


Web Sales Based Information System Using A Cross-Selling Approach At Bebek Berkah Farm

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Article Info	ABSTRACT
Keywords: Cross-Selling Web Sales	Bebek Berkah Farm carries out sales management activities manually, including sales research via the web, without a support system. This research aims to create a website-based application. Design and build a website-based E-commerce application that contains a system to help companies handle the management of goods data, customer data, sales transactions, purchase transactions, inventory at Bebek Berkah Farm. The method used in this research is the SDLC waterfall model. The result of this research is that the sales application information system allows Bebek Berkah Farm to provide data from logging in to inputting payment information easily, orderly and easily accessible. This technology can also produce more detailed sales reports over a certain period of time. Bebek Berkah Farm can access the system so that customers can easily obtain information regarding sales at the Bebek Berkah farm. This can help companies to increase sales and provide a better shopping experience for customers. This system was built using web-based technology, so it can be accessed via a browser and is easy to use for both admins and customers. This system is expected to help Bebek Berkah Farm optimize sales of duck products and provide a better shopping experience for customers.
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INTRODUCTION

Science and information technology are evolving at a quick and sophisticated pace today. Technology has provided numerous benefits, particularly in streamlining work processes and creating a more organized human being (Suendri, 2021). The utilisation of application systems has emerged as a crucial necessity to support productivity and service quality in a variety of sales settings, including businesses in the sales business sector, due to the swift advancement of information technology. The duck sales process is still based on Google Forms as of right now, which might have drawbacks in terms of responsiveness, accessibility, and interactivity.

In order to boost member engagement, enhance administrative effectiveness, and deliver a better experience, it is imperative that an analytical system application be developed utilising this integrated sales strategy (Apris & Dahmiri, 2022). The current challenges that this agency may have with Google Forms are the absence of automation in data management, the lack of interaction and direct seller feedback, and the constraints in gathering and

evaluating process data as a whole. Google Forms may present challenges for these business agencies now, including limited monitoring and assessment capabilities, a deficiency in data management automation, and a lack of direct feedback to sellers among other issues.

Bebek Berkah Farm is a company engaged in producing and selling livestock such as duck seeds, ducklings, eggs, and others. However, in terms of the sales process for livestock, this is still done manually, such as in creating item data, sales transaction item requests and sales reports are still done by manually recording them on sales invoices and cash books; this happens because this livestock company does not yet have two an information system that supports the process of selling goods, resulting in ineffective and inefficient company performance, as well as in marketing and introducing its products to the broader community does not yet have promotional media that can cover a broad market (Anshari et al., 2022). Therefore, the old sales method, which uses a manual system, is no longer appropriate in the current technological era. The cross-selling method is used in creating a sales information system (Budiyati et al., 2020).

This cross-selling strategy will be designed to deliver product recommendations that buyers prefer the most. This application was created using PHP programming and a MySQL database, and it was hosted using the XAMPP tool. This program is intended to help record data on commodities entering and exiting Bebek Berkah Farm, as well as handle sales and purchase data. So that the specific application built can further boost job effectiveness and give information promptly and properly to consumers.

Previous research conducted by Priambodo (2022) regarding the development of a sales application system applied to CV FCH Kema Pole Indonesia's department store is very necessary to increase sales turnover, especially to anticipate a decrease in turnover. The difference in this research is the application created for sales application information This system allows Bebek Berkah Farm to easily output data, from logging in to entering payment information, in an orderly and easily accessible manner. And research conducted by Alda (2022) regarding the design of E-Commerce cake sales by applying the B2C (Business To Consumer) model, whereas in this research a cross-selling approach was used.

This research aims to create a website-based application, including: 1. Designing a website-based E-commerce application that contains a system to help companies handle the management of goods data, customer data, sales transactions, purchase transactions, inventory of goods at Bebek Berkah Farm.2 .Design a system that can recommend products that are widely purchased by consumers using a cross-selling approach so that the website created has an appeal to customers.

