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DESIGN AND CONSTRUCTION OF SEWING EQUIPMENT SALES INFORMATION SYSTEM IN NEW WEBSITE BASED GIFT SHOP

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Information System, *Gift Shop*, *Website*

Abstract

Abstract. *Toko Karunia Baru is a sewing equipment shop located at ruko F number 7, Wonokriyo Gombong market, Kebumen, Central Java. In its operations, Toko Karunia Baru still uses manual methods and is not yet computerized. After knowing the problems at Toko Karunia Baru, steps to overcome these problems require an information system that can support Toko Karunia Baru's activities in running its business faster. The purpose of this study is to build a Website-Based Sewing Equipment Sales Information System Design at Toko Karunia Baru that can speed up the recapitulation of sales reports so that they are more efficient. The method used is a prototype, the results of the benefit test show that the average time before using the system is 10.34 and the average time after using the system is 01.58 minutes. With the benefit test using the McCall standard, Correctness was 94.67%, Reliability 91.33% Efficiency was 95%. Thus, it can be concluded that the Design and Construction of a Website-Based Sewing Equipment Sales Information System at the Karunia Baru Store can overcome problems in the utilization of technological facilities and efficiency in managing goods data.*

1. INTRODUCTION

With the increasing development of computer technology, it is increasingly easier for people to carry out their work. People who increasingly demand better activities make rapid technological developments in society. For example, in the field of media, with the existence of media, people also need technological developments in the field of media so that they need accurate, precise and fast information quality. Information technology has become an important part in presenting quality information to the public, therefore an information system is needed

Information systems are an important factor in a job, especially services in the community that have a high level of routine and managed data management. Information systems are used to collect, process and provide information.

Toko Karunia Baru is a sewing equipment shop located at ruko F number 7, Wonokriyo Gombong market, Kebumen, Central Java. In its operations, Toko Karunia Baru still uses manual and non-computerized methods. Data processing that is not computerized, for example using books and recording sales reports, also still uses manual methods which can slow down the preparation of sales reports, the owner also has difficulty in knowing sales and purchase reports periodically so that the owner does not know clearly the goods in and goods out, sales and purchase reports are also still not structured so that they cause data loss or data that has been recorded becomes scattered or even lost, operational sales activities at Toko Karunia Baru also do not use transaction notes, in addition, the owner also does not know clearly how much net income is periodically and there is no recording of what expenses come out of cash

To overcome this problem, an information system is needed that can support the activities of the Karunia Baru Store in running its business faster.

The purpose of this research is to build a Sewing Equipment Sales Information System Design at the Karunia Baru Store Based on a Website that can speed up the recapitulation of sales reports so that it is more efficient.

The benefits of this research are as follows:

1. *The research that has been conducted can be used as reference material and learning resources to compile theses for students who wish to use it and as a means to assess the abilities of final year students.*
2. *This system is expected to increase the efficiency of creating sales reports at the Karunia Baru store.*
3. *As a form of community service and as a means of applying what has been learned and developing the knowledge that has been obtained during lectures at STIKOM Yos Sudarso Purwokerto*

2. LITERATURE REVIEW

2. 1 *Review by(Ichwani et al. 2021), entitled "Website-Based Sales Information System with Prototype Method Approach" this study uses a Prototype model with problem analysis using the PIESCES method. This sales system is a means of information and at the same time an alternative problem solver in the sales recording process and the occurrence of human error. By creating a web-based application, errors in the sales system can be reduced. A web-based information system is a technology that contains various information, transactions and data processing to overcome these problems. The purpose of this study is that a web-based information system can provide informative information, effective promotional media, a wider target market and easier and more time-saving sales services.*

2. 2 *Review by(Grandmother Achmarain, Nugraha, and Indah 2021), entitled "Sales Information System at UD.Ediq Pohgading Sewing Shop" this research was made using the Waterfall method and Unified Modeling Language (UML). The programming language used is PHP. This system*

contains information about UD.Ediq Sewing Shop starting from the product page, dashboard page, customer order page, customer checkout page, customer cart page. This application is made to make it easier for buyers to view and make orders and also expand the marketing area because by using the internet we can access it anytime and anywhere. With this application, it is expected to increase customer satisfaction and product ordering activities become more efficient. The advantage of this system is that buyers can order online without coming to the seller's place. The purpose of this study is to design a website-based product sales information system that is used to meet the needs and facilitate the data processing process from UD.Ediq Sewing Shop.

