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Office Inventory Processing Information System at PT. Dian Ratna Abadi

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ABSTRACT

PT. Dian Ratna Abadi is a company engaged in human resource services. At this time, inventory data collection is still done manually using Microsoft Office applications. Data collection in this way can make it difficult for employees to collect data and produce reports, so that it is not effective and efficient. The research method used is a descriptive method using observation data collection techniques, interviews and literature studies. This research is an Applied Research. The purpose of this research is to design a goods inventory application to provide convenience in processing data to obtain the desired information. From the research conducted, it produces an inventory system that can be used without any errors or errors in the system.

Keyword : Inventory, Systems, Web

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1. INTRODUCTION

The rapid development of technology has influenced a more striking lifestyle(Ngafifi, 2014). That's because technological developments affect the mass communication model to carry out daily life activities(Azizah, 2020). In the digital era, everything seems to have a short, practical process(Aji, 2016). This certainly makes life easier for everyone.

The presence of technology has changed the way the various lines of industry work today(Hamdan, 2018). Every industry is also competing to make technology and the internet as media that make work easier(Catur Yuantari et al., 2016). One that has an impact is the company's inventory system(et al., 2015). Managing inventory is a complex task and optimizing inventory stock can feel like an endless battle. However, it turns out that managing inventory has historically been considered a major investment in a business(Durahman & Munir, 2019).

The application-based inventory system is currently quite developed, this is evidenced by several previous studies. For example, web-based inventory systems include (Susandi & Sukisno, 2018), "the inventory system at the Bina Husada Serdang Midwifery Academy", (Oktaviani et al., 2019), "the inventory system at SMP Negeri 1 Buer", and those carried out (Setioardi & Sukisno, 2019), "The inventory system at SMA Negeri 24 Tanggerang".

PT. Dian Ratna Abadi is a company engaged in human resource services. At this time, inventory data collection is still done manually using Microsoft Office applications. Data collection in this way can make it difficult for employees to collect data and produce reports, so that it is not effective and efficient.

Based on the explanation that has been presented, it is necessary to develop an inventory system in the PT. Dian Ratna Abadi with the hope that the application will provide facilities in processing data to obtain the desired information, especially in terms of inventory management at PT. Dian Ratna Abadi.

2. RESEARCH METHOD

A. Problem analysis

Problem analysis is the decomposition of a complete information system into its component parts with the intention of identifying and evaluating problems, opportunities, obstacles that occur, and expected needs so that improvements can be proposed to create a new system(Haryanto et al., 2019). The first step in creating this new system is to study the current system in an organization and its problems(Andalia & Setiawan, 2015).

The problem that the researcher got from the results of the survey conducted by the researcher was the absence of valid data on the inventory of goods at PT. Dian Ratna Abadi, both inventory data of used goods, damaged goods and consumable goods.

B. Data analysis

Data analysis is an activity to analyze the types of data required by the office inventory information system developed in this study(Rijali, 2019). The data needed by the system developed in this study includes inventory data, purchase data, and damaged inventory data.

C. System Design

System design is part of the research methodology and software development carried out after the analysis stage which aims to provide a detailed description(Wiharjanto, 2012). System design aims to provide a general overview to users in making a new system design to facilitate data processing, so that later it is hoped that applications made are better than manual data processing(Septiana & Waidah, 2020).

The diagrammatic model in this application business process uses the Unified Modeling Language (UML). Where the use of UML includes Use Case Diagrams, Activity Diagrams and Sequence Diagrams. The following is a business process design that has been designed.

1. Use Case Diagram

Use Case Diagramis a UML diagram model that is used to describe the expected functional requirements of a system(Danenas et al., 2020). Actors who interact with this system are users who consist of one type, namely admin. The design of a use case diagram of the system being developed can be seen in the following figure.

