ITEJ Juli-2021, Volume 6 Nomor 1 Page 1 - 34



ITEJ

Information Technology Engineering Journals

eISSN: 2548-2157



Url:

https://syekhnurjati.ac.id/journal/index.php/itej Email: itej@syekhnurjati.ac.id

Web-Based E-commerce Application at Narmada Furniture Store

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Abstract

Narmada Furniture Store is a store engaged in the sale of household furniture items such as tables, chairs, mattresses, cabinets, and others. At the Narmada Furniture Store, the sales system used today is a conventional system, namely the buyer must come directly to the store to see the products offered. At this time the Narmada Furniture Store does not yet have an e-commerce application, so it is difficult to offer products to consumers who are outside the city. In addition, it also results in consumer ignorance of the existence of Narmada Furniture Stores. The selling process of the Narmada Furniture Store is only carried out if there are consumers who come to the store, while many consumers both in Cirebon and outside the city of Cirebon cannot come or do not know the existence of the Narmada Furniture Store.

In analyzing the system, a description of the current system procedures is carried out, so that the system's strengths and weaknesses can be evaluated. In the process of making the system begins with the system analysis stage. Then the process modeling is described using flowmaps, context diagrams, data flow diagrams (Data Flow Diagrams) and Entity Relationship Diagrams (ERD). After the analysis stage is complete, it is continued with the design stage, by making table designs, table relations, program structures, program input and output designs. With this e-commerce application, it is expected to make it easier for consumers to obtain information about product specifications offered by Narmada Furniture Stores. Make it easy for Narmada Furniture Stores in selling their products to consumers who are inside and outside the city of Cirebon. Consumers can find out where the Narmada Furniture store is by using this e-commerce application service and can buy products without having to come to the store. And make it easier for leaders to make decisions based on the output of sales transaction reports and sales charts per month.

Keywords: Application, E-commerce, Online Store, Sales, Products, Furniture, Furniture Stores.

I. Introduction

The development of technology at this time is growing so rapidly, almost all aspects of human life use technology. Technology has become a necessity that cannot be separated from lifestyle, even in its development, humans are increasingly dependent on technology. In the business sector, the development of information technology has had a significant impact in improving business activities, particularly in terms of data management that provides support for business decision making and in terms of service improvement. Many companies are limited in marketing and selling their products, usually only covering the area of the company itself, this is due to limited marketing. One way to increase the area of marketing is by using the internet. With the internet, people from all over the world can connect easily. The internet, which is used as a technical infrastructure, is a set of global networks that are connected to one another to be used as a means of disseminating information using a set of protocols.

Narmada Furniture Store on Jalan Raya Karangsembung Once, Kec. Karangsembung Regency. Cirebon is a shop engaged in the sale of household goods such as tables, chairs, mattresses, cabinets, dining tables, clotheslines, and various other furniture products. Currently the sales system at the Narmada Furniture Store has not used a computerized system, the work is still manual where it still uses a handwriting system to recap consumer data, ordered products and the sales process. Data storage is still not neat and prone to loss or damage because it is still handwritten in manual notes. In addition, Narmada Furniture Store also wants product marketing activities to be further enhanced by utilizing internet access.

II. THEORETICAL BASIS

A. Application

- 1. According to Hasan Abdurahman and Asep Ririh Riswaya (2014: 62), an application is a ready-to-use program that can be used to execute commands from the user of the application with the aim of getting more accurate results in accordance with the purpose of making the application, the application has the meaning of problem solving, which uses one of the application data processing techniques that usually race on a desired or expected computing or expected data processing.
- 2. Understanding the application in general is an applied tool that is functioned specifically and integrated according to its capabilities, the application is a computer device that is ready to use for the user.
- 3. Understanding the application according to experts
- 4. 1. Understanding applications according to Jogiyanto (1999: 12), is the use in a computer, instructions (instructions) or statements (statements) that are arranged in such a way that the computer can process input into output.
- 5. 2. The definition of application according to the Big Indonesian Dictionary (1998: 52), is the application of system design to process data using the rules or provisions of a particular programming language. An application is a computer program that is created to do and carry out specific tasks from users.
- 6. 3.According to Wikipedia, an application is a subclass of computer software that utilizes direct computer capabilities to perform a task the user wants.
- 7. 4. According to Rachmad Hakim S, Application is software that is used for certain purposes, such as processing documents, managing windows & games (games), and so on.

8. According to Harip Santoso, an application is a group of files (forms, classes, reports) that aim to perform certain interrelated activities, such as payroll applications, fixed asset applications, and others..

B. Database

According to Tata Sutabri (2014: 94), the database system is a collection of computer data that is integrated, organized, and stored in a way that facilitates retrieval. The two main goals of the database concept are minimizing repetition and achieving data independence. Data independence is the ability to change the structure of the data without making changes to the program that processes the data.

According to Tata Sutabri (2014: 92), the following is the definition of a database according to James Martin in the book Database Organization: "A database is a collection of connected data (interrelated data) that are stored together on a media, without facing each other or not needing to be together. a data collection (controlled redundancy) in a certain way so that it is easy to use or display again; can be used by one or more application programs optimally; data is stored without being dependent on the program that will use it; Data is stored in such a way that addition, retrieval, and modification can be done easily and in a controlled manner..

From this understanding it can be concluded that the database system has several important criteria, namely::

- a. It is data oriented and not program oriented.
- b. Can be used by several application programs without changing the database.
- c. Can expand easily both volume and structure.
- d. Can meet new systems easily.
- e. Can be used differently.
- f. Minimum data redundancy.

C. Database Technology

According to Tata Sutabri (2014: 91), Database management is part of information resource management. Databases ensure that enterprise data resources accurately reflect the physical systems they represent. Data resources are stored in secondary storage media which can take the form of sequential or direct access. Magnetic tape is the most popular sequential storage medium and magnetic disks (hard drives) are the primary means of achieving direct access.

Before the era of database systems, every company experienced limitations in data management because of the way it was arranged in secondary storage data. Attempts to overcome this obstacle include sorting and merging files, extensive computer programming to search and match file records and file indexes, and links built into data records. The database concept is built on indexes and linkages to achieve a logical relationship between multiple files.

The objectives of the database system include providing flexible access facilities, maintaining data integrity, protecting data from damage, legal use, and providing facilities for shared use, such as data connectivity, reducing or minimizing data redundancy, eliminating data dependencies. of application programs, standardize the definition of data elements, and increase the productivity of information systems personnel.

