



Design and Development of a Web-Based Sales Information System at Dapur Bubu

Dewi Yuliandari^{1*}, Ahmad Hilmi Prayogi², Mareanus Lase³, Dian Ardiansyah⁴, Walim⁵

^{1,4,5} Universitas Bina Sarana Informatika

^{2,3} Universitas Nusa Mandiri

dewi.dwy@bsi.ac.id^{*}, ahmad.hp2024@gmail.com², mareanus.mle@unm.ac.id³, dian.did@bsi.ac.id⁴, walim.wam@bsi.ac.id⁵

Abstract

The sales process at Dapur Bubu is still using a manual system, which is prone to fraud during manual transactions, causing harm to various parties such as customers, store employees, and the store owner. Developing a web-based food and beverage sales system for Dapur Bubu will make the sales system more efficient. The author conducted research by directly visiting the Dapur Bubu business in Bekasi to accurately understand the current sales system in place and identify its weaknesses. With the advancement of technology, more and more SMEs (Small and Medium Enterprises) are utilizing the internet for their businesses, as it makes it easier for them to market their products, which can be easily seen and accessed by the public. Before implementing this web system, the author suggests conducting training for the admin who will be using the web. It is also recommended to use paid web hosting before implementing this web-based online sales system.

Keywords: Information Systems, SMEs, E-Commerce

1. Introduction

Current technological developments have spread to various areas of life, including business and trade [1]. With the internet, the sales process can be carried out at any time without being limited by space and time. The use of the internet in the business world is better known as -Electronic Commerce (E-commerce), E-Commerce offers many benefits for SMEs where the process of buying and selling products is carried out online by consumers and companies [2]. With the ability of the web or internet to transmit various forms of data such as text, images, audio and video. Many companies have taken advantage of this technology by creating e-commerce websites or information systems to promote their business. A system is a collection of elements that are interconnected and interact in one unit to run a process of achieving a main goal [3]. And information is data that has been processed into a useful part for users and is useful in decision making [4]. So now almost all people, especially in developed countries, are very familiar with this, because almost all information can be obtained.

The utilization and use of internet technology is expected to provide great benefits to the competitive business world. Entrepreneurs who are able to compete in this competition are entrepreneurs who are able to implement technology and information into their businesses. One type of technology implementation in terms of increasing business competition and product sales is by using e-commerce to market various products, both in physical and digital forms. E-commerce is the purchase, sale, and marketing of goods and services through electronic systems, namely radio, television, and computer networks (internet) [5].

The use of the internet as an advertising medium is growing and adding alternatives to traditional media, making it increasingly popular among marketers [6]. Currently, SMEs are increasingly developing, so it is necessary to develop a product introduction strategy that can attract consumers to buy products. Many factors affect sales volume, especially internal factors such as product marketing strategies, prices, promotions, locations and technology. To increase the attractiveness of SMEs, information technology is needed that can attract consumers [7].

Dapur Bubu is a Small and Medium Enterprise (SMEs) engaged in the sale of food and beverages. So far, Dapur Bubu has used Instagram and WhatsApp as a means to sell and market its products to consumers. However, the use of social media as the main means of selling products is considered less effective. Instagram does not have many regulations with a high level of application security as a marketplace media, so anyone can create a similar Instagram account [8].

This can make online store consumers on Instagram more careful because they are afraid of unwanted things happening such as fraud [9]. With this condition, it can be found that there are several things that are obstacles in the marketing and sales process, such as the sales process at Dapur Bubu is still not computerized, data collection of goods is still recorded on paper, the marketing area is still limited, it is suspected that this is one of the factors that makes it difficult for Dapur Bubu to develop its business. Based on the background that the

researcher has described above, the problems that can be formulated need to design a Marketing Information System for Dapur Bubus MSME Products so that it can help overcome problems and increase marketing of Dapur Bubus products.

2. Research Methodology

The methods used in this research are divided into:

2.1. Data Collection Technique

To obtain accurate, relevant and valid data, the author collects data sources by:

1. Observation
This research was carried out by conducting direct research at the Dapur Bubus Bekasi business premises to find out for sure the sales system currently running at that location and look for weaknesses in the current sales system.
2. Interview
Data collection through face-to-face and direct question and answer with the Kitchen Bubus SMEs business owner.
3. Literature review
Collecting data from various references, whether from journals or books that match the problem theme.