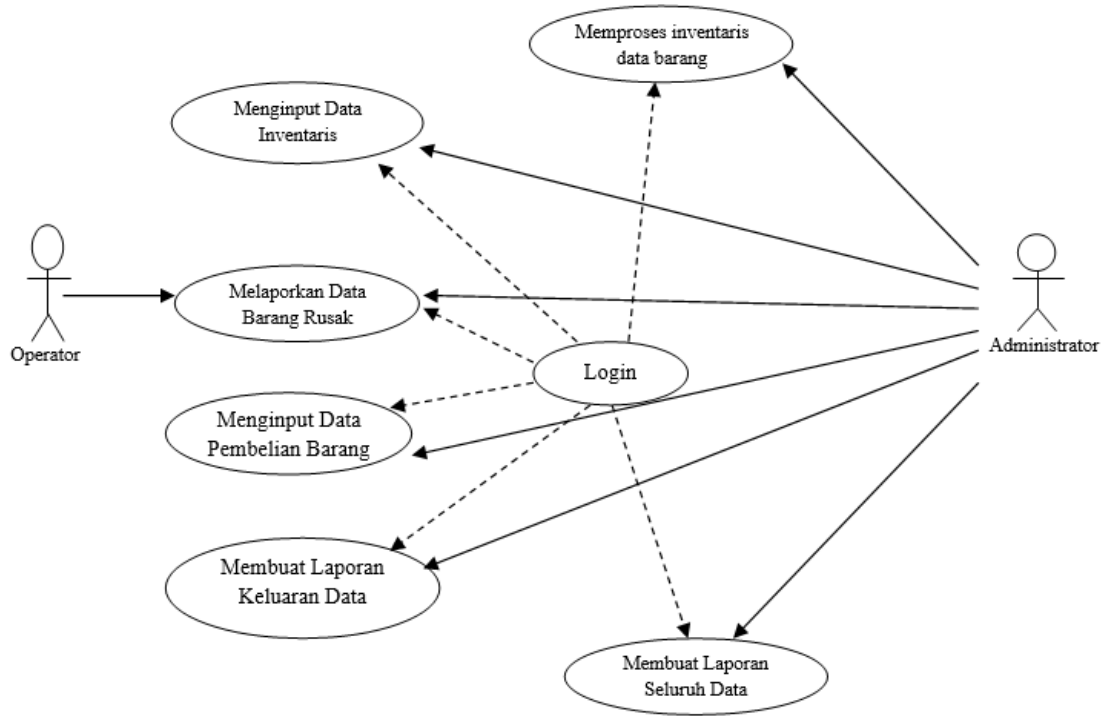


Fig 1. Use Case Diagram

In Figure 1, the activities of actors are users who interact to use the system. Actor activities are used to edit user data by changing the login access data for login. Actor activities use the system to manage stock items as office inventory. Actor activities use the system to manage data on purchases of goods and manage data on returning damaged goods as director of goods.

2. Activity Diagram

Activity diagramis a diagram that can display in detail the sequence of the application process(Ahmad et al., 2019). Information system application design can be described using the following activity diagram.