D. Understanding E-Commerce

According to Tata Sutabri (2014: 134), Electronic commerce or e-commerce is the distribution, purchase, sale, marketing of goods and services through electronic systems such as the internet, television, web, or other computer networks. E-commerce involves electronic funds transfer, electronic data exchange, automated inventory management systems, and automated data collection systems.

The information technology industry sees e-commerce activities as the application and application of e-business related to commercial transactions, such as electronic transfer of funds, supply chain management, e-marketing or online marketing, online transaction processing, electronic data interchange. /EDI), and others.

E-commerce is part of e-business, where the scope of e-business is broader, not just commerce but also includes collaborating with business partners, customer service, job vacancies, and others. In addition to web network technology, e-commerce also requires database technology, e-mail, and other forms of non-computer technology such as goods delivery systems and payment instruments for e-commerce.

E-commerce was first introduced in 1994 when electronic banners were first used for promotional and advertising purposes on a web page. According to Forrester Research, e-commerce generated sales of US\$12.2 billion in 2003. According to another report in October 2006, non-travel online retail revenue in the United States is forecast to reach a quarter of a trillion US dollars by 2011.

In addition, e-commerce is the application of information technology that can improve the relationship between companies and their customers. The use of this information technology then produces new forms of relationships such as:

- 1. B2B (Business to Business)
- 2. B2C (Business to Customer)
- 3. *C2C* (Customer to Customer)
- 4. C2B (Customer to Business)

With the existence of e-commerce, information technology has an important role for companies to promote, socialize services, provide special discounts, including cooperation between business partners and business people, as well as opening new businesses in potential areas. These activities can be done offline or online through the official website web.

a. Business to Business (B2B)

Business to Business (B2B) describes trade transactions between companies, such as between manufacturers and wholesalers, or between wholesalers and retailers. The contrast is business to customer (B2C) and business to government (B2G).

The volume of B2B transactions is much higher than the volume of B2C transactions. The main reason is that in a typical supply chain there will be B2B transactions involving sub-components or raw materials, and only one B2C transaction, specifically the sale of finished products to end consumers. For example, a car manufacturer makes several B2B transactions such as buying tires, glass for windshields, and rubber hoses for vehicles. The last transaction, the finished vehicle is sold to consumers, then it becomes a B2C transaction.

B2C is also used in the context of communication and collaboration. Many companies are now using social media to connect with their consumers (B2C), however, they are now using similar tools in business so that employees can connect with one another. When communication takes place between employees, it can be referred to as "B2B" communication.

B2B is a seller of products or services that involves several companies and is carried out with an automation system. Generally the companies involved are suppliers, distributors, factories, shops, and others. Most transactions take place directly between the two systems. This model has been widely applied. For example, what happened between Walmart and its suppliers.

The advantages of B2B, if done right, can save costs, increase revenue, speed up delivery, reduce administrative costs, and improve service to customers

(Korper and Ellis, 2002). For example, General Motors costs to buy parts or consumables using traditional methods (via paper and telephone) about \$100. Using a B2B system, General Motors estimates that ordering costs fall by less than \$10 (Elbert and Griffin, 2003).

In an increasingly competitive business, companies are required to be more innovative and have advantages that can be offered to customers and business partners. One of them is the concept of B2B cooperation. This form of cooperation can help efforts to cost efficiency in procurement of goods and the most important thing is that it can make it easier for business partners. There is a principle that says, the interests of the customer always come first.

This principle becomes evident in the provision of B2B services. This service is fully supported by adequate information technology so that it is ready to provide convenience and satisfaction to customers. The benefits and advantages of B2B services are:

- a. a. Save time and practical. The menu on the dedicated B2B service site only provides the customer's related product needs, without having to bother looking for it in the product catalog.
- b. b.Effective and efficient. B2B customers do not need to go through a lengthy price negotiation process because it was done at the beginning of the cooperation agreement.
- c. c. The profit is big. Reduce company costs for administration, transaction correspondence, or for market price research.
- d. d. Confidentiality is safe and secure. The system uses a high level of security with a 256-bit secure socket layer protocol to maintain customer data security.
- e. Transparent transactions. This service supports good corporate governance. Every transaction is easy to monitor because the system always provides a track record of transactions via e-mail notifications to buyers (purchasing department), superiors (approvers), to users, or those who are entitled to receive this information in the company according to the agreement. This increases the company's control over the transaction process.

b. Business to Customer (B2C)

Business to Customer (B2C) is an e-business activity in direct service to consumers through goods or services. With direct sales on the internet and orders can be directly made by consumers because the costs are already listed.

B2C in the field of travel and tourism can help tour packages. The business model of B2C can be seen in customers, service providers, and online retail companies, such as Yahoo! Groups and WSJ.com.

B2C helps small and medium-sized entrepreneurs get rid of middlemen, saves costs, and provides convenience. Theoretically, profits will be easier to achieve through this B2C model, because costs do not grow proportionally with business growth, in the sense that business growth will undoubtedly be faster than the costs incurred.

The need for working capital is lower than in the conventional business case so that prices can be reduced to a lower level. The advantages of the B2C concept are:

- a. Price offers are subject to change at any time (up to date).
- b. Shopping can be faster and easier.
- c. Call center services are listed on the website.

Market growth B2C

At the beginning of its growth, existing retail companies have not played an important role in the B2C market. Websites that are built generally only function as a

publication medium and are not interactive. The main goal is to attract the attention of visitors through the website to visit stores in the real world (physical stores).

During 2001, it was estimated that there were around 75 million internet users who participated in transactions in online stores (emarketer.com, July 2001). According to an eMarketer report (May 2001), world revenue from B2C in 2000 ranged from 53 to 238 dollars and increased rapidly in 2004 to between 428 to 2134 billion dollars. Even today, the B2C market is growing. Many retail companies combine their physical store (physical retail store) with a website (online presence).

The success of B2C is basically due to the factor of offering high quality goods at low prices and a lot of it is due to the provision of services to consumers who are quite good.

Products on the Market B2C

So, which products with such characteristics are expected to generate large sales volumes in the B2C market? Following are some of its characteristics :

- a. Famous brand.
- b. Digitized goods, such as e-books.
- c. Affordable prices.
- d. Items that are quite often sought after in daily life (such as vegetables, medicine).
- e. Items that cannot be found easily in traditional shops.

c. Customer to Customer (C2C)

C2C is an e-commerce model that is mushrooming in Indonesia. Examples of C2C are classified ads and impromptu online bookstores (owned by individuals who generally take advantage of free blogging services such as blogspot). C2C occurs when an individual sells products/services directly to other individuals.