METHODS

The Research and Development (R&D) approach is the research methodology employed. The Research and Development method is a process used to manufacture specific items and verify their efficacy, according to research (Purnia et al., 2019). Products may be created in the form of services, non-physical goods, or physical goods. Meanwhile, waterfall modeling is used in system development. The Waterfall Model provides a linear or orderly approach to the

software life cycle, beginning with analysis, design, coding, and testing (Handrianto, 2020). This is a picture of the SDLC waterfall model.



Figure 1. Waterfall Model

Waterfall model stages

1. The requirements

At this level, system engineers require communication targeted at understanding the program that consumers expect and its limits. Interviews, talks, and direct surveys can all help to gather information. The information is evaluated to obtain the data required by the user.

2. Design

At this step, the developer generates a system design that can help determine hardware and system requirements as well as define the overall system architecture.

3. Implementation

At this stage, the system is constructed in small programs known as units, which are then integrated in the following stage. Each unit is produced and evaluated for functioning, a process known as unit testing.

4. Testing

At this stage, the system is verified and tested whether the system is complete or not partially fulfill system requirements. Testing can be classified into unit testing (performed on a specific module of code), system testing (to see how the system reacts when all modules are integrated), and acceptance testing (done with or customer name to see if all customer needs are satisfied).

The Waterfall model is a common SDLC paradigm used in the development of information systems and software. This model takes a systematic, sequential approach. This model's stages include planning, management, and maintenance, and are completed in stages (Samsudin, 2023). Developers must understand the waterfall model's properties as well as the system development process. This paper examines the waterfall model as an information systems development process. The purpose of this research is to learn more about the waterfall model and how it is used by developers to construct and develop information systems or software.

Methods are steps or procedures for doing something. The Systems Development Life Cycle (SDLC) is a procedure used by system analysts to design information systems, including requirements, validation, training, and ownership. The System Development Life Cycle (SDLC) or system development life cycle in engineering systems and software engineering refers to the process of developing and updating systems, models, and methodologies. SDLC is a method for designing a software system that includes planning stages. analysis, design, implementation, and testing.

This research's data collection strategy is as follows, Direct observation of the thing under study. Observations were made in Bebek Berkah Farm. And interview, the author interviewed the owner of Bebek Berkah Farm. Based on the results of interviews done by researchers, the history of the founding of Bebek Berkah Farm was gathered, what types of products were produced, bought and sold at Bebek Berkah Farm, as well as profits The losses incurred at Bebek Berkah Farm were due to the development of e-commerce applications using a cross-selling strategy.

To increase sales at Bebek Berkah Farm, a Cross-Selling marketing plan is required, in which vendors offer other products connected to the goods buyers purchase. For example, if a customer purchases trousers, the system will immediately give the goods at a promotional price. When consumers see recommendations for more promotional goods linked to the product they purchased, they may become interested and decide to make additional purchases. The approach for implementing cross-selling is: a) position wisely, b) stock complementary items, c) bundles, and d) recommend items.

RESULTS AND DISCUSSION

Analysis

Before the design stage, the author first conducted a needs analysis. Currently, the system running at Bebek Berkah Farm is still experiencing problems. It lacks automation in data management, interactivity, and direct feedback to sellers, as well as limitations in monitoring and evaluating the overall analysis process. Of course, this requires the creation of a renewable system. The current system study and proposed solutions to this challenge involve the development of a web-based system to analyze duck sales at Bebek Berkah Farm. The goal is to encourage customers to buy duck items and enhance sales.

Analyses the flaws with the current system at Bebek Berkah Farm, with an emphasis on the village financial assistance management system, which is still administered manually by writing the recipients' signatures on paper. This can lead to issues such as difficulty preparing reports. The author is aware of the results of the continuing system study and proposes a solution to the problem, namely the development of a web-based village fund distribution system to make it easier for sellers to manage aid effectively and efficiently.