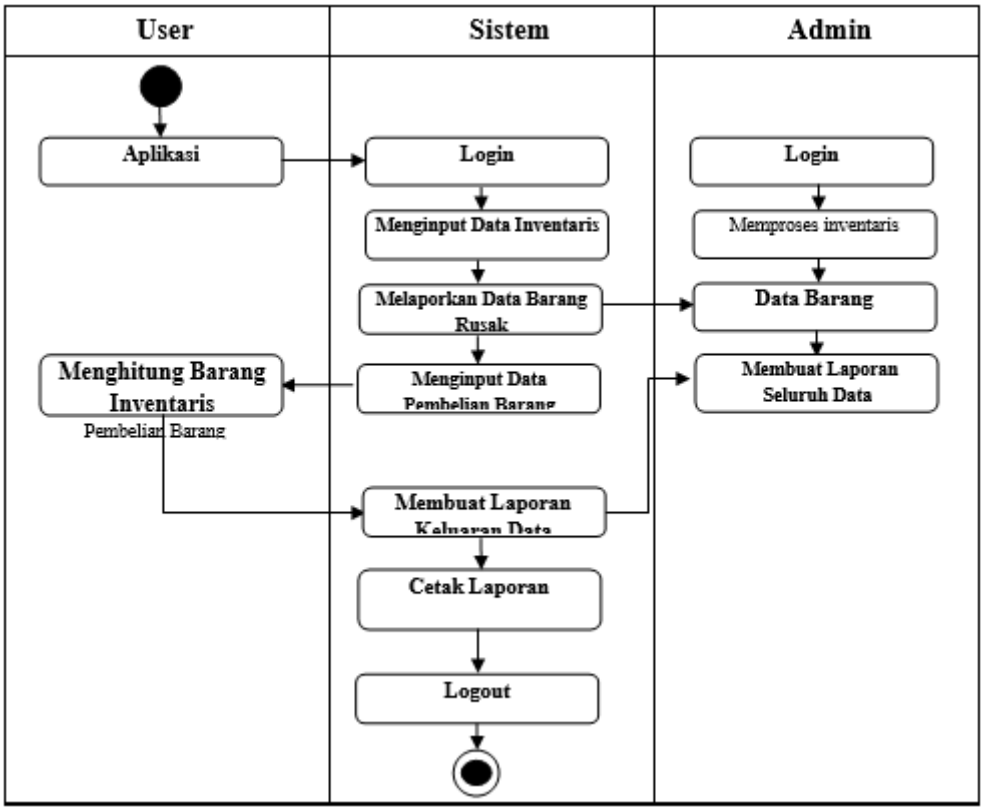


Fig 2. Activity Diagram

Figure 2 shows the user accessing the application, the system displays the login page. Users access the inventory page of goods at the company office. Users access the purchase of goods page to fill stock items at the company office. Users make purchases of goods at company partners and send goods to company offices. The user selects the inspection for damaged goods and goods that have expired. The system exits the application.

3. Sequence Diagram

Sequence diagramcommonly used to describe a scenario or a series of steps carried out in response to an event to produce a certain output(Suendri, 2018). System user objects are of one type, namely admin objects. The following is an overview of the sequence diagram design as follows.

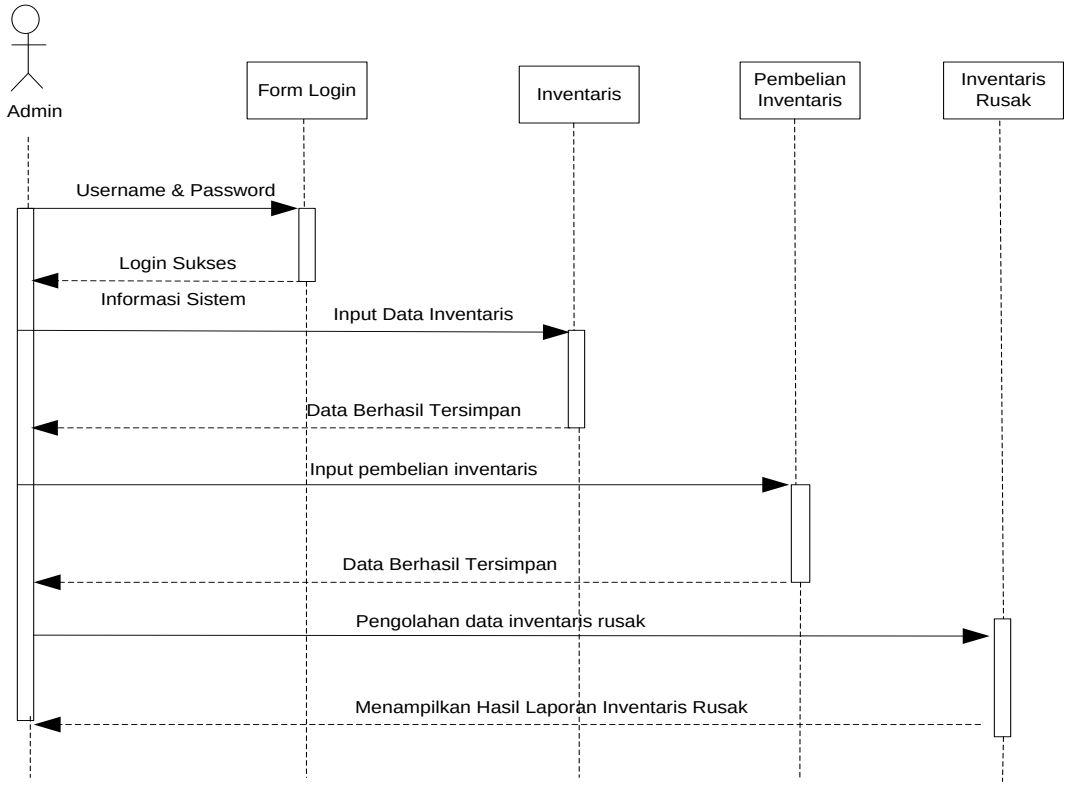


Fig 3. Sequance Diagram

Designing a sequence diagram as seen in Figure 3 can be seen a diagram of the sequence of interactions and work processes on the system by the admin. The admin can then input the inventory data along with the damaged inventory data. Admin checks the inventory purchase data and damaged inventory data. The admin then recapitulates the inventory purchases so as to produce reports on the purchase of inventory and inventory that is damaged. Then the admin uploads the report to be printed for a report to the leader.

