

Optimization Of Accounting Information System Reinforcing Of Tourism Based Small And Medium Enterprises (Smes)

Deden Ardiansyah, Eneng Tita Tosida, Agung Djati Waluyo

Abstract: Business activities in Kujang Paneupaan Bogor handicraft SMEs can not develop rapidly one of the causes is that financial transaction activities are still carried out with a manual system. we need a financial transaction system in order to facilitate transactions, to reinforcing the SMEs. The aim of this research is optimizing the financial transaction of Kujang Paneupaan Bogor Craft SMEs through implementing web based Accounting Information System. A software development process, also known as a software development life cycle (SDLC), is a structure imposed on the development of a software product. The results of the Optimization of Accounting Information System: Reinforcing of Tourism Based on Small and Medium Enterprises (SMEs) are discussed according to the method used, namely analysis, design, evaluation, and release. the percentage of 88.04%. The highest quality aspect is based on the Usability aspect with a percentage of 91.87%, followed by the Functionality aspect with 90.22%. Reliability with a percentage of 83.2%, while the lowest quality aspect is from the aspect of Efficiency with a percentage of 79.33%. Based on the test results, testing for the second hypothesis in this study proved that the quality of the web based Financial Transaction Information System for Small and Medium Enterprise (SMEs) ISO 9126 models exceeded the original expectations of Good. The final result of software quality according to respondents is Very Good with the percentage of respondent responses of 88.04%.

Index Terms: SMEs, AIS, SDLC, Kujang.

1 INTRODUCTION

Tourism sector SMEs in particular is one of the SMEs that has contributed greatly to the Regional Original Revenue (PAD) of the City of Bogor, especially the role of SMEs Bogor Typical Souvenirs. One of them is typical Bogor SMEs souvenirs Bogor Kujang. Kujang Paneupaan Bogor Craft or Kujang Pajajaran which was founded by Ki Wahyu Affandi Suradinata in 2000. SME production activities are carried out in a semi-conventional manner involving electrically powered metal forging equipment. Likewise, financial transaction activities are still carried out with a manual system, so that it is difficult for SMEs to identify financial systems, and business activities in Kujang Paneupaan Bogor handicraft SMEs cannot develop rapidly. Therefore, we need a financial transaction system in order to facilitate transactions, to reinforcing the SMEs. The aim of this research is optimizing the financial transaction of Kujang Paneupaan Bogor Craft SMEs through implementing web based Accounting Information System [1][2][3]. Small and Medium Enterprises (SMEs) are business activities that are in great demand after the economic crisis that has resulted in layoffs in large companies[3][4][5]. Therefore, entrepreneurship is a potential for development, both in quantity and in the quality of the entrepreneur itself. SMEs in Indonesia have received attention and fostered by the government by creating a portfolio of ministries namely the Ministry of Cooperatives and SMEs. With the existence of a ministry that deals specifically with the field of SMEs, it is expected that SMEs in Indonesia will develop and be in demand by most of the Indonesian workforce [6]. According to previous research one of the business strategies to improve the strengthening of small and medium businesses is to optimize the Accounting Information System [7]. As the field of computer technology applications in accounting, the traditional manual accounting system has undergone tremendous changes, from the manual accounting methods to the computer system accounting method. This change greatly improved the efficiency of the accounting staff [8]. Information systems are key to the success of Small and Medium Enterprises (SMEs) for developing business. SMEs have

difficulty using enterprise class information systems due to different working structures and limited resources [9]. therefore, this study will emphasize more on the use of accounting information systems to enhance the strengthening of SMEs. Accounting Information System (AIS) is an information system that handles everything related to accounting [10]. Accounting itself is actually a system of information [11]. Factors considered in the preparation of accounting information systems: Accounting information systems that are prepared must meet the principle of (1) fast, that is, accounting information systems must provide the required information quickly and on time and can meet the needs and the appropriate quality, (2) safely namely the information system must be able to help maintain the security of company property. (3) cheap, which means that the cost to implement the accounting information system must be reduced so that it is relatively inexpensive. Quality financial information management can help effective decision making from all sides such as funding, investment, planning, reporting and tax payment, and others. Meanwhile, for the preparation and manufacturing of a neat and good quality financial information can be done with or without the use of technology.[12][13][14] Accounting Information System for SMEs is a simple information system tailored to the needs of users and easy to use [15]. This Accounting information system was created for the Kujang Peneupaan Bogor Crafts SMEs. This information system was built using the Life Cycle Development Live Cycle (SDLC) system. System Live Development Cycle (SDLC) is a life cycle software models usually include some version or subset of the following activities Planning and Visualization, Requirement Analysis, Software Modeling and Design, Coding, Documentation, Testing, Deployment and Maintenance [16][17].