2.2. System Development Model

The stages in creating Web-Based MSME Product Marketing Information System software at Dapur Bubus are using the waterfall model. The waterfall model is a classic model that is systematic, sequential in building software [10]. The name of this model is actually "Linear Sequential Model". This model is often called the "classic life cycle" or waterfall method. This model is included in the generic models in software engineering and was first introduced by Winston Royce around 1970 so it is often considered ancient, but is the model most widely used in Software Engineering (SE). This model approaches systematically and sequentially. It is called a waterfall because the stages you go through must wait for the completion of the previous stage and run sequentially.

1. System Requirements Analysis
At this stage the author carries out an analysis of the system that will be created, starting from analyzing software requirements, analyzing the system that will be created such as admin login, buyer login, categories and also product data.
2. Design
This process will use UML and ERD which will translate the requirements for a software design that can be estimated before coding and database design, function and application design and face-to-face media design.
3. Code Generation
At this stage, code is written and the modules that have been created are combined. Later, the information system program that will be created will use the programming language PHP, Hypertext Markup Language (HTML) and MySQL in building a web-based marketing information system for MSME products at Dapur Bubus.
4. Testing
After the coding stage, testing will be carried out using black box testing, where the aim is to find out that all statements have been tested and ensure that the input used will produce the appropriate output.
5. Maintenance
It is possible for a piece of software to experience changes when it has been sent to the user. Changes can occur due to errors that appear and are not detected during testing or the software must adapt to a new environment. The support or maintenance stage can repeat the development process starting from specification analysis to changes to existing software, but not to creating new software. . However, because the time required is very limited and there is limited time to complete the thesis so that it can be included in the thesis trial, this process is not included.

3. Results And Discussion

The results of this research are the design of a web-based sales information system for Dapur Bubus. This research produces website page designs, including the main page display, customer list page, login page, shopping cart page, checkout page, note page, payment page, history page shopping, admin login page, admin product page, admin purchasing page, admin category page, admin purchasing report page, admin customer page.

3.1. Software Requirements Analysis

1. Analysis Stages
Designing a Web-Based Marketing Information System for MSME Products at Dapur Bubus where consumers do not need to meet face to face with the seller. Consumers can place orders via browser media. The following are the requirements specifications for a web-based bubus kitchen information system:
 - a. Customer Page:
 - 1) Customer registers as a customer.
 - 2) Customer logs in.
 - 3) Customers can order goods.
 - 4) Customers can see item details
 - 5) Customers can see the number of stock items.
 - 6) Customers can select items to purchase and add to the shopping cart.
 - 7) The system carries out the process of calculating the number of goods and total purchases.

8) The system processes customer data and customer shopping data and then displays customer shopping details.

b. Admin Page:

- 1) Admin can manage Product Categories.
- 2) Admin can manage product data.
- 3) Admin can manage buyer data.
- 4) Admin can manage customer data.
- 5) Admin can view purchase history.