3. RESULTS AND DISCUSSION

In accordance with the analysis and design as previously described, namely the research method, this section will describe the results of applications built using designs that have been done previously. In this discussion will be carried out on the results of the system built and the functional system.

The iventory system for the company's goods data management office is built with a system for incoming goods, outgoing goods, and checking goods data, and making reports that can be used with an easy understanding for application system operators, inputting goods data that can be understood how the system works, and making reports. goods that can generate goods reports.

A. Input Inventory Data

The inventory data input page is the page or interface used by the admin to process inventory data. The following is a display of the inventory page as shown in Figure 5.

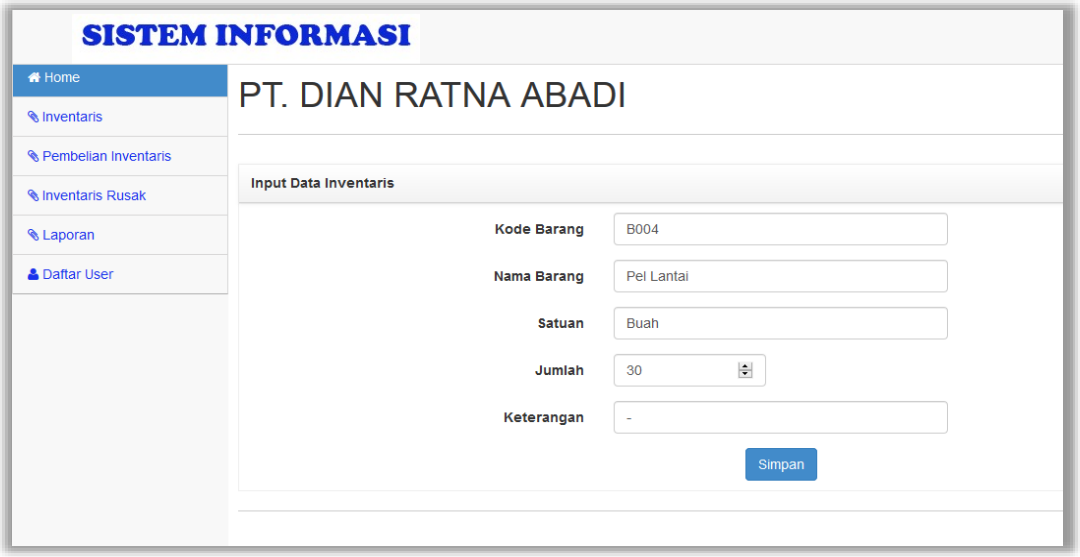


Fig 5. Inventory Data Input page

On this page there are several buttons with their respective functions inputting incoming data and incoming goods input by the operator and after inputting the data press the save button to save the data to the system database.

B. Input Data Purchase Goods

The page to input inventory data purchases is a page or interface used by the admin to process Inventory Purchase data. The following is a display of the Inventory Purchase page as shown in Figure 6.

