



SALES INFORMATION SYSTEM FOR BAKMI KHEK RESTAURANT USING SYSTEM DEVELOPMENT LIFE CYCLE METHODOLOGY

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Abstract

Sales Information System (SIP) is an integral part of business operations in the food and beverage industry. This research aims to develop a SIP specifically for Bakmi Khek Restaurant. The System Development Life Cycle (SDLC) methodology was chosen as the framework for the development of this system. This approach allows for structured stages, from planning to maintenance, that are in line with business needs. The research started with the planning stage which involved analyzing user requirements and formulating system objectives. Next, a system analysis stage was conducted to understand the business processes, information flow, and functional requirements of the system. The next system design stage establishes the architecture and technical specifications of the system. System implementation is done after the design is complete, followed by a testing phase to ensure system functionality and reliability. The result of this research is an SIP that is integrated with the sales activities of Bakmi Khek Restaurant. The system includes features such as inventory management, order recording, and sales tracking. Through the application of SDLC, the development of this system can be done in a structured and efficient manner, ensuring business needs are met optimally.

Keywords: Sales Information System, Restaurant, System Development Life Cycle, Requirements Analysis, System Design.

1. INTRODUCTION

In today's digital era, information systems have become a critical component in running efficient and effective business operations. One industry that is increasingly adopting information technology is the food and beverage industry. Bakmi Khek Restaurant, as one of the main players in this industry, realizes the importance of using information systems to improve operational performance and service to customers.

This research aims to develop a Sales Information System (SIP) that is tailored to the needs of Bakmi Khek Restaurant. This restaurant is known for its authentic noodle flavors and friendly service, but still faces challenges in managing sales and inventory transactions efficiently.

The System Development Life Cycle (SDLC) methodology was chosen as the framework for the development of this system. SDLC provides a structured approach that includes the stages of planning, analysis, design, implementation, and maintenance, which suits the complexity of the needs of Bakmi Khek Restaurant.

In this chapter, the background of the problem, the objectives of the study, as well as the scope and limitations of the study will be outlined. Furthermore, an explanation of the importance of the use of information systems in the food and beverage industry, as well as the potential contribution of SIP development for Bakmi Khek Restaurant will be discussed in more depth.

Therefore, the development of this SIP is expected to make a positive contribution in increasing operational efficiency, improving customer experience, and supporting the business growth of Bakmi Khek Restaurant.

System

A system is a combination of interconnected entities, whether physically or not, that collaborate synergistically to achieve a predetermined goal. (Prehanto et al., 2020)

Information

Information is the result of data processing that provides added value and significant meaning to the recipient, and helps reduce uncertainty in the decision-making process related to a situation. (Anggraeni, 2017) The main focus of information is to increase understanding or reduce uncertainty for its users, so its quality is a very crucial aspect. (Ginting et al., 2022)

Information System

Information systems are a series of integrated components with the aim of collecting, storing, and processing data, as well as presenting information, knowledge, and digital products. Companies and other organizational entities rely on information systems to run and manage operations, interact with customers and suppliers, and compete in the marketplace. In addition, information systems are used to manage supply chains between companies and facilitate transactions in electronic marketplaces. For example, companies use information systems to take care of financial aspects, human resource management, and expand market reach through online promotions. (Zwass, 2022)

According to Jerry Fitz Gerald's perspective, a system is a series of interconnected steps that work together to accomplish tasks and achieve predetermined goals. Meanwhile, Robert G. Murdick emphasizes that a system consists of closely interwoven components, aimed at achieving a desired result. Thus, through both procedural and elemental approaches, a system is defined as an organized and integrated structure, aimed at achieving a specific goal.

