



# B2B E-commerce Application Development: Case Study of Implementing Innovative Features to Increase Business Transaction Efficiency PT. Bening's Indonesia

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## ABSTRACT

The very rapid development of Information Technology at this time which also directly supports the development of the internet at this time has led to the emergence of new technologies such as social media, artificial intelligence (AI), e-commerce, and other technologies. E-Commerce or electronic commerce is a way to sell and buy goods or services via the internet network. Bening's Distributor Medan SUMUT is one of the partners of a company that operates in the field of selling skincare and body care products and needs for skin and beauty care, namely PT. Bening's Indonesia. The system currently running includes Business to Business and Business to Customer which is done manually via WhatsApp chat so it takes quite a long time, especially for partners or customers who need goods quickly.

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## 1. INTRODUCTION

PT. Bening's Indonesia is a company that operates in the field of selling skincare and body care products and other skin and beauty care needs under the brand name Bening's Indonesia, which was founded in early 2021 by a beauty doctor, namely Dr. OK, Primary. PT. Bening's Indonesia has partners in almost all of Indonesia, especially in North Sumatra. In North Sumatra itself there is a partner PT. Bening's Indonesia, namely Bening's Distributor Medan SUMUT, hereinafter referred to as Bening's Distributor which already has more than 40 partners spread across North Sumatra Province and even to other provinces starting from Medan City, Siantar Simalungun, North Tapanuli, Aceh, Jambi and even to the island of Nias and other areas. Apart from partners, Bening's Distributor also has quite a lot of customers and so far the process of ordering goods and asking about products by partners/customers has been carried out by chatting via the Whatsapp or Instagram applications.

So it takes quite a long time, especially for partners or customers who need goods quickly. According to [1] e-commerce or electronic commerce is a way to sell and buy goods or services via the internet network. By carrying out good marketing activities, a company can achieve the desired sales targets. building an e-commerce system which is expected to provide information about the products sold by Bening's Distributors. This e-commerce aims to assist the sales and purchasing process for Bening's Indonesian products sold by Bening's Distributors as well as helping Bening's Distributors to promote products sold and provided by Bening's Distributors. According to [1] it is the practice of implementing and managing main business processes such as product design, maintaining raw material supplies, manufacturing, sales, order provision, and service provision through the use of communication technology, computers, and computerized data. According to [2] e-business includes all things that must be done using information and communication technology to conduct business between organizations and from organizations to consumers. According to [3], e-business is a technology for developing both internal business processes in the form of human resources, administration and finance, and external processes in the form of sales and marketing, provision of goods and services and consumer relations. E-business itself is generally divided into two main categories based on the type of transaction [4]

1. Business-to-Business (B2B)

Business-to-business (B2B) refers to business transactions between two or more companies. In the B2B model, companies sell products, services, or resources to other companies. Examples include intercompany purchases of raw materials, equipment, or software, professional services contracts, or business collaborations between suppliers and distributors.

2. Business-to-Customer (B2C)

Business-to-Customer (B2C) involves business transactions between companies and individual consumers. In the B2C model, companies sell products or services directly to end consumers. Examples include purchasing goods through an online store, ordering food through a food delivery app, or purchasing concert tickets through an official website.

In this category, B2B focuses on business relationships between companies, while B2C focuses on business relationships between companies and end consumers. These two categories have differences in marketing strategies, market segmentation, and technology requirements used. E-business has a number of significant benefits for companies and consumers. Following are some of the main benefits of e-business [5]

1. E-business allows companies to reach global markets and sell products or services to various locations around the world. This opens up new opportunities for business growth and international expansion [6]

2. Through e-business, companies can reduce operational costs by reducing physical costs such as store rentals, warehouses, and related labor costs. E-business also enables the automation of business processes which can reduce the need for human labor.

3. For consumers, e-business provides convenience and comfort in making purchases. They can purchase products or services anytime and anywhere via their electronic devices without having to go to a physical store [7]

4. E-business provides a variety of effective marketing and promotional tools, such as online advertising, email marketing, social media and search engine optimization. It helps companies reach target audiences in a more efficient way and measure the effectiveness of marketing campaigns.

5. E-business allows companies to provide better customer service through online customer support, live chat, or complaint management systems. This increases customer satisfaction and builds long-term relationships.

6. Through e-business, companies can collect customer data, purchasing behavior, and market trends. This data can be analyzed to gain valuable insights and support better decision making in business strategy.

7. E-business gives companies the flexibility to change and adapt their operations quickly according to market needs. Additionally, e-business allows companies to easily scale their operations to accommodate business growth.