2. Use Case Diagram

a. Use Case Online Shopping Diagram Customer Page

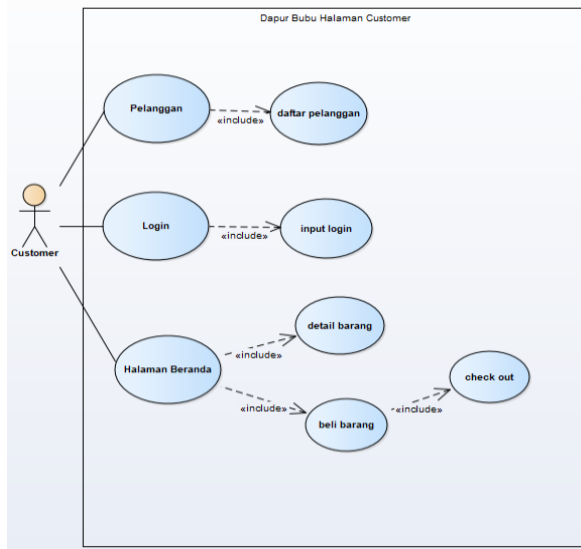


Fig. 1: Use Case Diagram for Online Shopping Customer Page

b. Use Case Admin page

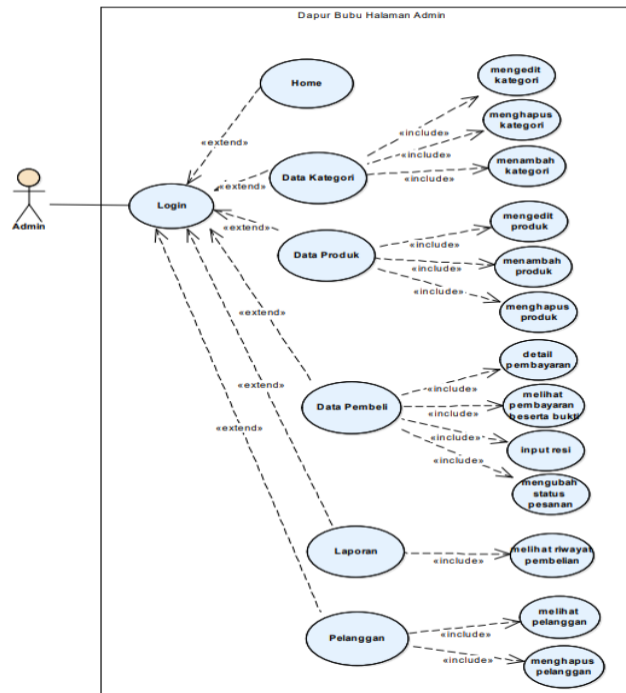


Fig. 2: Admin Page Use Case

3. Activity Diagrams
 a. Activity Diagram Online Sales Customer Page

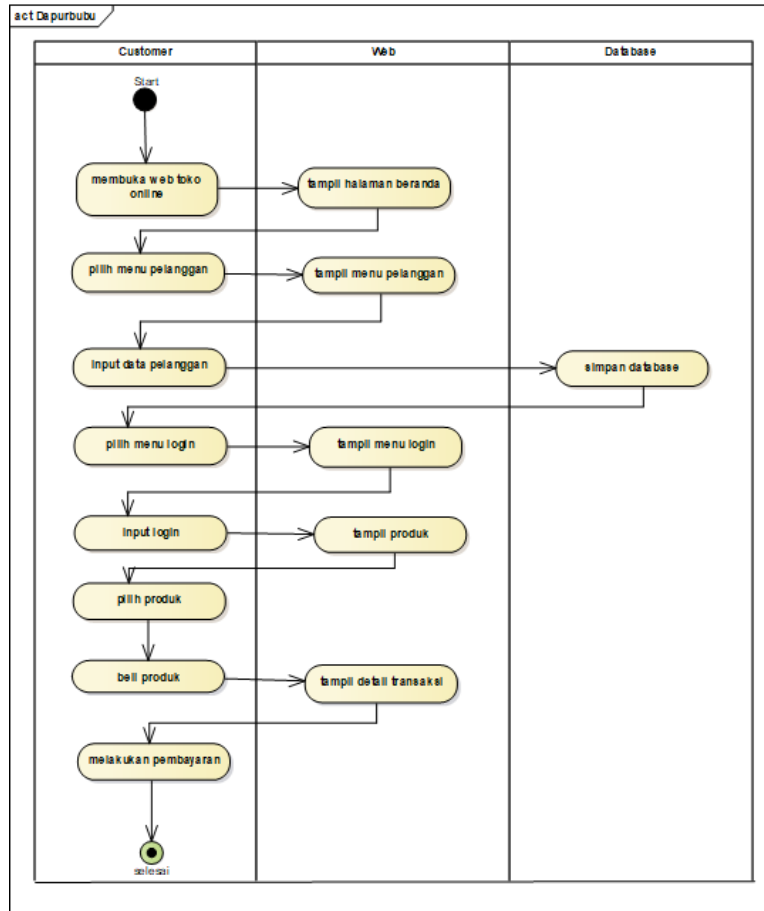