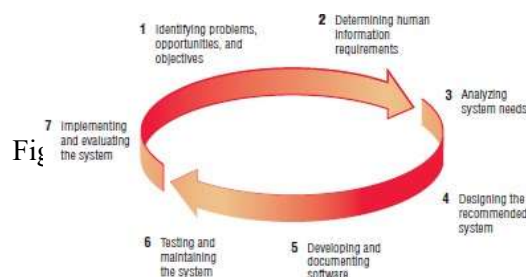
Sales

Sales is an integrated effort in designing strategies aimed at meeting customer needs and wants, with the aim of achieving profitable sales. As the axis of the company's sustainability, sales not only create profits, but also show the attractiveness of products to consumers, generating valuable insights into the results of the products produced. (Fagasta, Wicaksono, & Arifin, 2017)

The sales information system is part of a business information system consisting of a series of procedures for implementing, recording, calculating, generating documents, and providing sales information for the needs of management and other units involved, starting from receiving orders to recording the generation of bills or accounts receivable. (Sinaga & Malau, 2018)

2. METHODOLOGY

The methodology chosen for this research is the System Development Life Cycle (SHPS), which involves seven stages but only the initial stages up to the fifth stage are applied. SHPS is applied as a stepwise approach in analyzing and designing systems, based on the principle that optimal system development requires a structured set of analysis and user activities. (Kendall & Kendall, 2010)



Identifying problems, opportunities and objectives

In the initial stages, an analyst needs to adopt an honest attitude in observing business operations to identify existing problems, then work with members of the organization to highlight the problems that are revealed. Opportunities arise when the analyst recognizes the potential for improvement through the use of computerized information systems, which can provide a competitive advantage or set industry standards. Goal recognition is also essential at this early stage, as analysts look for aspects of information system applications that can help the business achieve its goals by addressing problems or capitalizing on opportunities.

Problems faced by Bakmi Khek Rumah Makan include constraints in operational efficiency, such as slow or poorly organized sales processes, lack of an integrated sales information system that results in difficulties in tracking sales, inventory, and customer preferences, and limitations in analyzing sales data that can make it difficult for management to make better decisions.

Opportunities include improved operational efficiency through the implementation of a sales information system, which has the potential to speed up the sales process and reduce human error. With an integrated information system, Bakmi Khek Rumah Makan can improve customer service by better understanding their preferences and needs. In addition, the sales information system can also provide better data analysis, supporting management in making strategic decisions based on accurate data.

The main objectives include developing an integrated sales information system for Bakmi Khek Rumah Makan, improving operational efficiency by ensuring the implementation of the new system optimizes the sales process, as well as improving customer experience by providing faster, accurate, and customized services. In addition, another objective is to provide adequate data analysis tools to support management decision making based on relevant and accurate information.

Determining information requirements

In this stage, analysts apply interactive methods such as interviews, sampling, and investigation of hard data. They also use questionnaires that do not interfere with the process, such as observation of decision-makers' behavior and their corporate environment, as well as methods that combine all approaches, such as prototyping. The analyst's main focus is to understand the information needs of users in performing their tasks. At this time, the analyst is looking for ways to develop a system that is beneficial to all stakeholders involved.

The author provides information relevant to the business context of Bakmi Khek Rumah Makan, including the challenges faced by the food and beverage industry. A clear explanation of the use of the System Development Life Cycle Methodology should be included, explaining the stages passed and the steps taken. A comprehensive analysis of business needs should be presented, including the identification of problems, opportunities, and objectives to be achieved through the implementation of a sales information system.

A detailed description of the sales information system developed for Bakmi Khek Rumah Makan, including key features, functionality, and system architecture, should be presented in the journal. In addition, the results of the sales information system implementation, including its impact on operational efficiency, customer service quality, and ability to support management decision-making, should be outlined. A critical evaluation of the developed sales information system, including identification of strengths, weaknesses, and suggestions for future improvements, should be conducted. The information presented is expected to have strong relevance to the research domain on sales information systems and make a valuable contribution to the practical or theoretical understanding of the topic.

Analyzing System Requirements

In the next phase, system analysts focus on analyzing the system requirements, including an examination of the decisions that have been structured. In this phase, they develop a system proposal that summarizes their findings on the users, functionality, and usability of the existing system, and presents a cost-benefit analysis of the various alternatives. In addition, they also provide recommendations on the steps to be taken, if any.