C2C is one of the e-commerce models in this case consumers sell directly to other consumers, or it can also be said as buying and selling transactions between consumers. C2C activities can be carried out in various ways via the internet. Auctions are one of the best known examples of C2C activity. Millions of people make buying and selling transactions on eBay and hundreds of auction websites. Other C2C activities include online advertising based on classification, personal services, exchanges, virtual property sales and support services. The characteristics of C2C are::

- a. In the consumer-to-consumer scope, it is special because transactions are carried out only between consumers, such as auctions of goods.
- b. The internet is used as a means of exchanging information about products, prices, quality, and services.
- c. Consumers also form a community of users or fans of a product. Therefore, if there is dissatisfaction with a product, it will immediately spread widely through the community.

The success of organizations, both private, public, and military, depends on their ability to regulate the flow of goods, information, and money to enter, circulate within, and out of the organization. E-supply chain management is a management concept in which companies try to utilize internet technology to integrate all company partners, especially those related to the supply system of raw materials or resources needed in the production process. In designing e-supply chain management there are several segments that must be considered, these segments are::

- a. Customer and service management.
- b. Supply chain planning and manufacturing (manufacturing and supply chain planning).
- c. Management of supplier relationships (supplier relationship management).
- d. Management of logistics resources (logistics resource management).
- e. Architecture of the e-supply chain management environment (architecting the e-SCM environment).

d. Customer to Business (C2B)

Customer to Business (C2B) is a business model where consumers (individuals) create value, and companies consume this value. For example, when a consumer writes a review, or when a consumer provides useful ideas for the development of a new product, then this individual is creating value for the company, if the company adopts the input. The excluded concepts are crowd sourcing and cocreation.

Another form of C2B is the electronic commerce business model, where consumers can offer products and services to companies and the company pays for them. This business model is a complete reversal of the traditional business model where companies offer goods and services to consumers (B2C). We can see examples of this on blogs or internet forums where the author offers a link back to an online business facilitating the purchase of some product (such as a bookstore on Amazon.com), and the author may receive income from successful affiliate sales.

The type of economic relationship that qualifies as a reverse business type. The emergence of the C2B scheme is due to major changes; connecting a large group of people to a two-way network, after establishing some sort of commercial relationship.

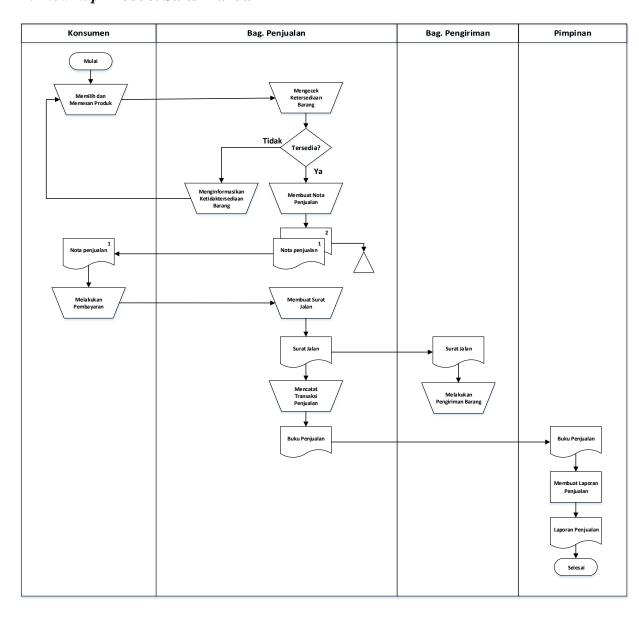
C2B, sometimes known as consumer for business, is the newest business e-commerce model. In this model, individual customers offer to sell products and services to companies that are ready to buy them. This business model is the opposite of the traditional B2C model.

C2B has come about as a result of two major changes. Unlike traditional media, which are unidirectional, the internet is two-way, enabling all kinds of relationships. In addition, the decline in technology costs means that people now have access to technologies such as powerful computer systems, audio and video capture systems, and other digital technologies that were once the exclusive territory of large corporations.

As mentioned above, this model is a model for individuals who sell goods or services to companies. An example is Priceline (www.priceline.com), where consumers offer specific prices at which they want to buy various goods and services, including airline tickets and hotels. Regarding the payment method, according to the transaction method itself, also virtual (virtually), whether in the form of L/C, money transfer, credit card, P-Cards, or other instruments.