2. 3 *Review by(Alamsyah 2020), entitled "Web-Based Sales Information System for Satunusa Retail Store Tanjungpinang" this research was made using the Waterfall method The programming language used is PHP and uses MYSQL in database design. Furthermore, the researcher conducted software development systematically and sequentially starting from the highest system level and continuing to the analysis, design, coding, testing and maintenance stages of the system that has been created. The system created by the researcher is very useful especially in store management, namely recording that was previously done manually, took a long time, was inefficient and even caused errors to be better and organized with the system that has been created. The purpose of this research is to make store operations faster and more accurate and increase store potential and all recording of store activities can be done in an organized manner, and produce complete, accurate and actual reports.*

2. 4 *Review by(Ramadan and Purwandari 2018), entitled "Web-Based Sales Information System at PT. Mustika Jati" this research was made using the RAD (Rapid Application Development) method. The method used by the researcher is to analyze and observe the problems faced by PT. Mustika Jati. The researcher conducted direct observation and interviews on the activities and business processes carried out at PT. Mustika Jati with the aim of obtaining more accurate and detailed information and data according to research needs. The purpose of this research is a web-based Information System that is able to help the operational activities of the company PT. Mustika Jati to be better starting from recording, integrated data processing and becoming a place to store data to be structured and can increase the effectiveness and efficiency of performance and time.*

2. 5 *Review by(Cendana and Syafwan nd), entitled "Application Of Customer Relationship Management (CRM) To Increase Sales At UD. Ulong Pian" this study was made using the Customer Relationship Management (CRM) method, the programming language used is PHP and MYSQL as the database server. The system created by the researcher includes: account registration, product marketing, product ordering, stock data and customer assessments, as well as information about discounts and shopping vouchers, cashback for customers. By using the CRM method created by the researcher, it greatly helps UD. Ulong Pian in maintaining relationships with customers and managing customer data. The purpose of this study is to improve the marketing, sales, service systems and increase customer loyalty so that customers remain loyal to UD. Ulong Pian.*

3. RESEARCH METHODS

Research methodology is the science of the stages that must be passed through in a research process, or the science that discusses scientific methods in seeking, developing and testing the truth of knowledge.(Benuf and Azhar 2020) (Benuf and Azhar 2020). In this study, the prototype method was used to design the Sewing Equipment Sales Information System at the Karunia Baru Store using the Codeigniter Framework. A prototype is a version of a potential system that provides an idea for developers and potential users, how the system will function in its finished form.

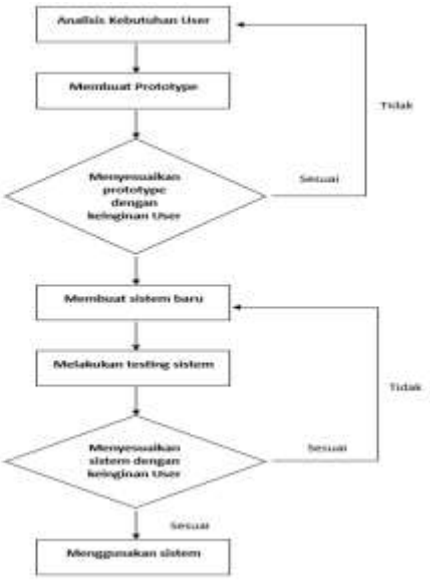

Figure 3. 1 Prototype Method

1. *User Needs Analysis*
   At this stage the developer and owner hold discussions whereThe owner explains to the developer about the desired system requirements.
2. *Making a Prototype*
   At this stage the developer creates a system that has been explained by the owner.
3. *Adapting Prototype to User Desires*
   At this stage, the developer asks the owner of the system that has been created whether it is in accordance with the system's requirements or not.
4. *Creating a New System*
   At this stage the developer uses the prototype that has been created to create a new system.
5. *Perform System Testing*
   At this stage, the system owner conducts a trial of the system being developed.
6. *Adjusting to User's Wishes*
   At this stage the system is adjusted to the user's wishes and system needs, if so the system is ready to use.
7. *Using the System*
   At this stage the user uses the system that has been created