Fig. 3: Activity Diagram for Online Sales Customer Page

b. Activity Diagram Admin Managing Product Data

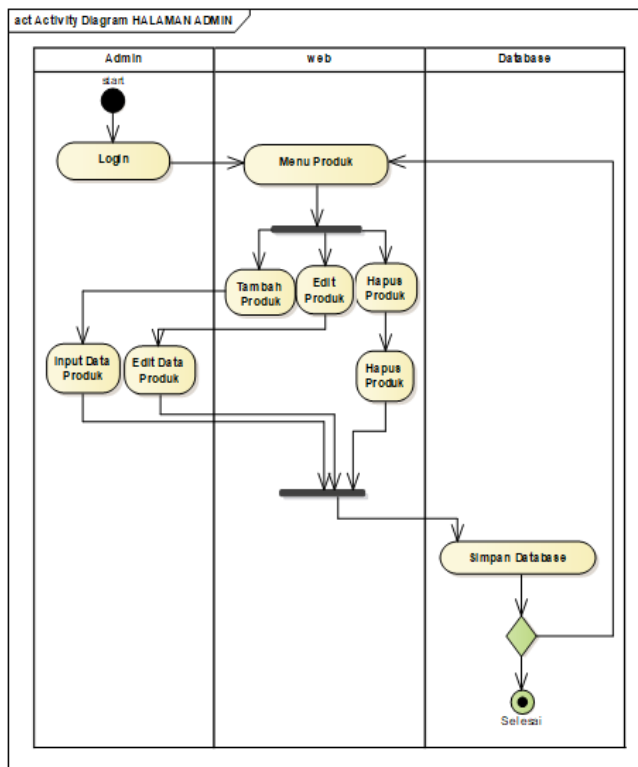


Fig. 4: Product Data Page Activity Diagram

c. Admin Activity Diagram Managing Buyer Data

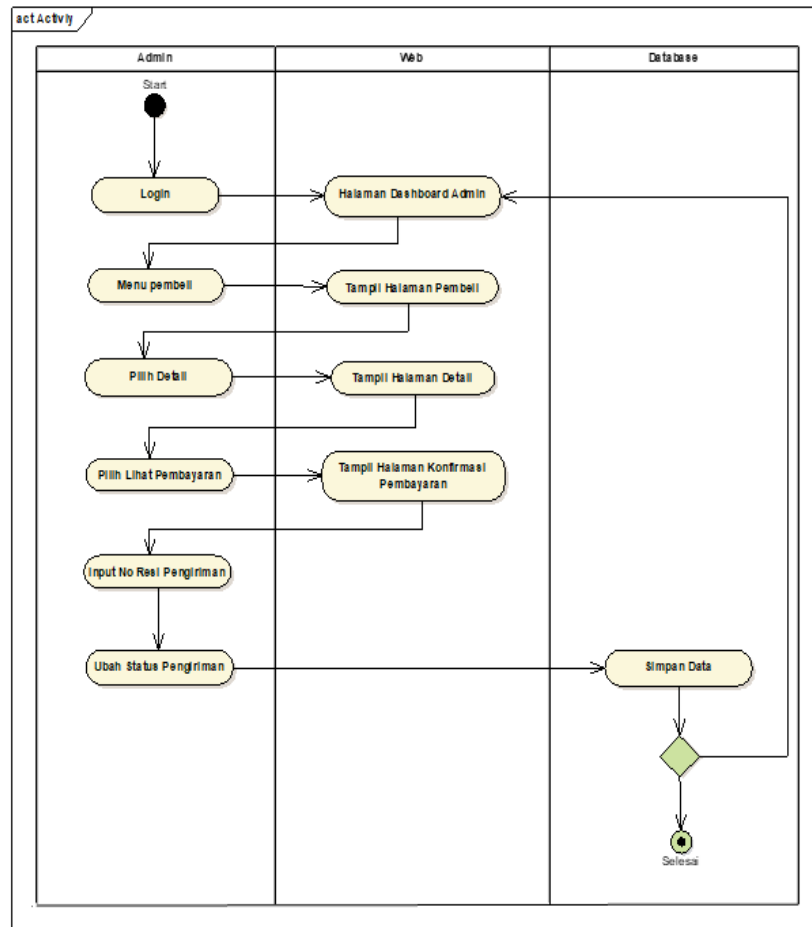


Fig. 5: Admin Activity Diagram Processing Buyer Data Pages

4. Design

a. Entity-Relationship Diagram