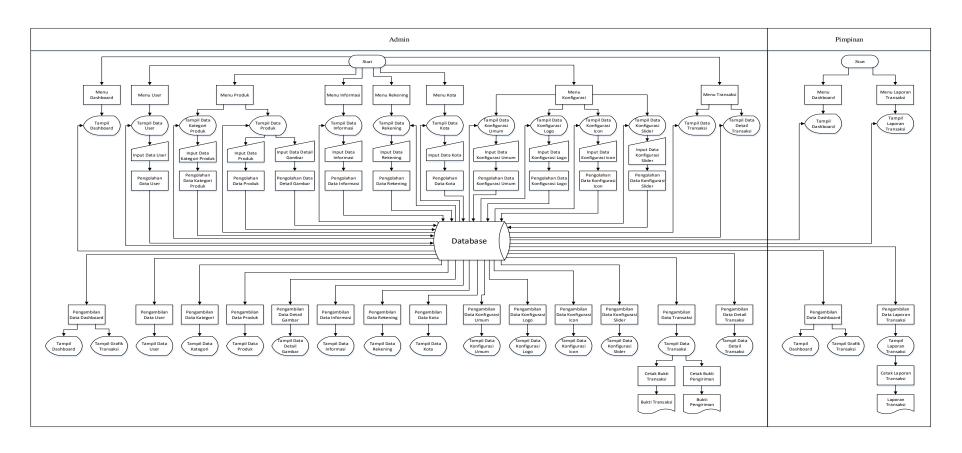
III. ANALYSIS AND DESIGN

A. Flowmap Product Sales Manual

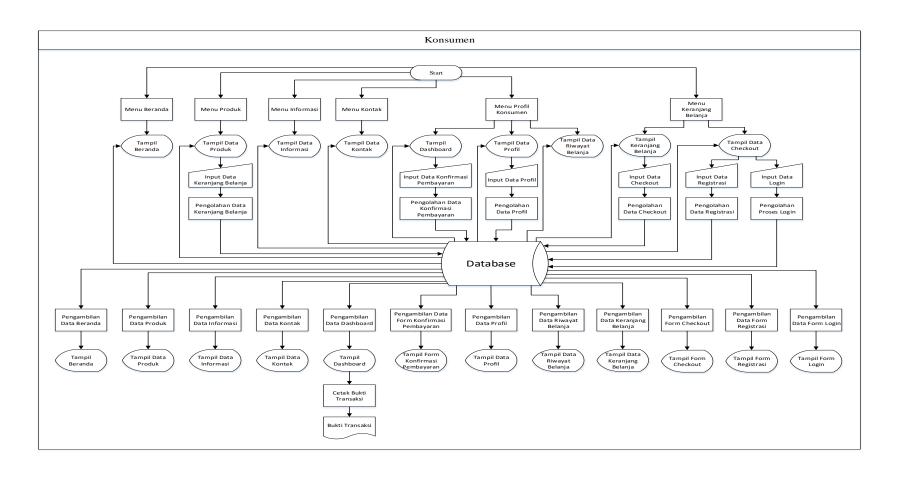


B. Flowmap of Computerized E-Commerce Applications at Narmada Furniture Store

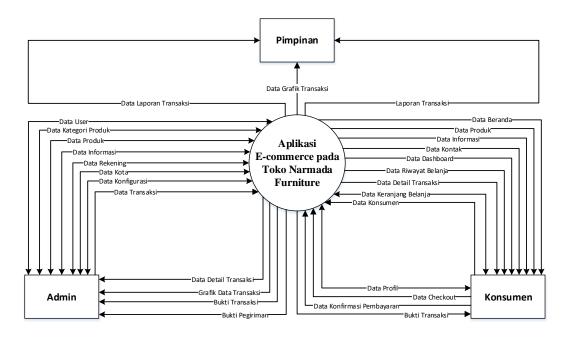
1. Admin and Leadership Section

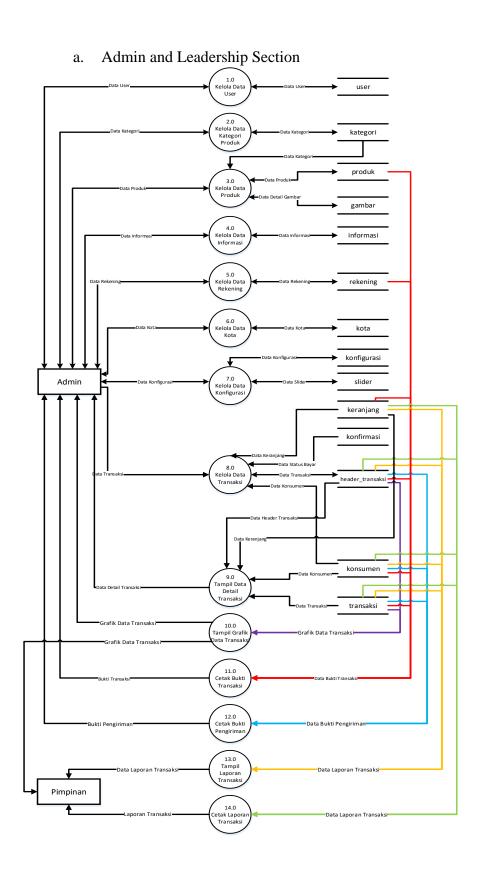


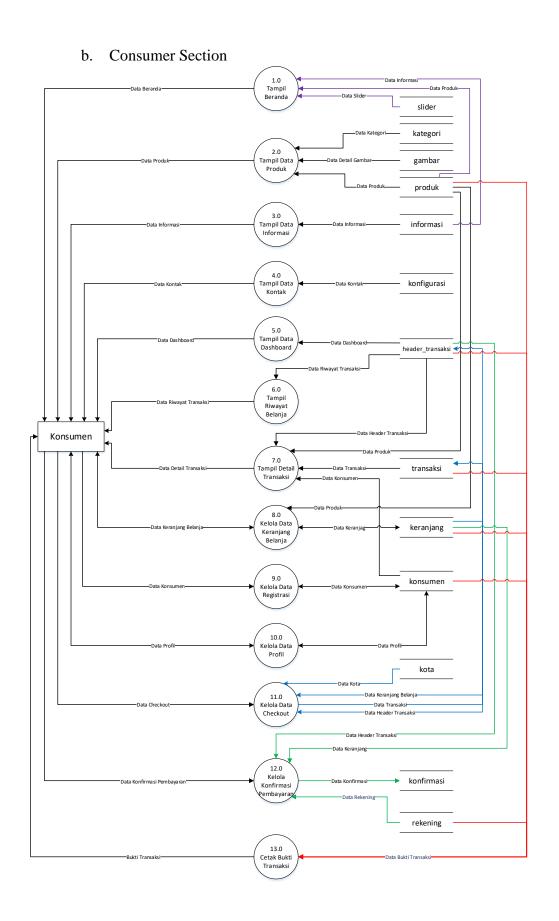
