

Canggih Coffee as the Processed Products of Micro Enterprises: System Design of E-Commerce

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ABSTRACT

The current spread of the Covid-19 virus in Indonesia has had a major impact in every aspect, especially Micro, Small, and Medium Enterprises. One of them is the production of Canggih Coffee (Kopi Canggih) in Subang regency located in Cupunegara village. Since the presence of Covid-19 pandemic, sales of Canggih Coffee have started to decline due to the reduced number of visitors to buy these processed coffee products. Thus, to face this problem, State Polytechnic of Subang supported by Indonesia Bangkit Micro, Small, and Medium Enterprises program intended to assist the problem by designing an e-commerce system to expand the the promotion of Canggih Coffee. The system design is developed by System Development Life Cycle (SDLC) method. The system is built through 5 stages, namely survey / analysis, design, coding, testing, implementation and maintenance. Afterwards, the system was successfully designed and built, it is begun to be used by Canggih Coffee. This system can provide information and online product sales so that the customers can order and buy these processed coffee products from their home. Additionally, this system also facilitates periodic transaction reports which is very useful for this Micro, Small, and Medium Enterprises.

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1. Introduction

The development of technology is increasingly advanced, especially in the use of information system technology in the field of marketing and it is now growing very rapidly (Luthfiana & Hadi, 2019; Yustiani & Yunanto, 2017). Moreover, consumers now can use the Internet to make orders transactions and purchase goods without limitation of place and time. They are increasingly free to get whatever they want and also responsive to updated information. This fact that it cannot be denied because all transaction processes can take place online. As the result, the customers are able to come from within or outside the country (Dirgantari et al., 2020; Mona, 2020). The results of research on the development of web-based e-commerce information systems have increased product marketing and the number of product sales (Hasanat et al., 2020; Setiawan & Lutfi, 2018). This web-based system is also very much needed during the Covid-19 pandemic. This condition is also beneficial for Canggih coffee because it can introduce various types of processed coffee products, such as honey coffee, tea coffee and so on. Thus, they can promote their products in the market.

Recently, the sales of Canggih coffee have been decreasing due to the impact of the Covid 19 pandemic (Sugiarti et al., 2020). Buyers who originally came to the location a lot are now getting less because of the government's advice not to leave the house if there is no urgent need. With the decrease of visitors, an e-commerce system is needed for shredded Canggih coffee so that people can still make orders and purchases even if they don't come to the store (Aulkemeier et al., 2017). This is in accordance with the government's recommendation for the Covid-19 health protocol, that all people are expected not to leave the house if there are no urgent interests (Izzaty, 2020). In addition, the sales recap that is still manual also makes managers sometimes feel difficult in finding documents and sometimes there is a damage to the financial report books. Based on this need, we are from state polytechnic of Subang, intended to design and build an e-commerce system to expand the market for processed products of Canggih coffee. As a result, the economy growth can be stable as usual. In addition, with this system, the

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sales recap will be more structured and easier to find and is expected not to be easily damaged and lost (Adisel, 2019).

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2. Methods

The System Development Life Cycle (SDLC) method is a development method used to build this system. SDLC serves to describe the main stages and steps of each stage of engineering system development. Basically, this methodology is divided into five main activities, namely survey / analysis, design, coding, testing, implementation and maintenance. The first stage is requirements or analysis; this modeling begins by looking for the needs of the entire system to be applied in software form. This is very important, considering the software must be able to interact with other elements such as hardware, databases, etc. The second stage is design, which means the specification or construction of a technical and computer-based solution for the business requirements is identified in the system analysis. The design stage will explore alternative technical solutions and continue through the blueprints and technical specifications required for implementing the database, programs and user interfaces required for the application. The third stage is coding of the design that has been made. This coding will become a machine-understood language in the form of a programming language through the coding process. This stage is also the implementation of the design that has been made technically and will be done by the programmer.