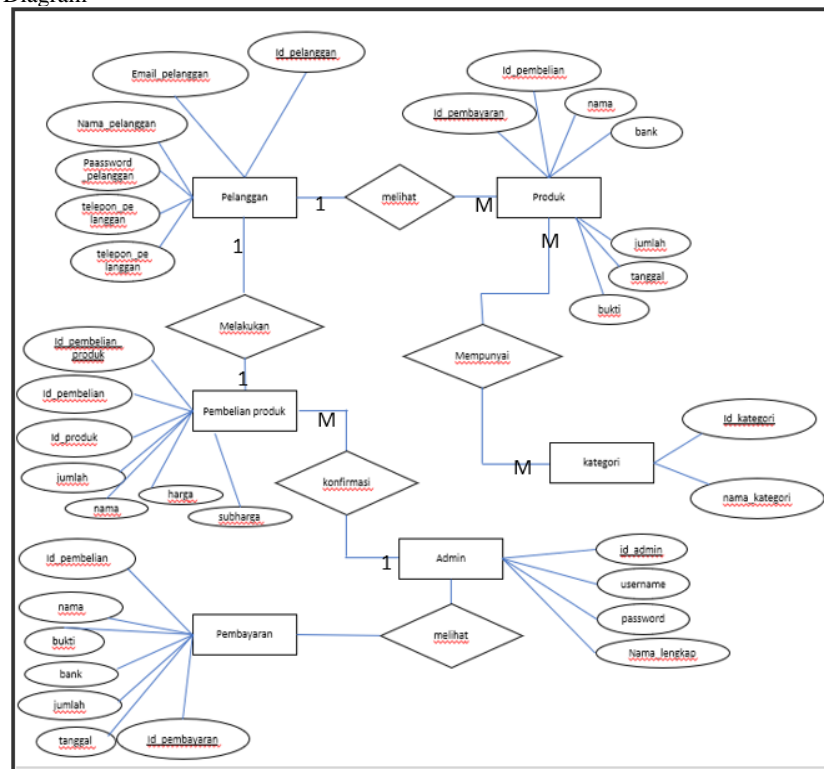


Fig. 6: Entity-Relationship Diagram

b. Logical Record Structure

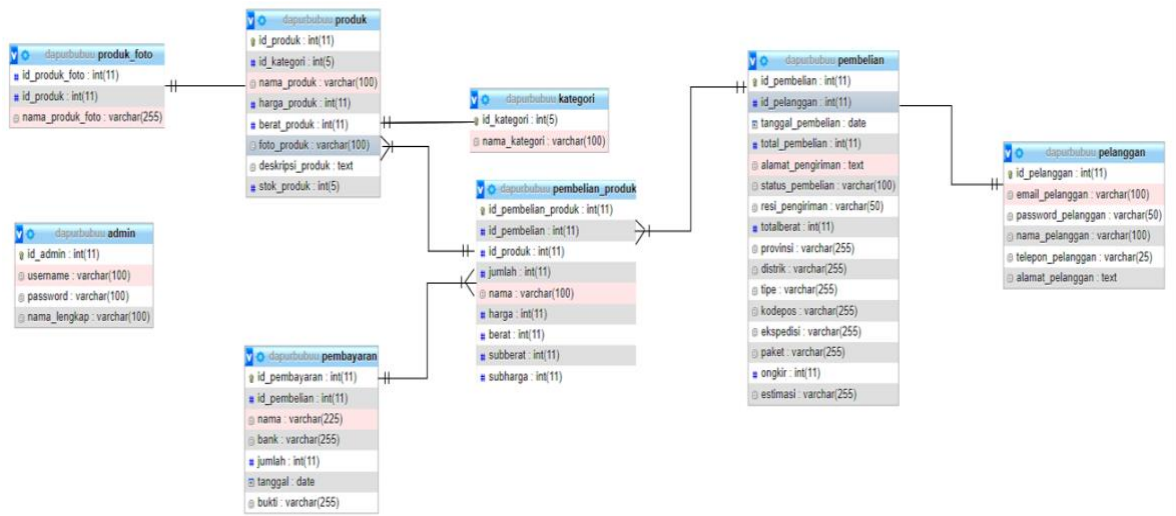


Fig. 7: Logical Record Structure Diagram

5. Software Architecture

a. Component Diagram of Online Sales System

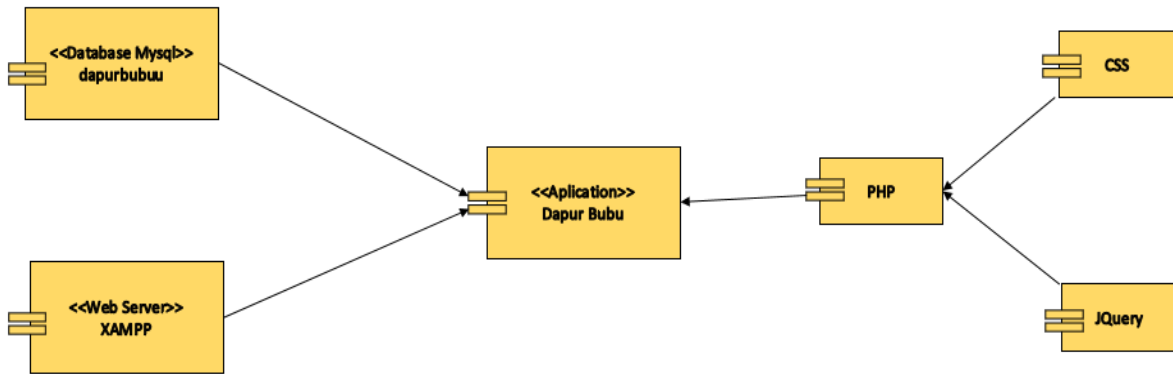


Fig. 8: Component Diagram of Online Sales System