2 MATERIAL AND METHODE

2.1 Material

Accounting information system for web-based SMEs is a simple information system tailored to the needs of users and easy to use. This Accounting information system was created for the Kujang Peneupaan Bogor Crafts SMEs. This information system was built using the Life Cycle Development Live Cycle (SDLC) system. System Live Development Cycle (SDLC) is a life cycle software models usually include some version or subset of the following activities Planning and Visualization, Requirement Analysis, Software Modeling and Design, Coding, Documentation, Testing, Deployment and Maintenance [16][10].

2.2 Methode

A software development process, also known as a software development life cycle (SDLC), is a structure imposed on the development of a software product. It is often considered as a subset of system development life cycle. There are several models for such processes, each describing approaches to a variety of activities that take place during the process. Software Engineering (SE) is the application of a systematic, disciplined, quantifiable approach to the development, operation, and maintenance of software, and the study of these approaches; that is, the application of engineering to software because it integrates significant mathematics, computer science and practices whose origins are in Engineering [18]. Various processes and methodologies have been developed over the last few decades to improve software quality, with varying degrees of success. However, it is widely agreed that no single approach that will prevent project overruns and failures in all cases. Software projects that are large, complicated, poorly-specified, and involve unfamiliar aspects, are still particularly vulnerable to large, unanticipated problems [19].



Figure 1 . SDLC Source : [16]

2.1 Planning

Planning is carried out for quality assurance requirements and identification of risks associated with the financial information system to be built. at the planning stage is carried out to define various technical approaches that can be followed to carry out the work of making a financial information system successfully and has a minimum risk. [17]

2.2 Requirement Analysis

Requirement analysis is the most important and fundamental stage in SDLC. this is done to find out information in the process of planning a survey of financial system requirements. Needs analysis is carried out by the team by conducting interviews and direct observation in the field. interviews were conducted by interviewing financial staff and SME owners so that the financial system that was built was suitable for the needs of SMEs.[8]

2.3 Design Development

Financial system design uses UML design which is a graph/image based language to visualize, specify, build, and document an OO (Object-Oriented) software development system. UML, short for Unified Modeling Language, is a standardized modeling language consisting of an integrated set of diagrams, developed to help system and software developers for specifying, visualizing, constructing, and documenting the artifacts of software systems, as well as for business modeling and other non-software systems [20]. In the development of this financial system using two UML approach models, namely usecase diagrams, activity diagrams and Class Diagrams.

2.4 Implementation

Implementation stage is the final of making the system acceptable or not by the user. in this system in accordance with the design of the UML system used. therefore, on a system created because there are only one user, only one user in this system, namely admin. The admin can do everything on the system. but in this financial system the admin cannot create another user.

2.5 Testing & Integration

Testing activities are carried out before the SME financial system is used so that at the time of system integration it can be used properly in accordance with the needs that have been previously analyzed. at this testing stage, testing is done using structural and functional testing methods that refer to ISO 9126. After testing, system integration is carried out on the existing system, because this financial system is the first system to be made in SME cleavers and batik, then the system integration is carried out directly.

2.6 Evaluation

This stage is the evaluation of the system that is built, the whole process, is evaluated. Some questions that need to be answered include whether the newly implemented system meets the requirements and initial business objectives, whether the system is reliable and fault-tolerant, and if it functions in accordance with agreed functional requirements. In addition to evaluating released software, it is important to assess the effectiveness of the development process. If there are aspects of the whole process (or certain stages) that management is not satisfied, it's time to improve. Effectiveness and efficiency of the system must be continuously evaluated to determine when the product has met its maximum effective lifecycle [21]. Considerations include: Continued existence of operational need, matching between operational requirements and system performance, feasibility of system phase-out versus maintenance, and availability of alternative systems.

2.7 Release

release is the application stage can be used by everyone in this case the application that has been released is an application that is ready to use.

2.8 Support

support is a stage that provides support for applications that have been released. so that when an application experiences an interruption or technical problem the team support provides direction to correct the problem.

3 RESULT

The results of the Optimization of Accounting Information System: Reinforcing of Tourism Based on Small and Medium Enterprises (SMEs) are discussed according to the method used, namely analysis, design, evaluation, and release [22].