Figure 3. 2 Use Case Diagram

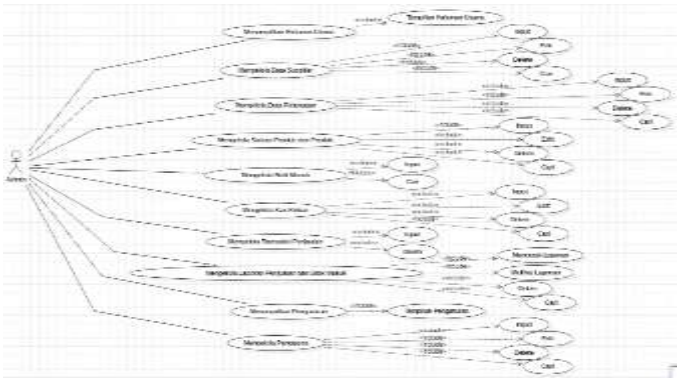

Figure 3. 3 Use Case Diagram Admin

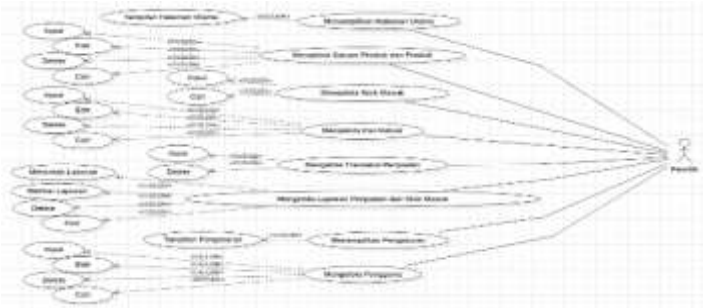

Figure 3. 4 Use Case Diagram Owner

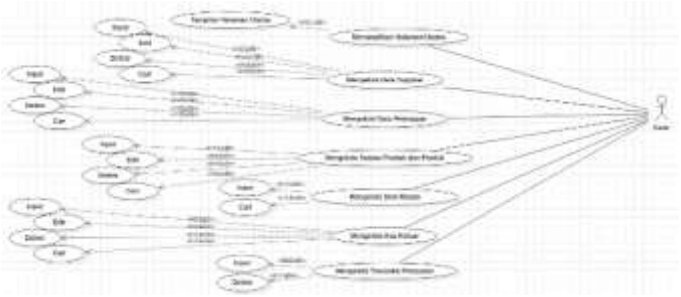

Figure 3. 5 Use Case Diagram Cashier

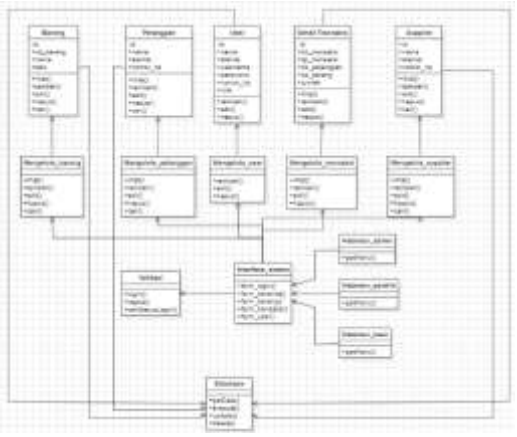

Figure 3. 6 Class Diagram

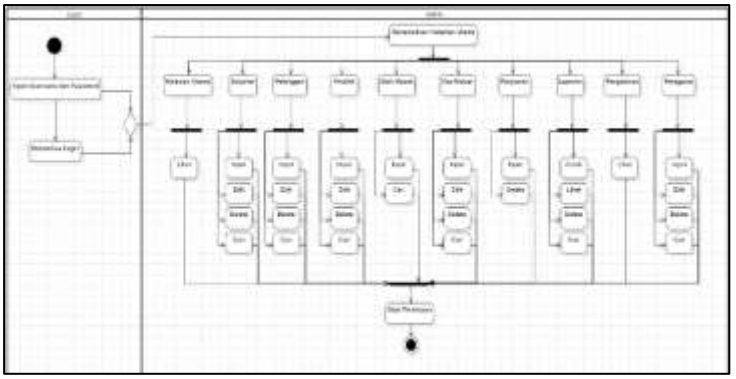

Figure 3. 7 Activity Diagram Admin

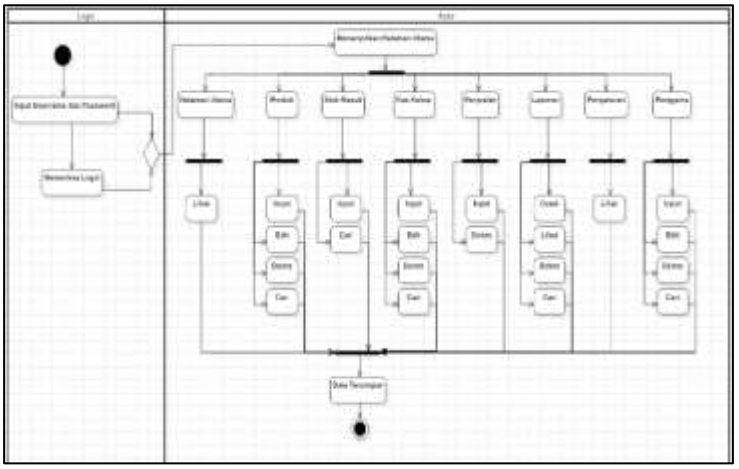

Figure 3. 8 Activity Diagram Owner

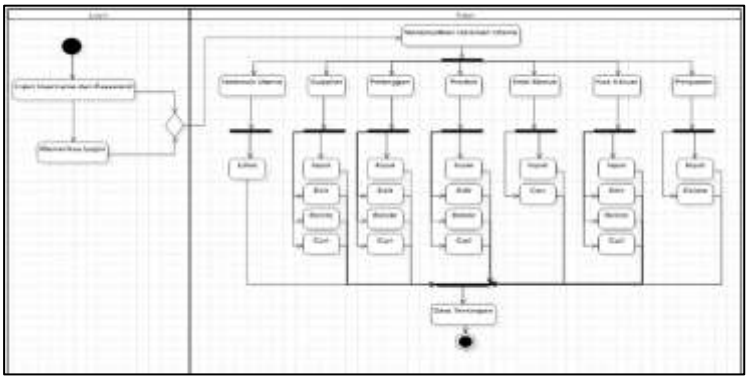

Figure 3. 9 Activity Diagram Cashier

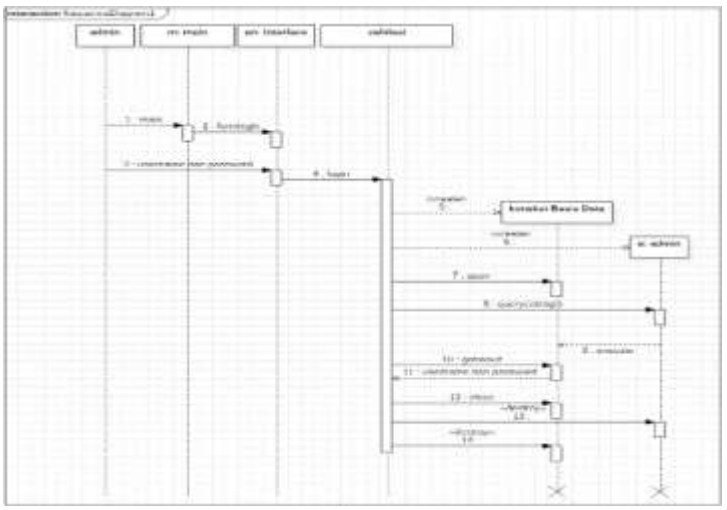

Figure 3. 10 Squence Diagram