b. Deployment Diagram of Online Sales System

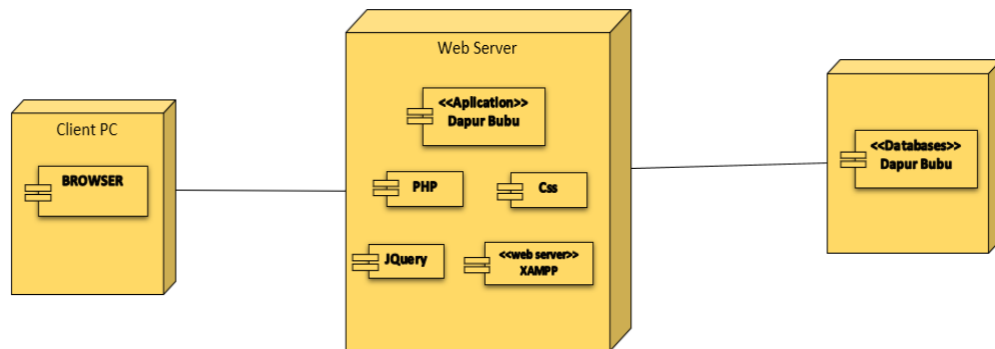


Fig. 9: Deployment Diagram of Online Sales System

3.2. User Interface

1. Home Page

The main page display when you first open the website.



Fig. 10: Home page

2. Customer List Page

The following is the customer list page, where visitors will be asked to register first before making a transaction.