3.1 Analysis

Requirement analysis is done to find out the needs of the system to be built. before analyzing the system to be built we need to know the previous system that has been running on SMEs kujang

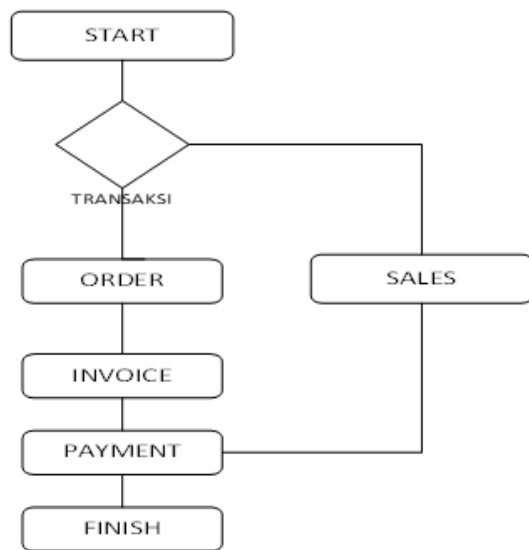


Figure 1 Flowchart Running System Manual

from the results of the analysis carried out produces an analysis that can be seen in Figure 2. in the picture explained that the results of the previous analysis of two transactions namely ordering and selling. Sales transactions are carried out in two stages, namely sales and temporary payments. Transaction transactions occur in three stages, namely ordering, invoice and payment. this will be the basis of making accounting information systems.

3.2 Design

Financial system design uses UML design which is a graph /image based language to visualize, specify, build, and document an OO (Object-Oriented) software development system. in the development of this financial system using two UML approach models, namely usecase diagrams, activity diagrams and Class Diagrams. In Figure 3 it is explained that

the results of the design analysis produce a design similar to Figure three, In figure 3 it is explained that the results of the design analysis produce a design similar to figure three. in the picture, uml activity diagram is drawn from source 2.

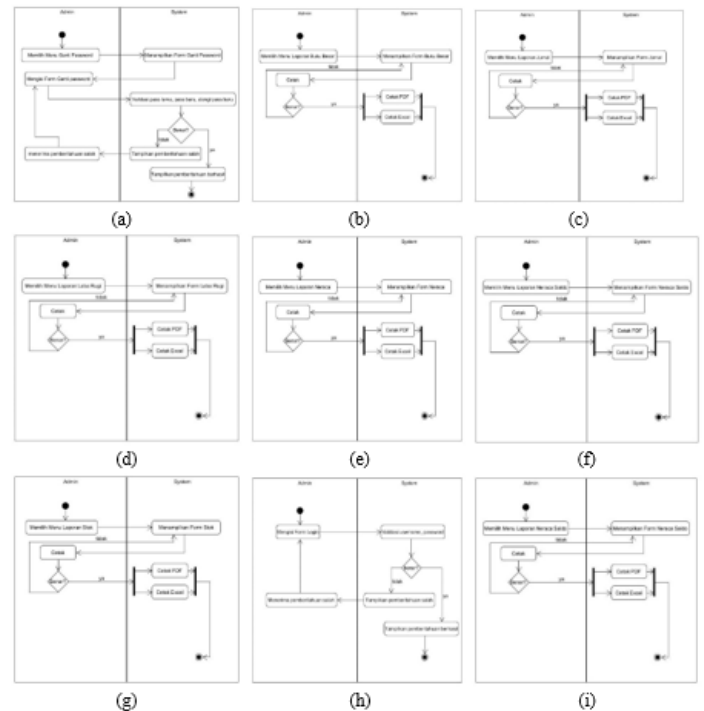


Figure 2 UML Activity Diagram

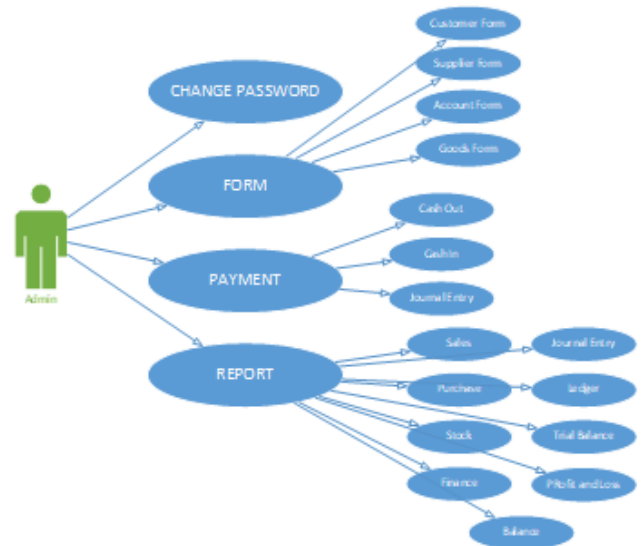


Figure 3 Use Case Diagram

This stage includes the development of detailed designs that brings initial design work into a completed with form of specifications [23]. This work includes the specification of interfaces between the system and its intended environment and a comprehensive evaluation of the systems logistical, maintenance and support requirements. The detail design and

development is responsible for producing the product, process and material specifications and may result in substantial changes to the development specification [24].