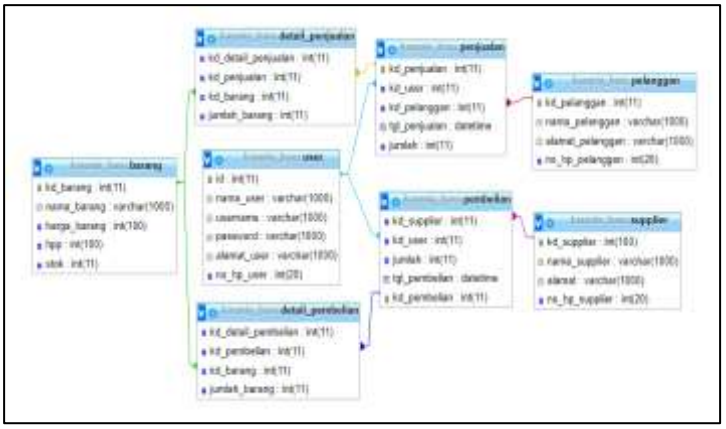

Figure 3. 11 Database Relations

4. RESULT AND DISCUSSION

4. 1 Interface implementation

Figure 4. 1 Login Page View

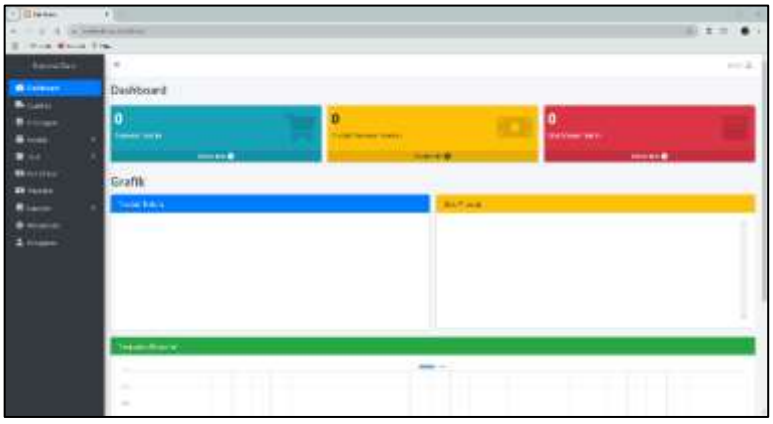

Figure 4. 2 Dashboard Page View

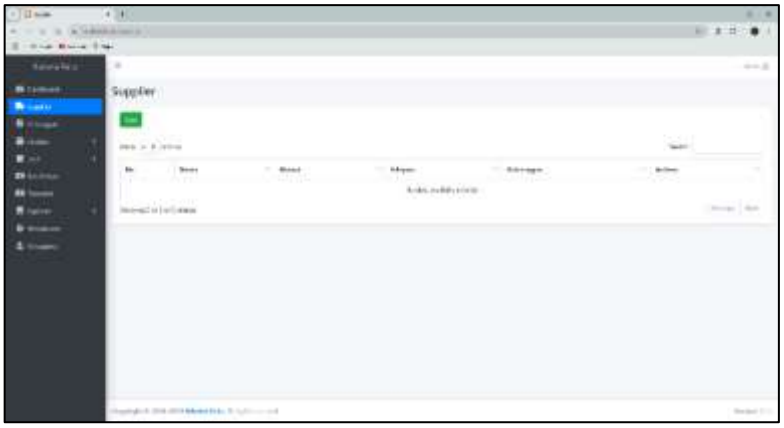

Figure 4. 3 Supplier Page View

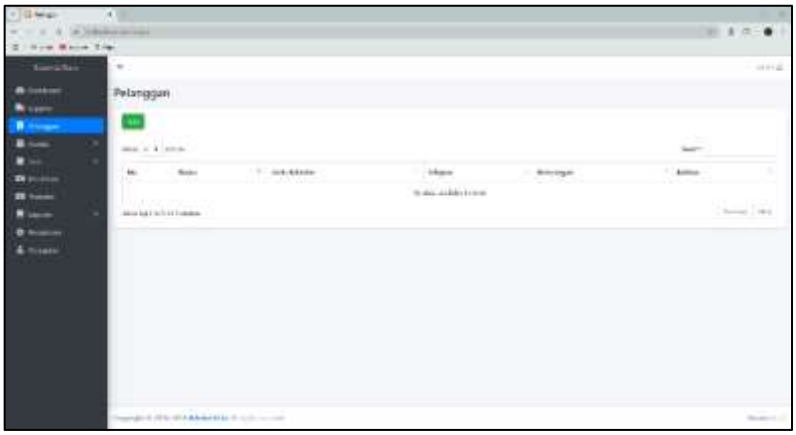

Figure 4. 4 Customer Page View

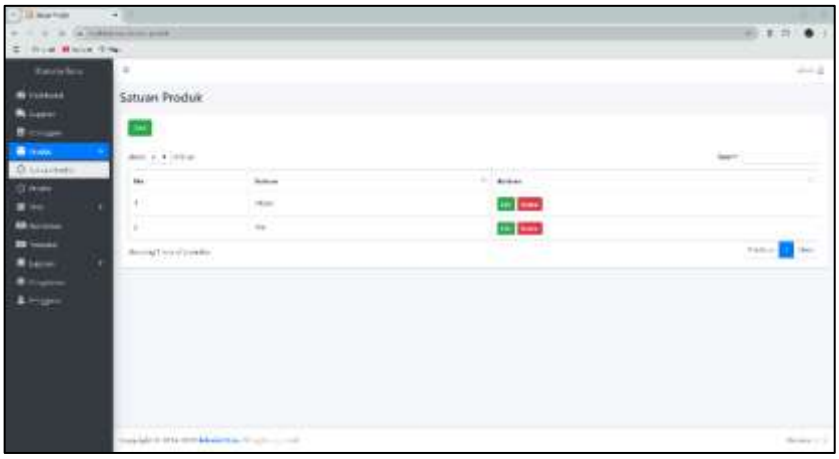

Figure 4. 5 Product Unit Page View

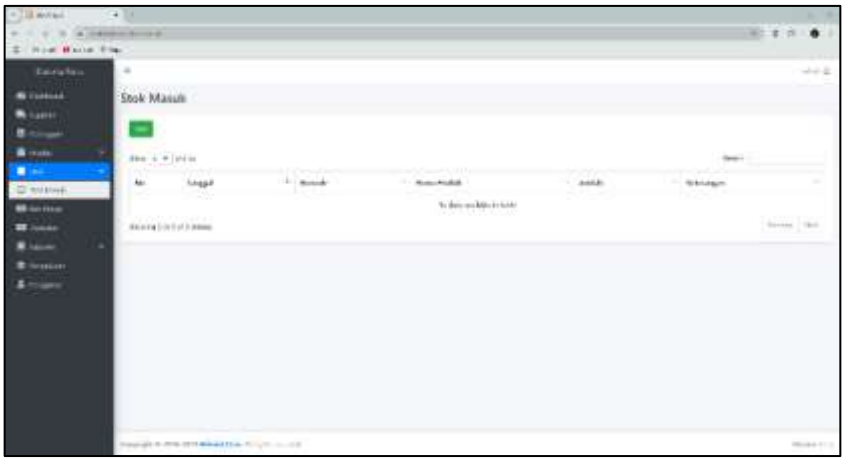

Figure 4. 6 Stock Incoming Page View

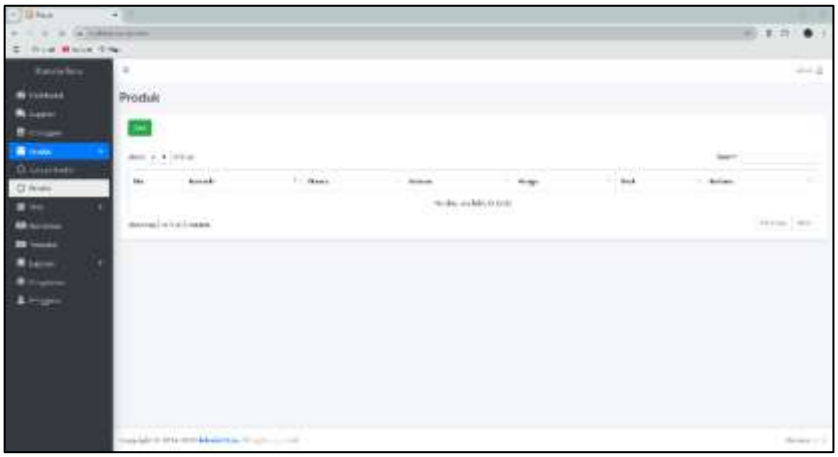

Figure 4. 7 Sales Transaction Page View