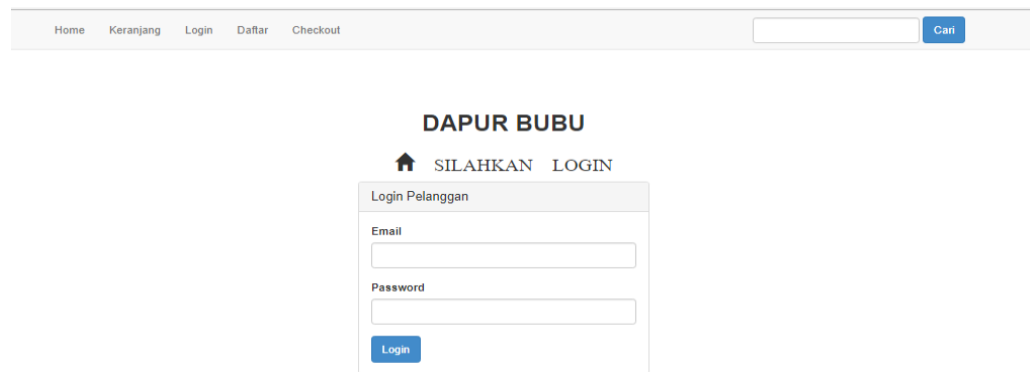


Fig. 11: Customer List Page

3. Customer Login Page

After registering, the next step is to log in directly on the login page.

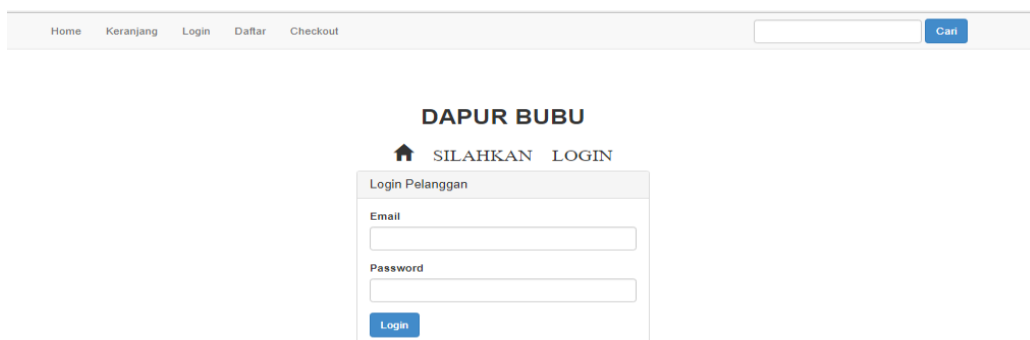


Fig. 12: Customer Login Page

4. Shopping Cart Page

The food you want to buy will first go into the shopping basket, so we can buy more than one food.

No	Produk	Harga	Jumlah	Subharga	Aksi
1	Makaroni Goreng	Rp. 15,000	1	Rp. 15,000	Hapus

Fig. 13: Shopping Cart Page

5. Checkout Page

After the food we want to buy has been selected, the next step is to go to the shopping checkout page to find out the amount that must be paid.

No	Produk	Harga	Jumlah	Subharga
1	Makaroni Goreng	Rp. 15,000,00	1	Rp. 15,000,00
TOTAL BELANJA				Rp. 15,000,00

Fig. 14: Checkout page

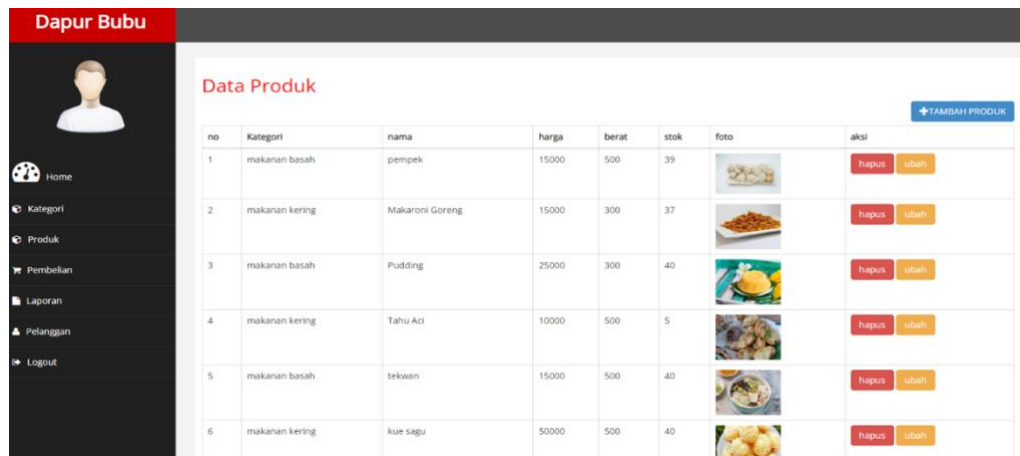
6. Admin Login Page

The following is a display of the login page.