Design

This system design uses a UML (Unified Modeling Language) diagram. UML (Unified Modeling Language) is a visual modeling technique that explains object-oriented system architecture (Anugrahno, 2024). The author uses a range of UML diagrams to depict the system design, such as use case, activity, class, and sequence diagrams.



Figure 2. Use Case Diagram

The following is a use case diagram of the cross-selling analysis system. This diagram explains the activities carried out by system users (Wicaksono et al., 2022). There are two system users: admin and user. The admin owns the business, while the user is the buyer.

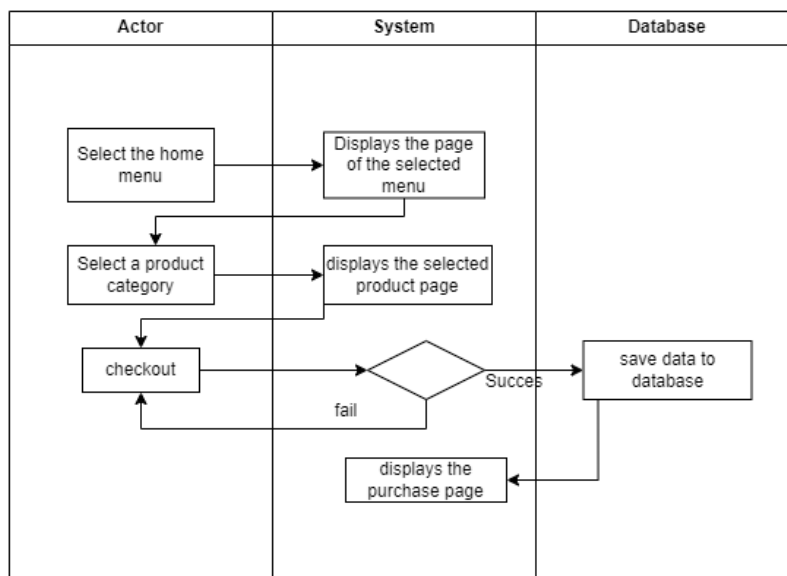


Figure 3. Activity Diagram

This diagram explains the flow of the system that has been created. This flow is the flow in users ordering products.

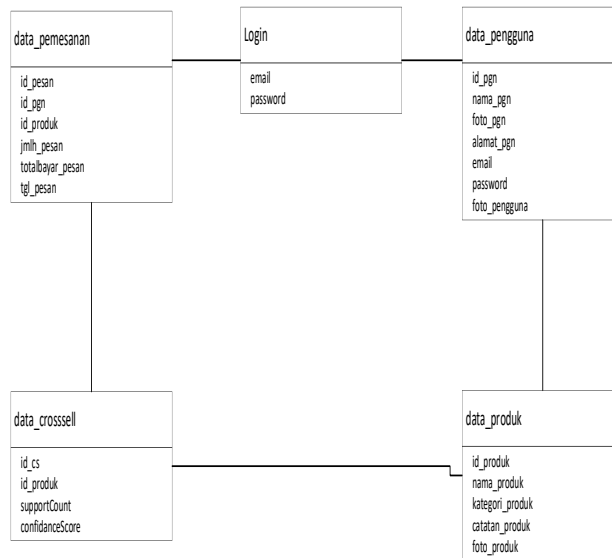


Figure 4. Class Diagram

Berkah Prasasti Application's class diagram is provided here. A class diagram is a diagram that is used to define the system structure by defining the classes that will be generated to build the system (Hikmah et al., 2020).