2. Consumer Section

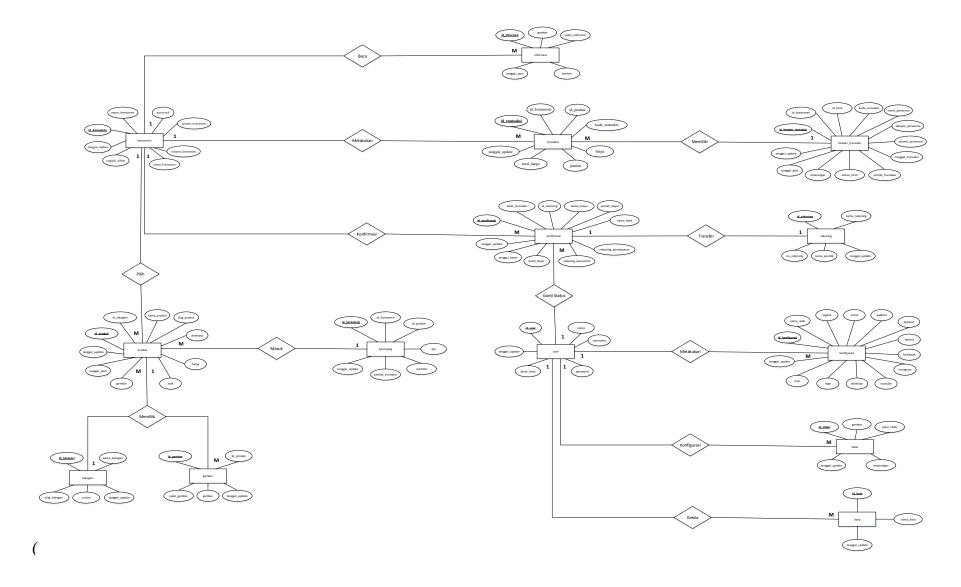


B. Context Diagram

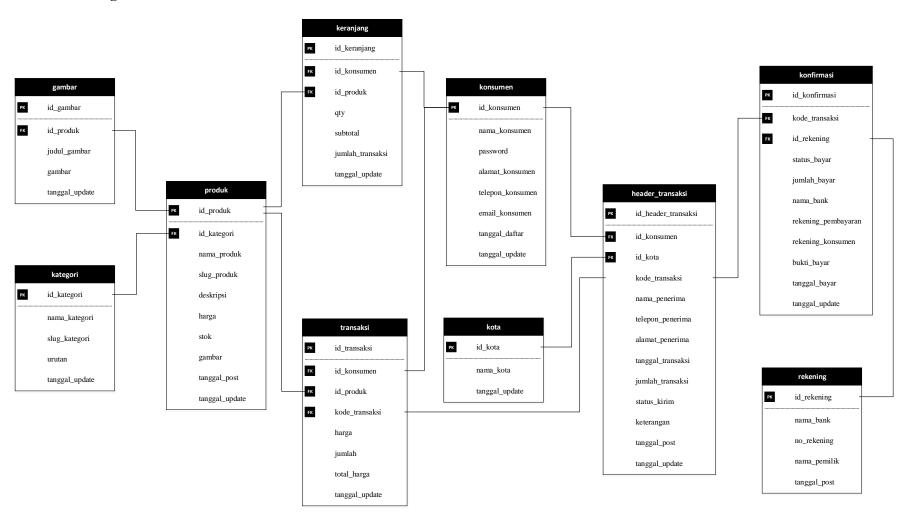








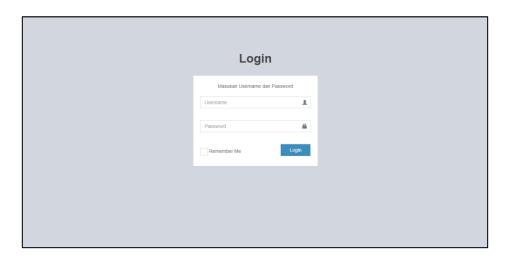
Relation Diagram Table



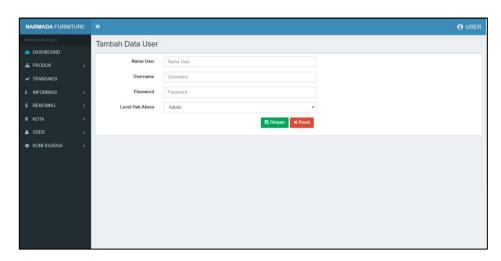
IV. IMPLEMENTATION

1. Input Display

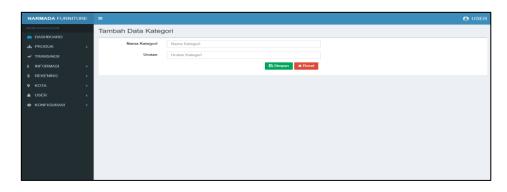
a. Admin Section.