The fourth stage is testing, where at this stage testing is carried out using a black box in terms of functions and UAT (User Acceptance Test) in terms of user acceptance of the system. The last stage is implementation and maintenance. At this stage, the system will begin to be used according to its needs, namely as an e-commerce system to increase sales of Canggih coffee in Subang regency area. After being used, this system requires a maintenance and development process because the software that is made is not always static, there will be a possibility that there will be small errors that have not been found previously during testing or appear additional features that the software does not have.

3. Results and Discussions

Canggih Coffee Subang is one of the Micro, Small, and Medium Enterprises located in Cupunegara Village. Since the Covid-19 pandemic, sales of processed coffee productions have started to decline due to the reduced number of visitors to buy the products. So far, most of the sales transactions have been done face to face or in person and due to the condition, it is needed to do the transactions online. They need an e-commerce system so that their sales can remain stable even if the buyer does not come to the location. In addition to the ease of transacting, the system is also expected to facilitate regular sales recaps so that Canggih Coffee can find out their sales recap and can develop further strategies for the development of Micro, Small, and Medium Enterprises (Sugiarti et al., 2020).

In the design phase, actors are divided into 2 types, namely admins from Canggih Coffee who are in charge of updating the system and customers who can make purchases online through the system (Rahmawati & Bachtiar, 2018). Each actor has a functional scope as shown in Figure 1.

In designing this structure, the data used is the MVC (Model View Controller) framework. This MVC framework produces a data structure that assigns tasks to each function so that it is more controllable. CodeIgniter is a framework that enforces the MVC structure for this development system (Nugroho, 2004). The coding stage begins with scripting the program code and continues with the implementation of the design that has been made (Iqbal et al., 2020). The user and admin interface are as shown in Figure 2.