From the previous observations, the authors conducted a needs analysis and identified two main users for the sales information system to be developed: the owner and the shop staff. The shop staff will

have access to enter item data, make stock adjustments, record sales, and manage sales returns. Meanwhile, the shop owner will have the same access as the shop staff, plus the ability to view various reports, including reports on sales, stock items, sales returns, and stock adjustments.

Designing the Recommended System

Based on the previously collected data, system analysts develop the logical design of the information system. They design user procedures that help users to enter data accurately, so that the data entered into the information system is the correct one.

In this stage, the authors design the information system based on the needs analysis that has been compiled previously. They design input, output, and database structures that have been normalized. The design for input and output is done using Microsoft Visual Studio, while the database design uses SQL Server.

Developing and documenting the software

During the software development phase, analysts collaborate with programmers to produce the required software. They also work closely with users to compile documentation relating to the software.

At this stage, the authors act as software developers and use Visual Basic .NET Programming Language to develop the sales information system. They used SQL Server as the database. In addition, the author is also responsible for compiling information system documentation to guide users of Bakmi Khek Rumah Makan and help other developers in the future.

3. RESULT AND DISCUSSION

The results of the development of a sales information system for Bakmi Khek Rumah Makan using the System Development Life Cycle Methodology show success in achieving the various objectives that have been set. The implementation of this system shows a significant improvement in operational efficiency, with a faster and well-organized sales process. In addition, the system also managed to improve customer experience by providing better and responsive services.

The discussion of the results of this development highlights several important points. First, the implementation of the System Development Life Cycle Methodology helped in drawing up a structured plan and managing the project efficiently. Second, close collaboration between analysts, developers and users played a key role in the success of this project. Good communication and a deep understanding of Bakmi Khek Rumah Makan's business needs ensured that the developed system met expectations and provided significant added value.

The evaluation results show that this sales information system provides accurate and relevant information for management in decision-making. The reports generated by the system provide insights into sales performance, inventory, and customer preferences, allowing management to identify trends, predict demand, and design more effective marketing strategies. System performance evaluations are also conducted regularly to ensure smooth operations and quick responses. With regular monitoring, the development team can identify and address issues quickly, thus ensuring optimal system availability for users.

Overall the development of the sales information system for Bakmi Khek Rumah Makan has successfully achieved the set objectives by making a significant contribution to operational efficiency and business growth. By applying the System Development Life Cycle Methodology and understanding the business needs and appropriate technology, the project provided an effective and sustainable solution to improve operations and services at the restaurant. The next steps include regular system maintenance and customization according to the changing business needs and evolving technology, thus ensuring that the system remains relevant and beneficial to the company in the future.

4. CONCLUSIONS

The conclusion of the journal Sales Information System for Bakmi Khek Restaurant with System Development Life Cycle Methodology shows that the implementation of this system has had a significant positive impact on the restaurant's business operations and growth. By using the System Development Life Cycle Methodology, the project successfully developed a structured plan and

managed the system development efficiently. The evaluation results show that the sales information system provides accurate and relevant information for management, enabling them to make better decisions based on the available data. Overall, the development of this sales information system proves that a structured approach and a deep understanding of business and technology needs are critical to project success. The next steps include periodic maintenance of the system and customization according to evolving business and technology needs. Thus, this journal provides valuable insights for practitioners and researchers in the field of information systems, as well as providing useful guidance for companies in improving their operations and services through the implementation of effective information systems.

Suggestions that can be given for the Sales Information System to Bakmi Khek Rumah Makan with the System Development Life Cycle Methodology are The staff and management of Bakmi Khek Rumah Makan will receive intensive training in the use of the new sales information system, so that they can utilize it optimally, Regular maintenance plans and periodic system updates will be drawn up to ensure the smooth operation of the system and meet evolving business needs, Consideration will be given regarding the integration of the sales information system with other systems used by Bakmi Khek Rumah Makan, Regular collection of feedback from users will be conducted to evaluate their experience with the sales information system, and the results will be used to make necessary improvements and adjustments and Periodic review of the business needs of Bakmi Khek Rumah Makan will be conducted to ensure that the sales information system remains relevant and able to meet emerging challenges and opportunities.

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