Fig. 15: Admin Login Page

7. Admin Product Page

The following is the admin product data display page.









no	Kategori	nama	harga	berat	stok	foto	aksi
1	makanan basah	pempek	15000	500	39		hapus ubah
2	makanan kering	Makaroni Goreng	15000	300	37		hapus ubah
3	makanan basah	Pudding	25000	300	40		hapus ubah
4	makanan kering	Tahu Aci	10000	500	5		hapus ubah
5	makanan basah	tekwan	15000	500	40		hapus ubah
6	makanan kering	kue sagu	50000	500	40		hapus ubah

Fig. 16: Admin Product Page

8. Admin Purchase Report Page

The following is the purchase report page.



No	Pelanggan	Tanggal	Jumlah	Status
1	Ahmad Hilmi Prayogi	27 June 2022	Rp. 32,000	lunas
Total			Rp. 32,000	

Fig. 17: Purchase Report Page

4. Conclusion

The conclusion of the research regarding the design and development of a web-based sales information system at Dapur Bubu is that with the increasing development of technology, now more and more MSMEs are using the internet for their business, because using the internet can make it easier for MSMEs to market their products and they can be seen or easily accessible to the public. Apart from that, the web-based Dapur Bubu information system can make it easier for people to shop without coming directly to the shop. Just connect to the internet and visit the online shop website directly.

References

- [1] Adelin, "Perkembangan Teknologi Informasi Dalam Dunia Perdagangan," *diskominfo.mc.kalselprov.go.id*, 2020.
- [2] D. Ardiansyah, D. Yuliandari, W. Walim, S. Ilham, and M. Lase, "Perancangan Sistem Informasi Penjualan Tanaman Bonsai Berbasis Web," *Inf. Manag. Educ. Prof. J. Inf. Manag.*, vol. 6, no. 2, pp. 111–120, 2022.
- [3] R. Mawarni and D. Afriansyah, "Audit Sistem Informasi Aplikasi Penjualan Nd6 Menggunakan Framework IT-IL Version 3 Domain: Service Operation & Service Strategy (Studi Kasus PT. Inafood)," *J. Inform. Softw. dan Netw.*, vol. 2, no. 2, 2021.
- [4] C. Umam and L. Cristin, "Peran Humas Kementerian Komunikasi Dan Informasi (Kominfo) Dalam Mensosialisasikan Informasi Kepada Masyarakat," *J. Ilmu Komun.*, vol. 10, no. 1, pp. 20–30, 2020.
- [5] R. L. Batu, T. L. Situngkir, I. Krisnawati, and S. Halim, "Pengaruh Digital Marketing Terhadap Online Purchase Decision Pada Platform Belanja Online Shopee," *Ekon. Bisnis*, vol. 18, no. 2, pp. 144–152, 2020.
- [6] A. Rumondang, A. Sudirman, and S. Sitorus, "Pemasaran Digital dan Perilaku Konsumen." Yayasan Kita Menulis, 2020.
- [7] T. Yuliyati, C. S. Shafira, and M. R. Akbar, "Strategi UMKM Dalam Menghadapi Persaingan Bisnis Global," *Mbia*, vol. 19, no. 3, pp. 293–308, 2020.
- [8] G. Chakti, *The Book Of Digital Marketing: Buku Pemasaran Digital*, vol. 1. Celebes Media Perkasa, 2019.
- [9] M. Ulfah, *DIGITAL PARENTING: Bagaimana Orang Tua Melindungi Anak-anak dari Bahaya Digital?* Edu Publisher, 2020.
- [10] S. Ayumida, D. Ardiansyah, N. Maulidah, and M. S. Azis, "Sistem Informasi Penggajian pada Patroli Kopi 3 Karawang Dengan Metode Waterfall," *Simpatik J. Sist. Inf. dan Inform.*, vol. 1, no. 2, pp. 127–136, 2021.