8. E-business provides opportunities to innovate in business models, products and services. Companies can develop unique experiences, offer additional features, or create differentiated solutions to differentiate themselves from competitors [8]

## 2. RESEARCH DESIGN

This research is descriptive in nature where the study design used is cross sectional because the research was carried out at a certain point in time to collect data, it was not carried out continuously and used qualitative methods (surveys, interviews and observations) [9] Descriptive research is used to collect, summarize, and interpret the data obtained which is then processed to provide a clear and objective picture of the problem that is the object of research, so that it can provide a basis for further understanding, decision making, or further research development [2]

The following are the steps taken to conduct research and obtain data:

1. Make direct observations at the research location, to find out what system is running.
2. Conduct direct interviews with Bening's Distributors
3. Provide solutions so that problems in the product sales process can be resolved.
4. Design a sales system for Bening's Distributor.

## 3. RESULTS AND DISCUSSIONS

Knowing the problems being faced by Bening's Distributors, the author tried to solve these problems by building a web-based e-commerce system using PHP programming with the Laravel framework and MySQL database [10]. The development of this system was carried out using the SDLC (System Development Life Cycle) method for the Distributors Bening's, where the system built can create integrated data flows, making the sales, data collection and product/partner data processing processes more effective and efficient [11] After conducting observations and interviews with Bening's Distributor, the author obtained information about the current system. The problems faced are [2]

1. Difficulty in handling product sales to partners/consumers and questions regarding stock because it is still done manually via Whatsapp.
2. Difficulty in searching for data on incoming and outgoing goods because data is still stored in the form of bookkeeping data, which becomes an obstacle for monitoring and controlling stock of goods.
3. Difficulty in registering partners who have joined Bening's Distributor because they still use the manual method via WhatsApp chat [12]