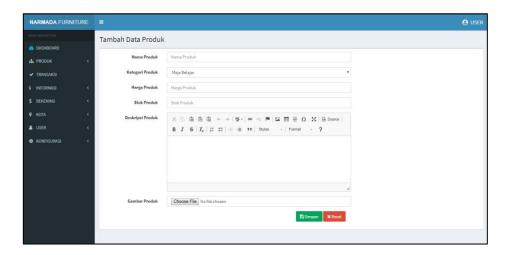
1. User Data Input Page



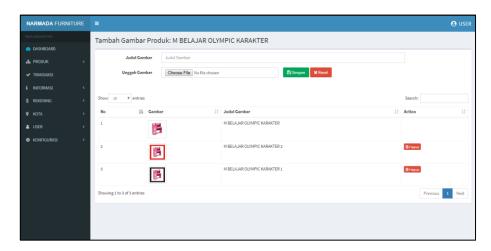
2. Category Data Input Page



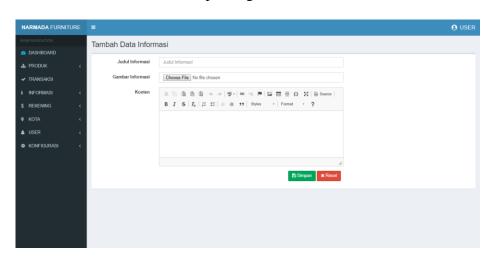
3. Product Data Input Page



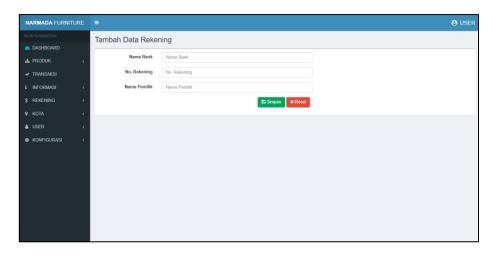
4. Image Detail Data Input Page Halaman



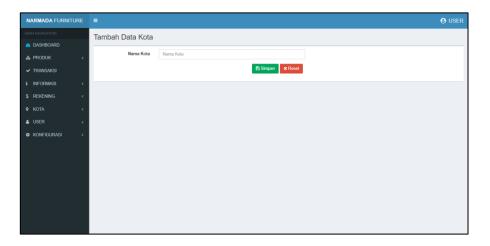
5. Information Data Input Page



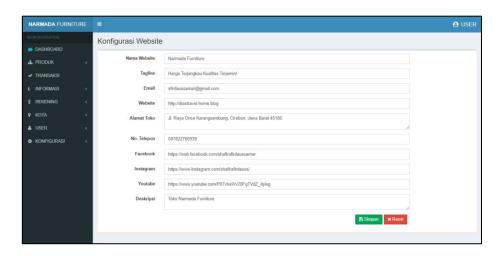
6. Account Data Input Page



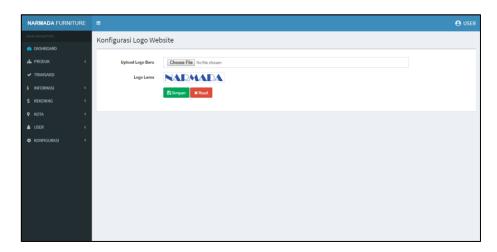
7. City Data Input Page



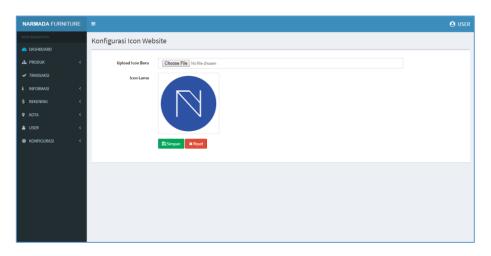
8. General Configuration Data Input Page



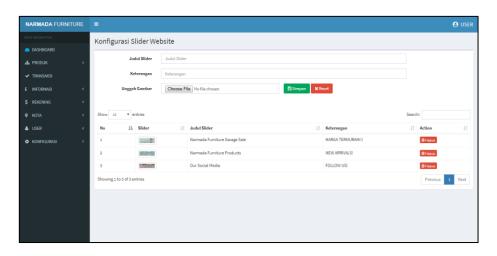
9. Logo Configuration Data Input Page



10. Icon Configuration Data Input Page

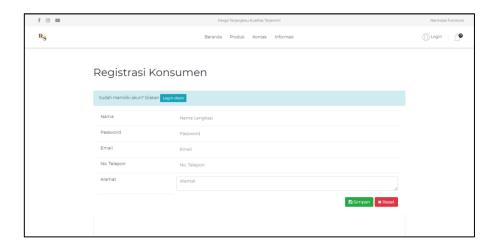


11. Slider Configuration Data Input Page

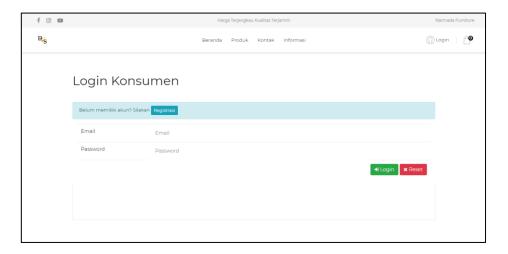


b. Consumer Section

1. Registration Data Input Page



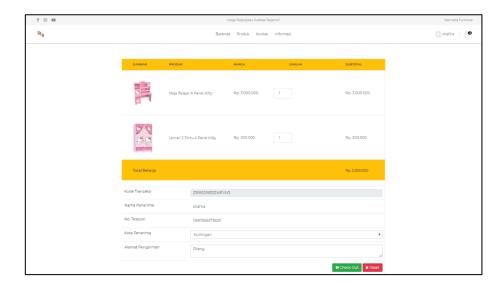
2. Login Data Input Page



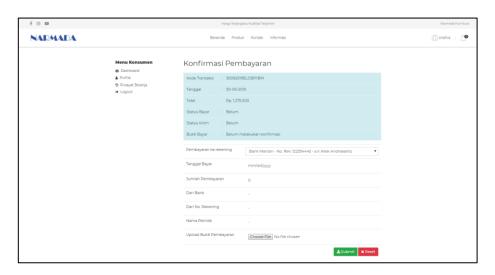
3. Profile Data Input Page



4. Checkout Data Input Page



5. Payment Confirmation Data Input Page

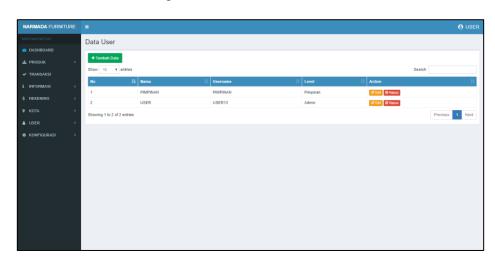


2. Output Display

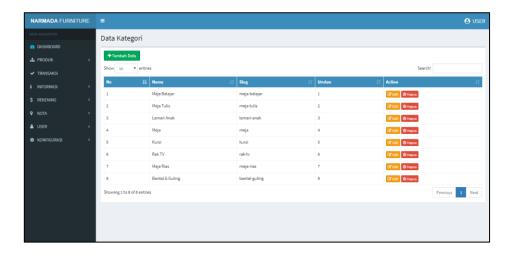
- a. Admin Section
- 1. Admin Dashboard Page