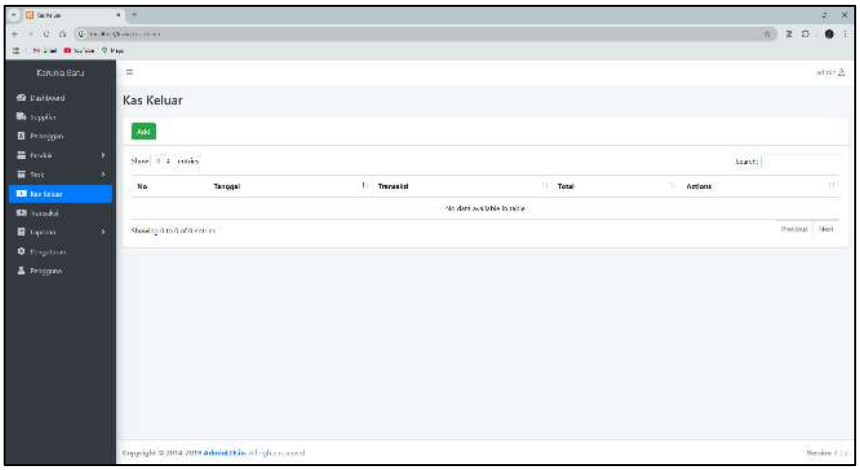

Figure 4. 8 Cash Out Page View

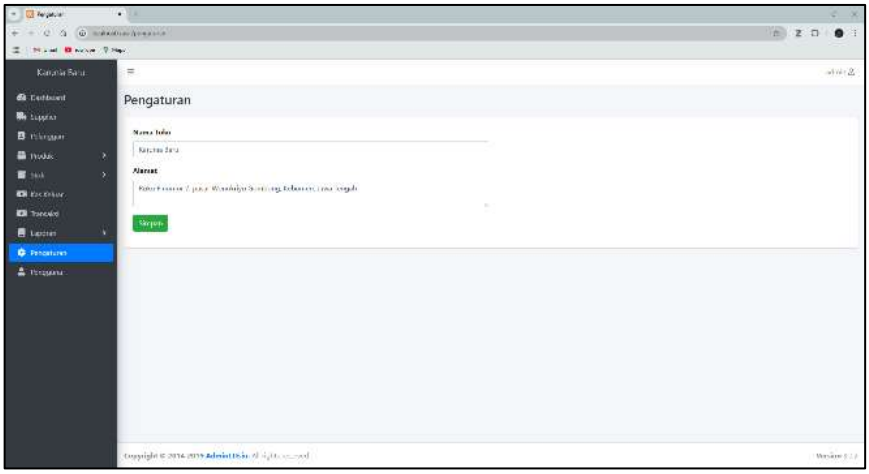

Figure 4. 9 Setting Page View

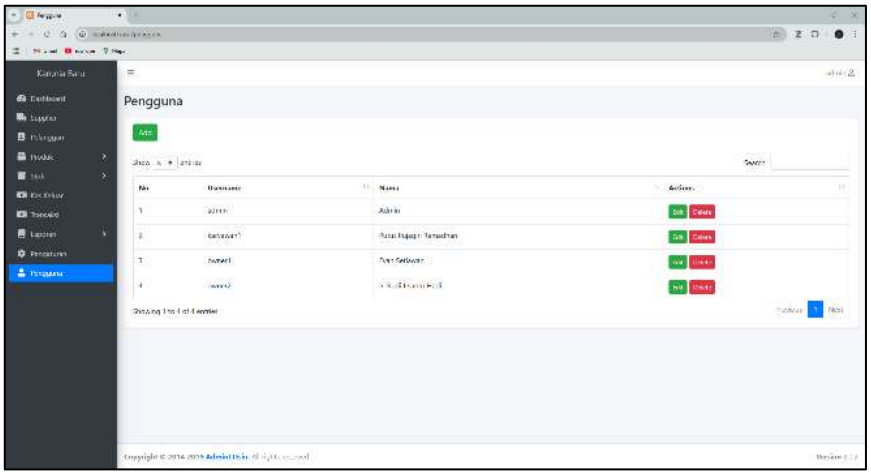

Figure 4. 10 User Page View

4. 2 *System Testing*

4.2.1. White Box Testing

```
public function login()
  {
    if ($this->session->userdata('status') != 'login' ) {                    1
      if ($this->input->post('username')) {
        $username = $this->input->post('username');
        if ($this->auth_model->getUser($username)->num_rows() > 0) {
          $data = $this->auth_model->getUser($username)->row();              2
          $toko = $this->auth_model->getToko();