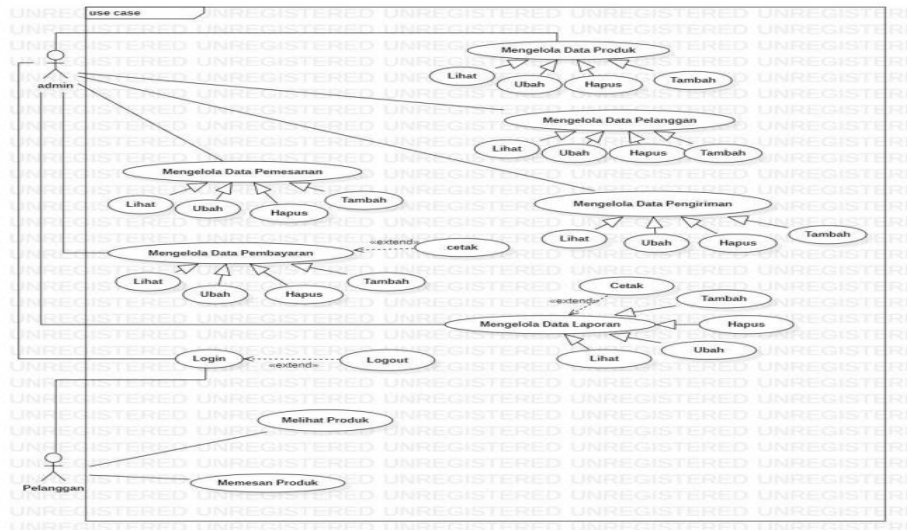


Figure 1. Use Case Diagram

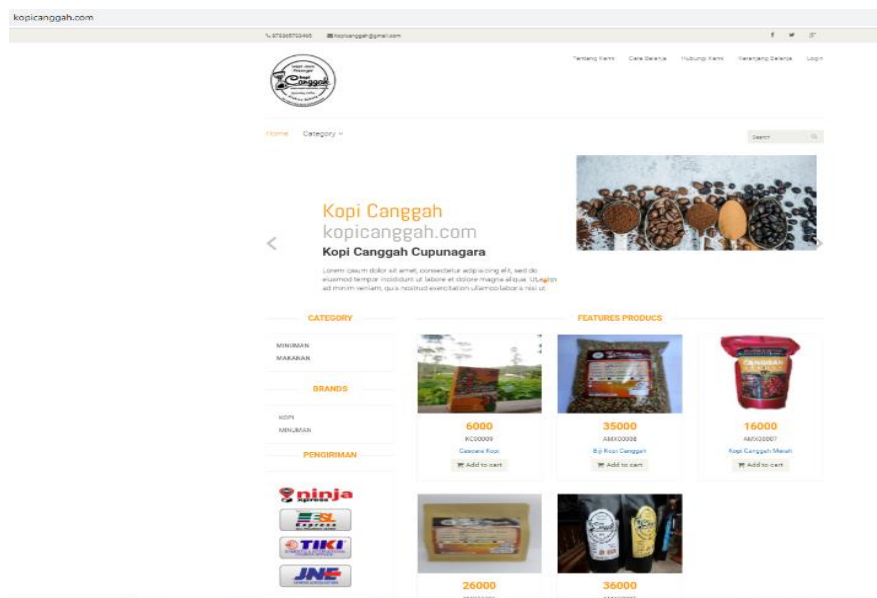


Figure 2. Views of the customer's Home Page

On this page, customers can select products to order by entering the selected product into the shopping cart. If a customer clicks the buy button on the product that has been selected, it will enter the consumer's shopping cart. Then they can see the transaction table for further processing.

No	Kode Transaksi	Nama Penitip	Email	Alamat	No Telp	Provinsi	Kota	Kode Pos	Bank	Jasa Pengiriman	Aksi
1	2021120001	Mohammad Iqbal	mohammad1qbal@gmail.com	Jalan Canggih Subang	08965710000	Jawa Barat	Bandung	40135	BCA	JNE	<input type="button" value="Upload Kembali Penitipan"/> <input type="button" value="Detail"/>
2	2021120002	Mohammad Iqbal	mohammad1qbal@gmail.com	Jalan Canggih Subang	08965710000	Jawa Barat	Cianjur	40735	Mandiri	JNE	<input type="button" value="Upload Kembali Penitipan"/> <input type="button" value="Detail"/>

Figure 3. Display of customer transactions

This transaction table serves to upload proof of payment so that the goods will be processed immediately by the admin. Admin will not process if the buyer has not uploaded proof of payment. After the shopping is in the process, the buyer can also see the delivery receipt and track where the item has been ordered (Setiawan, 2019).

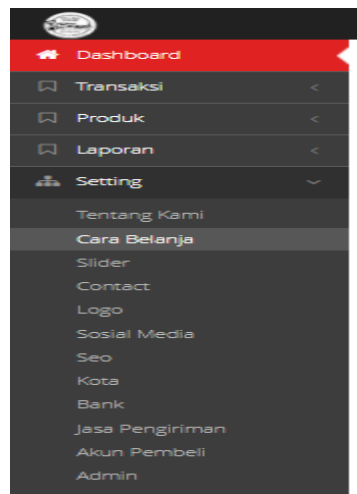


Figure 4. Display menu for admin

The following image is a menu display in the admin. Admin can update the stock of goods and view the list of buyers. Admin can also customize the appearance of the e-commerce web to provide more information to visitors.