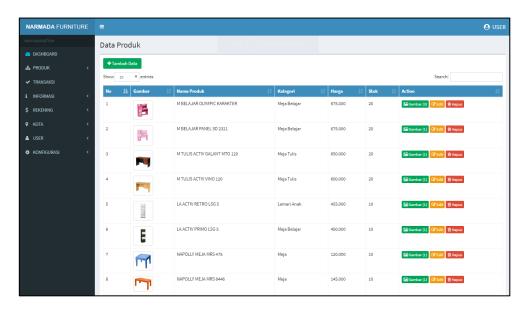
2. User Data Page



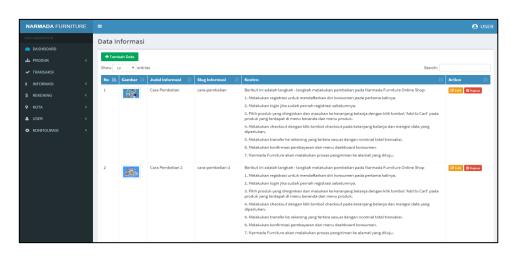
3. Category Data Page



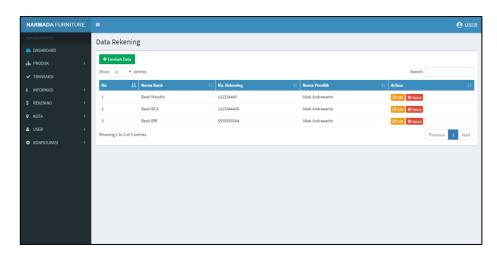
4. Product Data Page



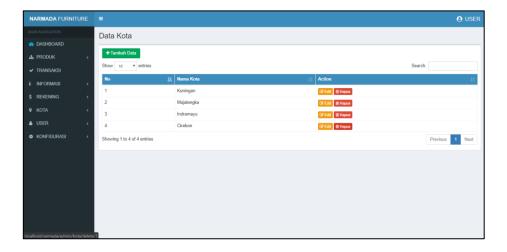
5. Information Data Page



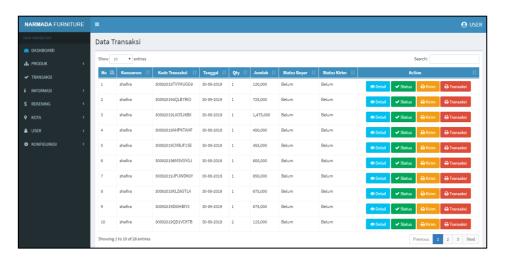
6. Account Data Page



7. City Data Page



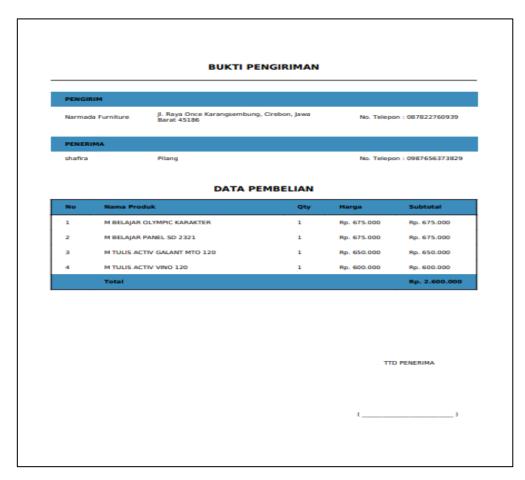
8. Transaction Data Page



9. Transaction Detail Data Page



10. Print Proof of Delivery Page



11. Print Proof of Transaction page

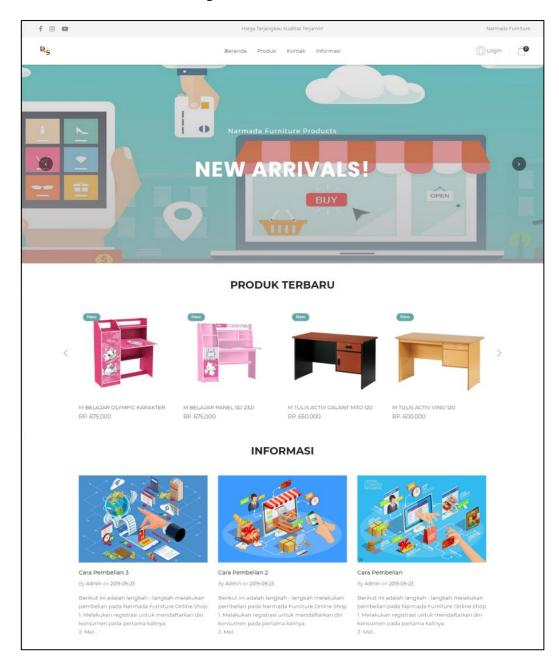
DETAIL TRANSAKSI NARMADA FURNITURE

| Detail Konsumen | |
|---------------------------|------------------------------|
| Nama | : shafira |
| Email | : sfirdaussamar@gmail.com |
| No. Telepon | : 0987656373829 |
| Alamat | : Pilang |
| Detail Penerima | |
| Nama Penerima | : shafira |
| No. Telepon | : 0987656373829 |
| Alamat Penerima | : Pilang |
| Detail Transaksi | |
| Kode Transaksi | : 30092019VJURNALR |
| Tanggal | : 13-01-2019 |
| Total | : Rp. 2.600.000 |
| Status Bayar | : Konfirmasi |
| Status Kirim | : Belum |
| Bukti Bayar | : Belum melakukan konfirmasi |
| Tanggal Bayar | : 13-01-2019 |
| Jumlah Bayar | : Belum melakukan konfirmasi |
| Pembayaran dari | : Belum melakukan konfirmasi |
| Pembayaran ke rekening | : Belum melakukan konfirmasi |
| Keterangan | : |

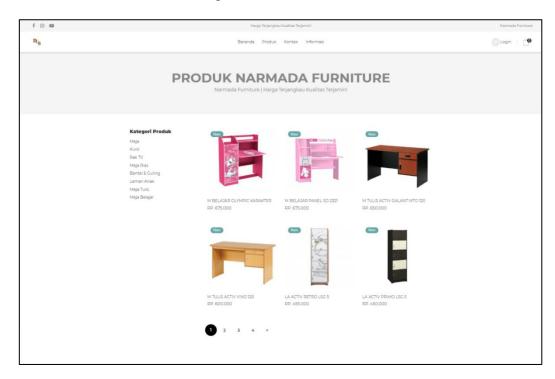
| No | Nama Produk | Qty | Harga | Subtotal |
|----|------------------------------|-----|-------------|---------------|
| 1 | M BELAJAR OLYMPIC KARAKTER | 1 | Rp. 675.000 | Rp. 675.000 |
| 2 | M BELAJAR PANEL SD 2321 | 1 | Rp. 675.000 | Rp. 675.000 |
| 3 | M TULIS ACTIV GALANT MTO 120 | 1 | Rp. 650.000 | Rp. 650.000 |
| 4 | M TULIS ACTIV VINO 120 | 1 | Rp. 600.000 | Rp. 600.000 |
| | Total | | | Rp. 2.600.000 |