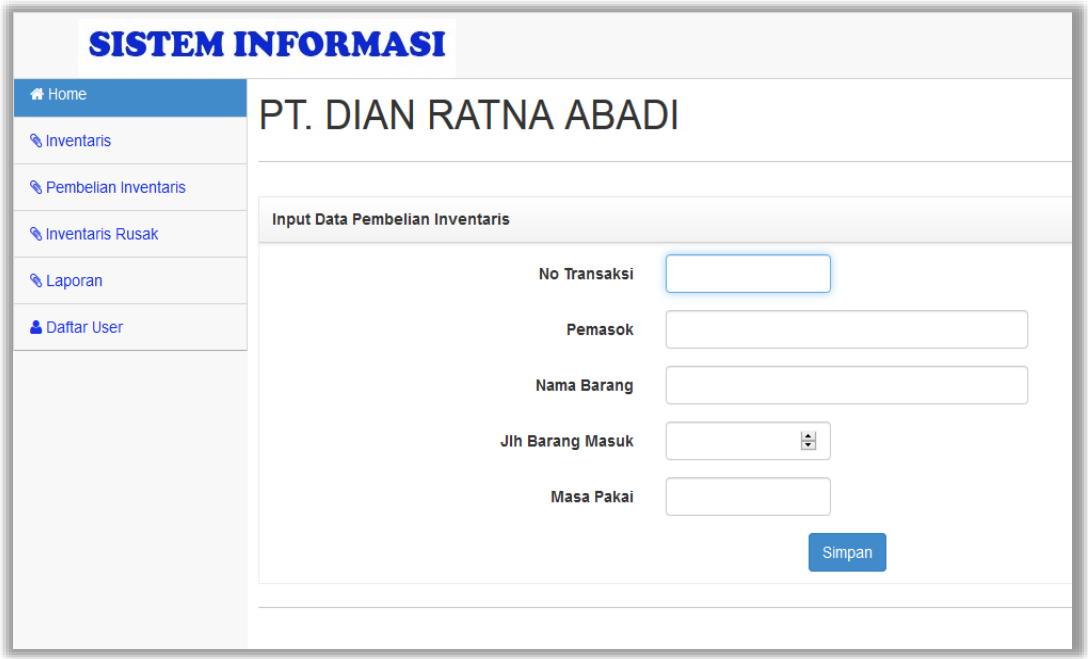


Fig 6. Inventory Purchase Data page

On this page there are several buttons with their functions on the purchase page, the operator will input the data on the entry of goods and the name of the goods with the amount of data on the incoming goods and the validity period of the item, after inputting the data correctly the operator saves the data by pressing the save button.

C. Damaged Goods Data Report

The page for reporting damaged goods data is the page or interface used by the admin to process damaged inventory data. The following is a display of the broken inventory page as shown in Figure 7.

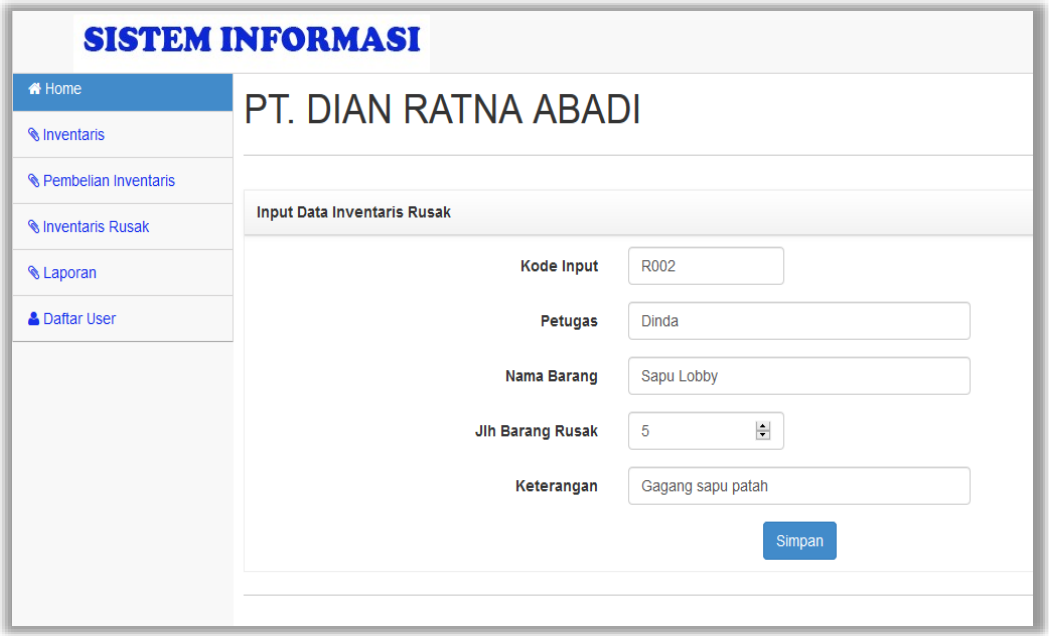
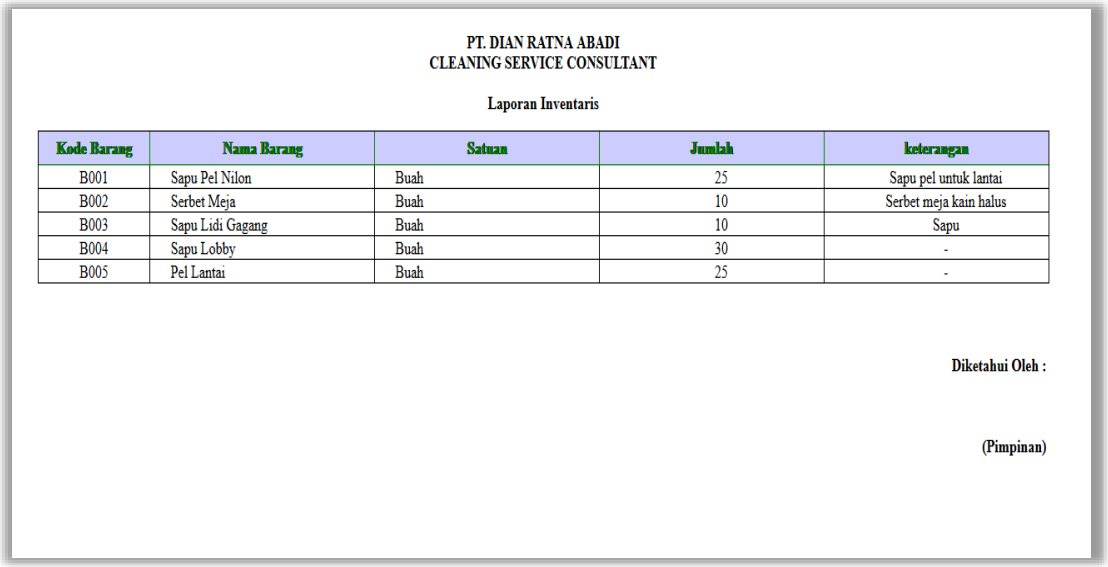