### 3.1. Proposed System Design

- a. Usecase Diagram

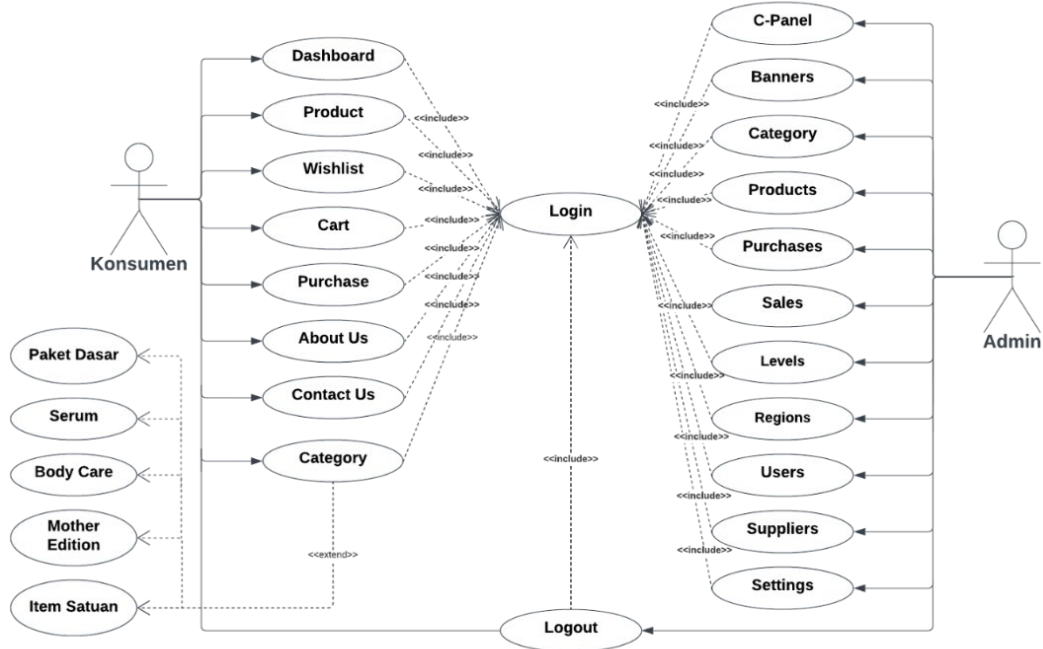


Figure 1. Usecase Diagram of Proposed System

b. Class Diagram System Usulan

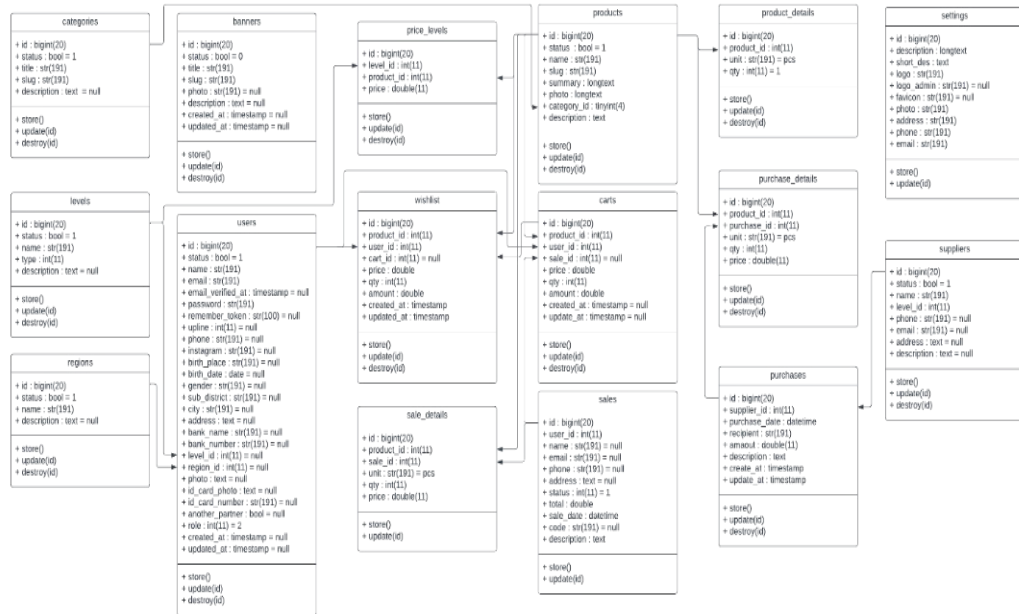


Figure 2. Class Diagram of Proposed System

#### 4. CONCLUSION

Based on the results of research on the web-based E-Commerce System at Bening's Distributor, it can be concluded that:

1. The design of the Bening's Distributor e-commerce system runs well in accordance with the needs and objectives of the research.
2. The system functionality has been tested and runs well in testing and simulation.
3. The Business to Business and Business to Customer sales systems that have been implemented in the current business at Bening's Distributor can be applied to the e-commerce system that has been built

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To improve this research, the author provides several suggestions as follows:

1. Carry out further development to improve system functionality, such as adding more sophisticated search features, product recommendations, or implementing a payment system.
2. Provide effective customer support, such as online chat or a discount and voucher system to increase user satisfaction.
3. Developing aspects of the appearance and user interface based on feedback from users to improve the overall user experience.
4. Added an export data report feature to Excel format in the purchases and sales menu on the admin page to make it easier to process report data further.

#### REFERENCES

- [1] M. Ikhwan Syarif, M. Hannum, S. Wahyuni, F. Ekonomi, B. Islam Universitas Islam Negeri Sumatra Utara, and H. Artikel, "JCBD JOURNAL OF COMPUTERS AND DIGITAL BUSINESS Potensi Perkembangan E-Commerce Dalam Menunjang Bisnis di Indonesia I N F O A R T I K E L A B S T R A K," vol. 2, no. 1, pp. 11–14, 2023, doi: 10.56427/jcbd.v2i1.30.
- [2] O. Maulidya Alfı Anita Zain, M. Zanna Arsyad, and B. Supeno, "E COMMERCE DALAM PENGEMBANGAN BISNIS: A BIBLIOMATRIK STUDY," vol. 11, no. 1, 2022, [Online]. Available: <http://stp-mataram.e-journal.id/JIH>
- [3] "156-Article Text-501-1-10-20200505".
- [4] K. Agus, S. Putra, and R. Irfan, "PENGEMBANGAN WEBSITE E-COMMERCE SEBAGAI MEDIA PROMOSI DAN PENJUALAN PRODUK KEWIRUSAHAAN SISWA KELAS XI TKJ SMK NEGERI 2 YOGYAKARTA THE DEVELOPMENT OF E-COMMERCE WEBSITE AS A MEDIA OF PROMOTION AND SELLING OF ENTREPRENEURSHIP PRODUCTS FOR CLASS XI STUDENTS OF TKJ SMK NEGERI 2 YOGYAKARTA."
- [5] Y. L. R. Rehtalanit, "PERAN E-COMMERCE DALAM PENGEMBANGAN BISNIS."
- [6] N. Hidayatun, H. Murtina, S. Nusa Mandiri Jakarta, and T. Informatika, "Pembangunan Web E-Commerce B2B Untuk Meningkatkan Pemasaran dan Penjualan Produk Menggunakan Linear Sequential Model," vol. 22, doi: 10.31294/p.v21i2.
- [7] "210812-strategi-pengembangan-usaha-roti-tanjong".
- [8] A. E. Prasetiadi, "WEB 3.0: TEKNOLOGI WEB MASA DEPAN," 2011.
- [9] E. Y. Nasution, P. Hariani, L. S. Hasibuan, and W. Pradita, "Perkembangan Transaksi Bisnis E-Commerce terhadap Pertumbuhan Ekonomi di Indonesia," *Jesya*, vol. 3, no. 2, pp. 506–519, Jun. 2020, doi: 10.36778/jesya.v3i2.227.
- [10] Mardiyana, "STRATEGI PENGEMBANGAN USAHA DENGAN METODE ANALISIS SWOT PADA HOME INDUSTRI WEN-DANG JAHE DI KABUPATEN KUKAR," vol. 10, no. 1, pp. 1–11, 2022.
- [11] "1050-Article Text-2675-1-10-20200628".
- [12] D. Sanusi, A. Agustang, and A. M. Idkhan, "Pengembangan Sumber Daya Manusia Dalam Meningkatkan Pelayanan Akademik Di Universitas Puangrimaggalatung Sengkang," vol. 1, no. 2.