No	Kode Transaksi	Tanggal Transaksi	Nama Penerima	Email	Alamat	No Telp	Properti	Kota	Kode Pos	Bank	Jasa Pengiriman	Total Bayar
1	2020120109	2020-10-20	hanhanhanhan	hanhanhanhan@gmail.com	Chaukaut Camis	0898507840	Jawa Barat	Camis	40302	BN	JNE	40000
2	2020120104	2020-10-20	hanhanhanhan	hanhanhanhan@gmail.com	Chaukaut Camis	0898507840	Jawa Barat	Camis	40302	Mantri	JNE	40-000
3	2020120107	2020-10-20	hanhanhanhan	hanhanhanhan@gmail.com	Chaukaut Camis	0898507840	Jawa Barat	Camis	40302	BN	JNE	50000
4	2020120105	2020-10-20	hanhanhanhan	hanhanhanhan@gmail.com	Chaukaut Camis	0898507840	Jawa Barat	Camis	40302	BCA	GL Express	40000
5	2020120101	2020-10-20	Muhammad Iqbal	MuhammadIqbal@gmail.com	Perumahan pacific permai tuju 2 cilugri Blok G 07 07 RW: 30-08 Hal Dew Cilugri Kecamatan Cilugri	08985070062	Jawa Barat	Sukang	07-005	Mandiri	Indra Express	17000
6	2020120102	2020-10-20	hanhanhanhan	hanhanhanhan@gmail.com	Chaukaut Camis	0898507840	Jawa Barat	Camis	40302	Mandiri-Syariah	Indra Express	10000
7	2020120106	2020-10-20	hanhanhanhan	hanhanhanhan@gmail.com	Chaukaut Camis	0898507840	Jawa Barat	Camis	40302	Mandiri-Syariah	Indra Express	32000
8	2020120101	2020-10-24	hanhanhanhan	hanhanhanhan@gmail.com	Chaukaut Camis	0898507840	Jawa Barat	Camis	40302	BN	JNE	20000

Total Transaksi Penjualan: 8
Total Pembayaran Keseluruhan: Rp. 219700

Figure 5. Display sales recap

The following is a display of sales data recap so you can see every transaction that has been done periodically. With this feature, sales reports are more structured and easier to find when needed.

Discussion

The development of technology is increasingly advanced, especially in the use of information system technology in the field of marketing and it is now growing very rapidly (Luthfiana & Hadi, 2019; Yustiani & Yunanto, 2017). Moreover, consumers now can use the Internet to make orders transactions and purchase goods without limitation of place and time. They are increasingly free to get whatever they want and also responsive to updated information. This fact that it cannot be denied because all transaction processes can take place online. As the result, the customers are able to come from within or outside the country (Dirgantari et al., 2020; Mona, 2020). The results of research on the development of web-based e-commerce information systems have increased product marketing and the number of product sales (Hasanat et al., 2020; Setiawan & Lutfi, 2018). This web-based system is also very much needed during the Covid-19 pandemic. This condition is also beneficial for Canggih coffee because it can introduce various types of processed coffee products, such as honey coffee, tea coffee and so on. Thus, they can promote their products in the market.

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A good system allows users to use the website to solve their problems. Good quality service can help users get the full power of the website by matching their expectations. The quality of information shows the extent to which the content of the website is up to date, accurate, and complete (Kuo-Chien Chang, Yin-Xuan Lin et al, 2013). This website application is equipped with a display of various products from SMEs that can make it easier for buyers to find out information on the characteristics of the product to be purchased, besides that there are various choices of payment methods that can be selected by buyers, options for expedition to ship packages purchased, and so on. Buyers can also track goods that have been purchased and shipped. This website-based online sales can also make it easier for SME partners to get a wider target marketplace and be able to find out customer data and the shipping process that makes transactions because it will be recorded into the system, besides that if the UKM admin experiences difficulties or problems in the website application, then the escort team can provide remote directions and control or control the website remotely so that it can run effectively. In addition to SMEs, using e-commerce applications can help buyers get performance benefits in their work (Yulistia, 2017).

4. Conclusion

Based on the results of this study, it can be concluded that, this activity has successfully designed and built an e-commerce system for Canggah coffee that can help to introduce Micro, Small, and Medium Enterprises which is focus on processed products, especially coffee. In addition, this system can also assist the customers so that they will be easy to do a transaction any time without being limited by time and place, especially during the current Covid-19 pandemic which limits all people to leave the house.

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