Fig 7. Damaged Goods Data page

On this page there are several buttons with their functions.In this page there are several buttons with their functions on the damaged goods inventory page, the operator enters the damaged goods data and the name of the goods with the number of damaged goods data and information on the cause of the damaged goods, after inputting the data correctly the operator save data by pressing the save button.

D. Inventory Data Report

The report page for all inventory data is the page or interface used by the admin to display inventory data reports. The following is a display of the inventory report invoice page as shown in Figure 8.



PT. DIAN RATNA ABADI
CLEANING SERVICE CONSULTANT

Laporan Inventaris

Kode Barang	Nama Barang	Satuan	Jumlah	keterangan
B001	Sapu Pel Nilon	Buah	25	Sapu pel untuk lantai
B002	Serbet Meja	Buah	10	Serbet meja kain halus
B003	Sapu Lidi Gagang	Buah	10	Sapu
B004	Sapu Lobby	Buah	30	-
B005	Pel Lantai	Buah	25	-

Diketahui Oleh :

(Pimpinan)

Fig 8. Inventory Report page

4. CONCLUSION

Based on research conducted by the author, the following conclusions can be drawn.

1. The inventory system development carried out in this study is a web-based system that can be used by users in managing inventory data that is purchased, damaged or used up.
2. With this inventory system, it makes it easier for PT. Dian Ratna Abadi in creating and reporting inventory data effectively and efficiently.

REFERENCES

Ahmad, T., Iqbal, J., Ashraf, A., Truscan, D., & Porres, I. (2019). Model-based testing using UML activity diagrams: A systematic mapping study. *Computer Science Review*, *33*(July), 98–112. https://doi.org/10.1016/j.cosrev.2019.07.001

Aji, R. (2016). DIGITALISASI, ERA TANTANGAN MEDIA (Analisis Kritis Kesiapan Fakultas Dakwah Dan Komunikasi Menyongsong Era Digital). *Islamic Communication Journal*, *1*(1), 43–54. https://doi.org/10.21580/icj.2016.1.1.1245

Andalia, F., & Setiawan, E. B. (2015). Pengembangan Sistem Informasi Pengolahan Data Pencari Kerja Pada Dinas Sosial Dan Tenaga Kerja Kota Padang. *Komputa : Jurnal Ilmiah Komputer Dan Informatika*, *4*(2), 93–97. https://doi.org/10.34010/komputa.v4i2.2431

Azizah, M. (2020). Pengaruh Kemajuan Teknologi Terhadap Pola Komunikasi Mahasiswa Universitas Muhammadiyah Malang (UMM). *Jurnal Sosiologi Nusantara*, *6*(1), 45–54.