b. Consumer Section

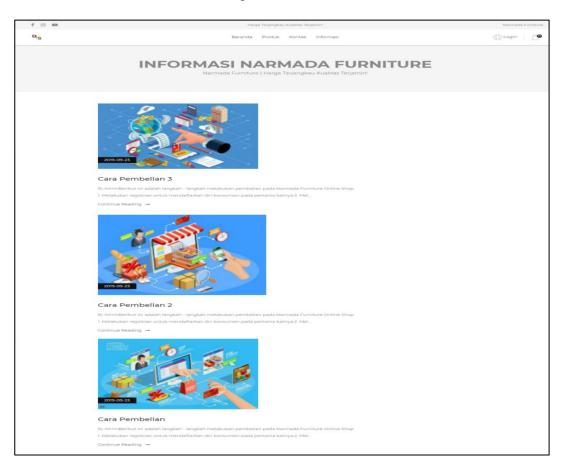
1. Home Data Page



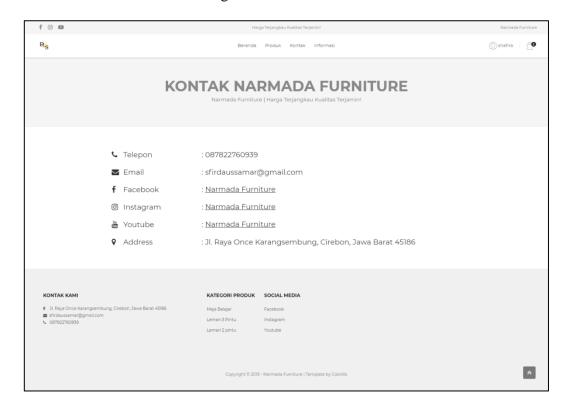
2. Product Data Page



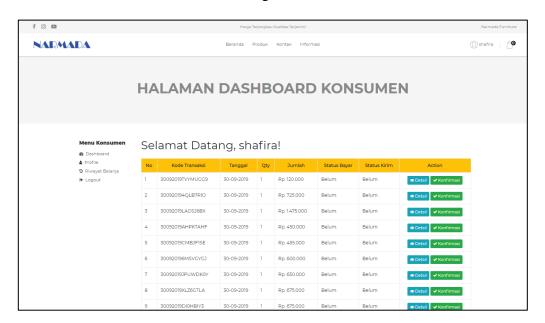
3. Information Data Page



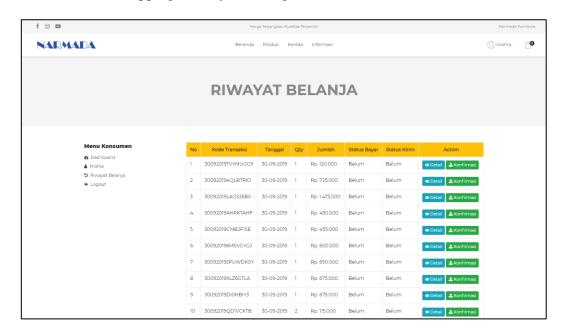
4. Contact Data Page



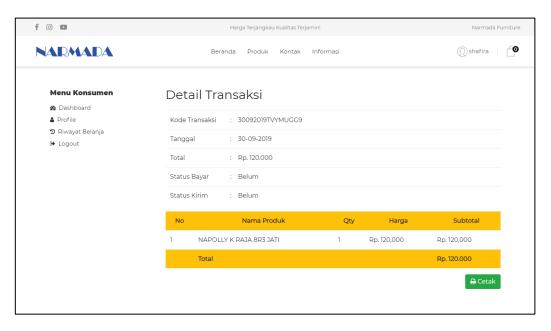
5. Consumer Dashboard Page



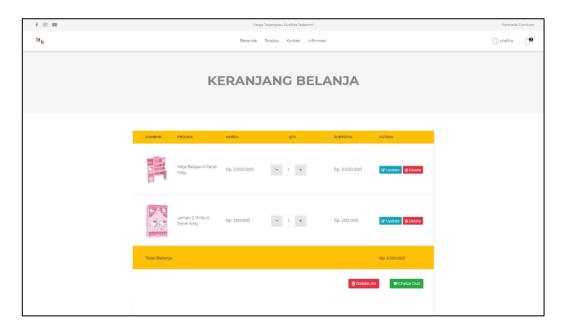
6. Shopping History Data Page



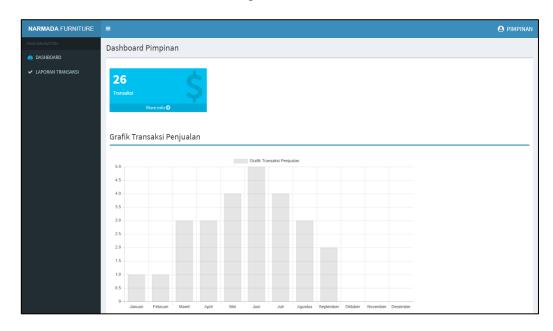
7. Transaction Detail Data Page



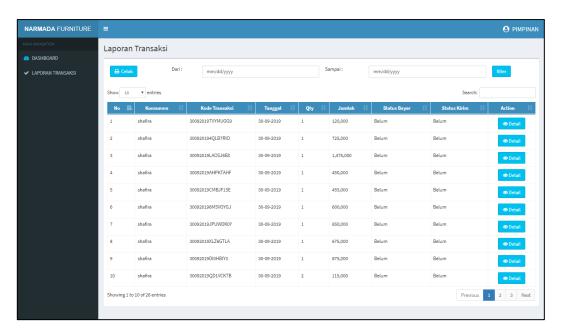
8. Shopping Cart Data Page



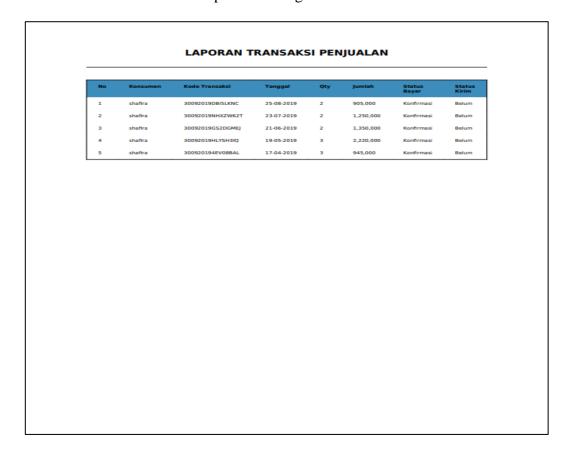
- c. Leadership Section
- 1. Leader Dashboard Page



2. Transaction Report Data Page



3. Transaction Report Print Page



V. CONCLUSION

After going through the analysis and implementation stages, the following conclusions are drawn:t:

- 1. This application is able to answer the needs of the Narmada Furniture Store in the form of an online product sales application (e-commerce).
- 2. This application facilitates the process of storing and processing data, because it is done digitally.
- 3. This application makes it easy for consumers who are in the Ciayumajakuning area to make product purchase transactions, because it is done online.
- 4. This application provides reports in the form of sales transaction reports that can be accessed by leaders at any time, making it easier for leaders to monitor sales transaction activities and assist leaders in making decisions.
- 5. This application provides a graph of sales transactions that can be accessed by admins and leaders, so that leaders can monitor sales transaction activities per month.

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