          if (password_verify($this->input->post('password'), $data->password)) {
            $userdata = array(
              'id' => $data->id,
              'username' => $data->username,
              'password' => $data->password,
              'nama' => $data->nama,                                         3
              'role' => $data->role,
              'status' => 'login',
              'toko' => $toko
            );
            $this->session->set_userdata($userdata);                         4
            echo json_encode('sukses');
          } else {
            echo json_encode('passwordsalah');
          }
        } else {                                                             5
          echo json_encode('tidakada');
        }
      } else {
        $this->load->view('login');                                          6
      }
    } else {
      redirect('');
    }
  }
```

Figure 4. 11 White Box Testing

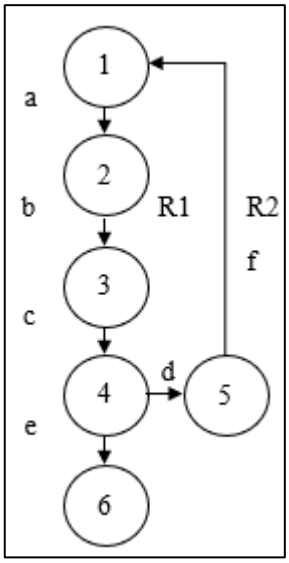

Figure 4. 12 Flowgraph Matrix

	1	2	3	4	5	6
1		a				
2			b			
3				c		
4					d	e
5	f					
6						

Figure 4. 13 Graph Matrix

Based on Flowgraphthat has been created, a Cyclomatic Complexity calculation can be carried out using the following formula:

V(G) = E – N + 2

It is known:

Number of Edges (E) = 6

Number of Nodes (N) = 6

Where is V(G) = E – N + 2

= 6 – 6 + 2

= 2

V(G) = P + 1

= 1 + 1

= 2

So that the results obtained are where there are two paths, namely:

Line 1 = 1 – 2 – 3 – 4 – 6

Line 2 = 1 – 2 – 3 – 4 – 5 – 1 – 2 – 3– 4– 6

4.2.2. Black Box Testing

no	Input	Fungsi	Aksi	Hasil yang diharapkan (output)	Kesimpulan
1	Login	Login *username* dan *password* sesuai	Mengisi *username* dan *password* dengan benar	Notifikasi Login Berhasil dan masuk ke halaman *dashboard*	Berhasil
2	Login	Login *username* dan *password* tidak sesuai	Mengisi *username* dan *password* tidak sesuai	Notifikasi username dan password salah, tetap berada di halaman login	Berhasil
3	Tambah user	Menambah pengguna sistem	Mengisi nama, usename, alamat, nomor HP	Tambah data user berhasil sistem mengarah ke halaman user	Berhasil
4	Tambah barang	Menambah Barang	Mengisi kode barang, nama barang, Harga, HPP, stok	Tambah barang berhasil mengarah ke halaman data barang	Berhasil
5	Edit barang	Mengubah data barang yang dipilih	Mengubah data nilai	Data barang berhasil diubah	Berhasil
6	Hapus barang	Menghapus data barang yang dipilih	Menghapus data barang	Data barang berhasil dihapus	Berhasil

Figure 4. 14 Black Box Testing

4.2.3. *Benefit Test*

i. *UjiManfaat.sav Data is entered into SPSS and saved with the name UjiManfaat.sav*

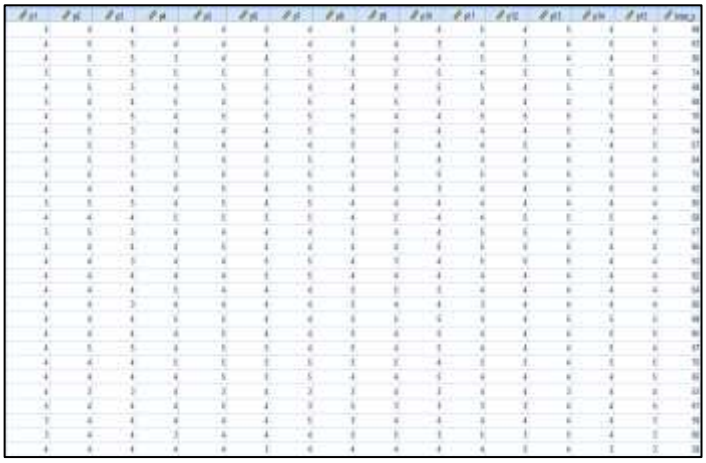

Figure 4. 15 Benefit Test

ii. *Interpretation of Results*

	Pertanyaan	Kriteria		Total	Rata - rata
		SS	S		
Correctness (Kese	1	7	21	28	93,33%
	2	12	17	29	96,67%
	3	11	15	26	86,67%
	4	9	18	27	90%
	5	14	15	29	96,67%
Reliability (Keseri	6	13	16	29	96,67%
	7	15	13	28	93,33%
	8	16	12	28	93,33%
	9	10	17	27	90%
	10	10	15	25	83,33%
Efficienci (Efisien	11	10	18	28	93,33%
	12	11	16	27	90%
	13	11	18	29	96,67%
	14	13	16	29	96,67%
	15	12	15	27	90%

Figure 4. 16 Benefit Test

5. CONCLUSION

The conclusion of the study on the Design and Construction of a Sewing Equipment Sales Information System at Karunia Baru Store Based on a Website, hypothesis testing and benefit testing, it is known that the average time before using the system is 10.34 and the average time after using the system is 01.58 minutes. With the benefit testing, Correctness is obtained94.67%, Reliability 91.33% Efficiency of 95%. Thus it can be concluded that the Design and Construction of a Website-Based Sewing Equipment Sales Information System at Karunia Baru Store can overcome problems in the utilization of technological facilities and efficiency in managing goods data.

6. SUGGESTION

1. *Further system development can be developed into a feature for receiving notifications to customers detailing shopping results via existing social media such as WhatsApp and so on.*
2. *The next system development is that the system is also open to customers so that they can access the system to display and find out the availability of goods without having to come directly.*
3. *The next system development is that the system can be developed to be mobile-based.*

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