Catur Yuantari, M., Kurniadi, A., & Kesehatan, F. (2016). Pemanfaatan Teknologi Informasi Untuk Meningkatkan Pemasaran Hasil Pertanian Di Desa Curut Kecamatan Penawangan Kabupaten Grobogan Jawa Tengah. *Techno.COM*, *15*(1), 43–47.

Danenas, P., Skersys, T., & Butleris, R. (2020). Natural language processing-enhanced extraction of SBVR business vocabularies and business rules from UML use case diagrams. *Data and Knowledge Engineering*, *128*(February), 101822. https://doi.org/10.1016/j.datak.2020.101822

Durahman, N., & Munir, S. (2019). Sistem Informasi Inventaris Data Barang Di Pt Nata Bersaudara Sejahtera Menggunakan Metode Garis Lurus. *Jurnal Teknik Informatika*, *7*(1), 1–6.

Hamdan, H. (2018). Industri 4.0: Pengaruh Revolusi Industri Pada Kewirausahaan Demi Kemandirian Ekonomi. *Jurnal Nusantara Aplikasi Manajemen Bisnis*, *3*(2), 1. https://doi.org/10.29407/nusamba.v3i2.12142

Haryanto, Aoliya, I., & Siahaan, E. N. (2019). Rancangan Sistem Informasi Pengadaan Barang Pada Koperasi Karyawan Aqua Group Dengan Metodologi Berorientasi Obyek. *Seminar Nasional Energi & Teknologi (SINERGI)*, 111–120.

Ngafifi, M. (2014). Kemajuan Teknologi Dan Pola Hidup Manusia Dalam Perspektif Sosial Budaya. *Jurnal Pembangunan Pendidikan: Fondasi Dan Aplikasi*, *2*(1), 33–47. https://doi.org/10.21831/jppfa.v2i1.2616

Oktaviani, N., Nurlaily, & Widiarta, I. M. (2019). Sistem Informasi Inventaris Barang Berbasis Web Pada Smp Negeri 1 Buer. *Jurnal JINTEKS*, *1*(2), 160–168.

Rijali, A. (2019). Analisis Data Kualitatif. *Alhadharah: Jurnal Ilmu Dakwah*, *17*(33), 81. https://doi.org/10.18592/alhadharah.v17i33.2374

Septiana, C., & Waidah, D. F. (2020). Perancangan Sistem Pengolahan Data Pasien Pada Klinik Sayang Ibu Dengan Menggunakan PHP Dan MYSQL. *Jurnal TIKAR*, *1*(2), 104–117.

Setiawan, R., & Ikhwana, A. (2015). Pengembangan Aplikasi Pengelolaan Inventaris Barang Berbasis Web Di Sekolah Tinggi Teknologi Garut. *Jurnal Algoritma*, *14*(2), 452–462. https://doi.org/10.33364/algoritma/v.14-2.452

Setioardi, M. A., & Sukisno. (2019). *Perancangan Sistem Informasi Pengelolaan Barang Inventaris Berbasis Web Di SMAN 24 Kabupaten Tangerang*. *7*(1), 29–35.

Suendri. (2018). Implementasi Diagram UML (Unified Modelling Language) Pada Perancangan Sistem Informasi Remunerasi Dosen Dengan Database Oracle (Studi Kasus: UIN Sumatera Utara Medan). *Jurnal Ilmu Komputer Dan Informatika*, *3*(1), 1–9. http://jurnal.uinsu.ac.id/index.php/algoritma/article/download/3148/1871

Susandi, D., & Sukisno, S. (2018). Sistem Informasi Inventaris Berbasis Web di Akademi Kebidanan Bina Husada Serang. *JSiI (Jurnal Sistem Informasi)*, *5*(2), 46–50. https://doi.org/10.30656/jsii.v5i2.775

Wiharjanto, Y. (2012). Perencanaan Sistem Penjualan Tunai Berbasis Web Sebagai Sarana Informasi Produk Bagi Konsumen Pada Pt. Warna Ac. *Nominal, Barometer Riset Akuntansi Dan Manajemen*, *1*(1). https://doi.org/10.21831/nominal.v1i1.986