Implementation

Product Catalog Display

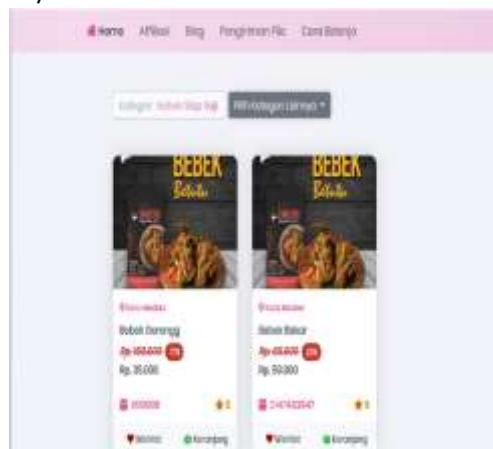


Figure 5. Product Catalog Display

This step will provide a detailed description of how the system operates. The program was implemented at Bebek Berkah Farm, resulting in a display of the selling information system. The information system allows consumers to select the product catalogue they want to buy.

Purchase Page Display

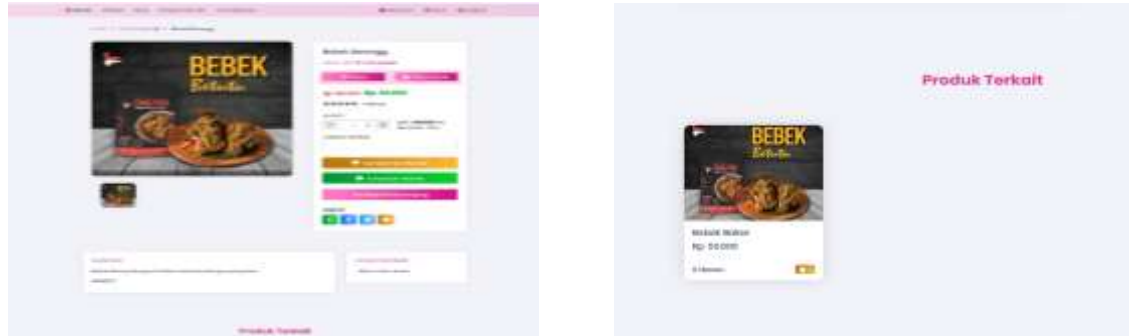


Figure 6. Page Display

After selecting a product catalogue, the administrator will be taken to the dashboard page. The user buys the page on this page that shows the chosen product. This can be seen in Figure 6.

Shipping and Payment Page



Figure 7. Shipping and Payment Page

On this page, the user makes payment for the product he has purchased and arranges shipping services for the delivery of the product.

Testing

System testing uses black box testing to ensure that all application functions are running well. The following are the results of testing the Berkah Prasasti application, which are presented in table form.

Table 1. Blackbox Testing

Testing	Realizing the intended	Test Result	Conclusion
Form login	Enter a username and password	Successfully entered the application	Valid
Dashboard Page	Select the dashboard menu	Successfully accessed the menu	Valid
Admin Product List Page	Select the product list menu	Successfully entered the product list page	Valid
User Product Page	Select the product menu	Successfully entered the product	Valid
User confirmation page	Select the confirmation menu	Successfully entered confirmation	Valid

CONCLUSION

Bebek Berkah Farm conducts manual sales management activities, including web sales research, without a support system in place. This development procedure The Waterfall technique is used in the sales application system, and it consists of three stages: needs analysis, system design, implementation, testing, and maintenance. After successfully designing and developing this grant administration program, researchers tested it to see whether there were any issues when it was used. No anomalies were discovered during the testing procedure, according to the results of black box tests. Researchers and consumers can expect sales management applications to function smoothly. It is believed that future researchers will be able to improve the system and bring benefits to users. Having successfully designed and developed a sales application Based on this website, the author derives numerous inferences, including the ownership of the information system. It was created to assist Bebek Berkah Farm in managing accurate sales results and targeted data in accordance with the required quota. The sales application information system allows Bebek Berkah Farm to readily regurgitate data, from login in to inputting payment information, in an orderly and accessible manner. This technology can also generate more detailed sales reports over a given time period. Bebek Berkah Farm may access the system, allowing customers to readily obtain information about sales at Bebek Berkah farm.

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