menus consisting of transactions, sales history, and customer data.

Table 2: CRUD Matrix

Proses/Lokasi	Karyawan	Pemilik
Penjualan		
Pengisian data transaksi		CRUD
Rekap data transaksi penjualan (Histori)		RUD
Master data pelanggan		CRUD
Barang		
Master data semua produk	CRUD	CRUD
Master data list *merk* produk	CRUD	CRUD
Master data list kategori	CRUD	CRUD
Laporan		
Laporan Penjualan		CRU
List *User*		
Master data admin		CRUD

The transactions sub-menu displays a transaction page that has features for filling in transaction data. On this page, there is information about the invoice, including the invoice number, date, and cashier. The invoice number and date will be automatically filled in, and the cashier is selected by choosing one of the cashier names who is responsible for inputting the transaction. This page also displays customer information, which includes features for displaying the name of customers, both general customers and registered ones. If you want to add customer data, it can be done on this page or on the customer data page. After the customer's name has been selected, the system will automatically display data such as telephone number, address, and other information based on the selected customer's name. The admin (user) can input data such as the item code and quantity into the column, then automatically the system will display data based on the input data, such as the item name, price, subtotal, and total price. After that, the admin (user) can input the amount paid in the pay column, then the system will automatically display the amount of change. The admin can also input transaction notes in the transaction notes column. This page is equipped with features to refresh the page to refresh/update the page's display, print feature which functions to print a receipt based on transaction data, and save feature which functions to save inputted transaction data for further processing by the system. When clicking the save button, a message box will appear to confirm the choice to save the data. On this page, there is also a cancel button located next to the subtotal, which functions to delete the data inputted in that row. The following is the display of the sales page transaction sub-menu displayed in Figure 3.
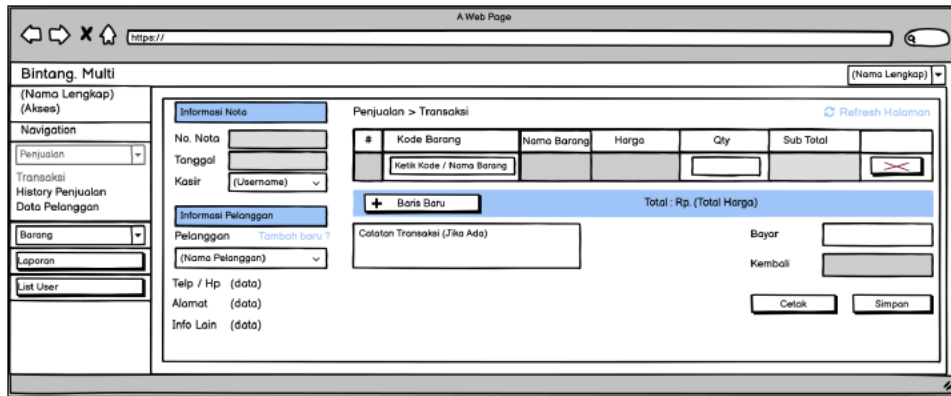
Figure 3 Sales Page (Transaction) Display

The next step in testing is the system testing phase, which is the process of testing the entire system. This testing is carried out to meet the specifications of user needs through verification and validation. The system testing process is carried out by the owner since the owner has access to the system as a whole. The testing process is carried out by assigning tasks to be performed by the owner using the system, and then the researcher will check off the tasks based on the resulting conditions.

This stage is a validation stage for the user interface design, aimed to determine whether the appearance of the information system is in accordance with user needs. The validation process is carried out by comparing the designed user interface with the requirement determination. The results of the validation can be seen in Table 3.

Table 3: Validation of Proposed User Interface Design

Pengguna	Fungsi Utama	Detail Fungsi	Rancangan Sistem Informasi	Valid?
Pemilik	Reporting	Membuat laporan keuangan berdasarkan pendataan transaksi	Pada gambar 5.96. menunjukkan bahwa sistem informasi memiliki fitur untuk mengolah laporan penjualan	☑
	Monitoring	Melakukan pengawasan terhadap keberlangsungan proses bisnis	Pemilik memiliki akses terhadap keseluruhan fitur yang terdapat pada sistem informasi sehingga dapat melakukan pengendalian terhadap proses bisnis	☑
	Checking	Melakukan pemeriksaan terhadap laporan penjualan	Pada gambar 5.96. menunjukkan bahwa sistem informasi menyajikan fitur pengolahan laporan penjualan yang dapat dicocokkan dengan pendapatan yang diperoleh	☑
	Evaluation	Melakukan evaluasi yang dijadikan dasar dalam pengambilan keputusan	Pada gambar 5.51. menunjukkan bahwa sistem informasi memiliki fitur menyajikan data history penjualan yang memberikan informasi mengenai kecenderungan produk yang banyak dibeli oleh konsumen	☑
	Inform	Mengetahui mengenai update stock produk	Pada gambar 5.66. menunjukkan bahwa sistem informasi dilengkapi fitur menampilkan update jumlah stock produk secara realtime.	☑
Karyawan	Monitoring	Melakukan pengawasan terhadap ketersediaan stock produk	Pada gambar 5.72. menunjukkan bahwa karyawan (Inventory) dapat melakukan akses terhadap fitur jumlah stock barang	☑
	Inform	Mengetahui mengenai update stock produk	Pada gambar 5.72. menunjukkan bahwa karyawan (Inventory) dapat melakukan akses terhadap fitur jumlah stock barang sehingga dapat memperoleh informasi mengenai jumlah stock secara realtime	☑

4. Conclusion

Based on the information system design for Bintang Multi Spare Parts Store that has been conducted, there are several conclusions that can be drawn, including: the research was conducted on the business process at Bintang Multi Spare Parts Store which includes sales recording, product stock fulfillment, and sales report creation. The current constraints faced by the business in running its business process are the sales recording process, which is still done manually using books, inaccurate and not real-time product stock information, and sales report processing, which is done manually, making it less effective and efficient, and affecting the accuracy of the data. The solution provided to overcome the constraints faced by the business is the design of

a Bintang Multi Spare Parts Store sales information system based on a website that has gone through testing stages. Thus, the designed information system can be said to operate well and is suitable for use as a positive tool in running the business process at Bintang Multi Spare Parts Store.

The designed information system can meet the needs of all parties involved in the business, including: the designed information system enables the owner to supervise the continuity of the business process through the system, obtain real-time information about product stock, check and obtain sales report data more efficiently and accurately. The designed information system enables employees to obtain information about product stock more effectively and efficiently, thus saving time and energy. The information system improves data security and accuracy because the data is stored and processed by the system.

As for the recommendations that can be given for this research and for further research, they include developing a more complex information system with more complete features that can meet the more specific needs of the business, such as recording of stock purchases. Testing the information system with a larger amount of data to ensure that the designed information system performs well under more realistic conditions. Providing training and socialization to employees and business owners on the use of the designed information system so that the information system can be used optimally. Conducting periodic evaluations of the performance of the designed information system to ensure that the information system continues to operate well and meet the needs of the business.

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