3.3 Implementation

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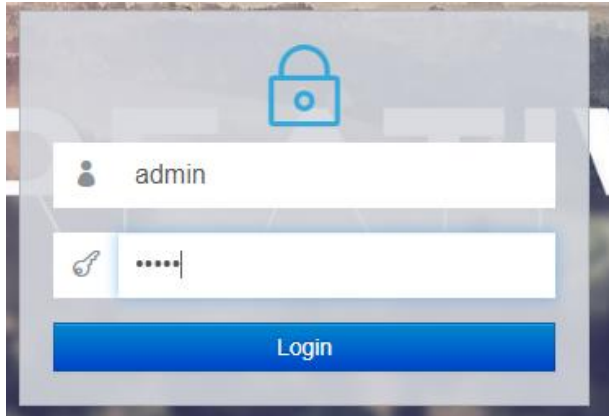


Figure 5 Login Menu

on the system there are four main menus that can be accessed by the admin, namely the password change menu, report menu, payment menu, and report menu

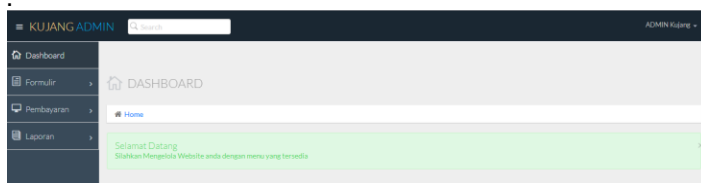


Figure 6 Main Display System

form menu there are four submenus namely customer, supplier, account, and item form submenus. each menu can be edited and added other items. making it easier for admins in terms of processing the addition and reduction of types.



Figure 7 Main Menu

3.4 Testing and Integration

ISO 9126 is an international standard for the evaluation of software. The standard is divided into four parts which addresses, respectively, the following subjects: quality model; external metrics; internal metrics; and quality in use metrics [29]. Quality control Accounting Information System for SMEs use four characteristic ISO 9126, they are functionality, Reliability, Usability and Efficiency. result of data analysis to get from quisioner, there are result of quality control using QC ISO 9126. The ISO 9126-1 software quality model identifies 6 main quality characteristics, namely, Functionality, Reliability, Usability, Efficiency, Maintainability, Portability [25][24].

Table 1 Result Of QC

Aspect	Actual Score	Ideal Score	% Actual Score	Criteria
Functionality	812	900	90.22%	Very Good
Reliability	416	500	83.2%	Good
Usability	735	800	91.87%	Very Good
Efficiency	238	300	79.33%	Good
Total	2201	2500	88.04%	Very Good

Base on the table 1, we can make conclusion that quality of Accounting Information System for The SMEs is very good. the percentage 88.04%. The highest quality aspect is based on the Usability aspect with a percentage of 91.87%, followed by the Functionality aspect with 90.22%. Reliability with a percentage of 83.2%, while the lowest quality aspect is from the aspect of Efficiency with a percentage of 79.33%. Based on the test results, testing for the second hypothesis in this study proved that the quality of the web based Financial Transaction Information System for Small and Medium Enterprise (SMEs) ISO 9126 models exceeded the original expectations of Good. The final result of software quality according to respondents is Very Good with the percentage of respondent responses of 88.04%.

3.5 Optimization Accounting Information System for SMEs.

based on the results of research that has been done accounting information systems that have been made are very helpful for all transaction activities ranging from the purchase of goods, stock and sales [26]. so that this, can provide facilities for SME owners to increase production and marketing. this is evident from the increase in production and sales results in clever and batik SMEs after and before using the accounting information system.

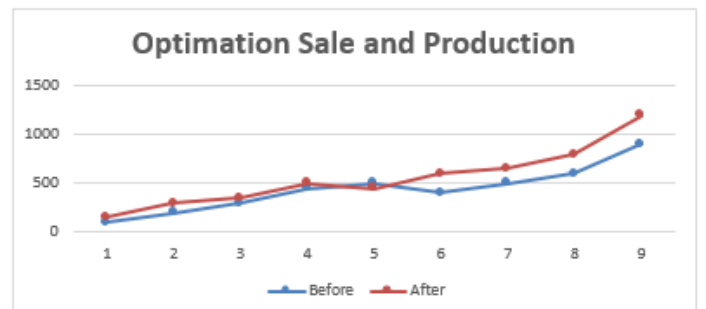


Figure 8 Grafik Optimation Sales Production Before dan After Using AIS Based on Figure 8 we can see that the accounting information system has a positive impact on SME business activities. this seems to increase every month after and before using SIA. and increase in sales transactions after using SIA around 79%.

4 CONCLUSION

Optimization of Web Based Financial Transaction Information System: Reinforcing of Tourism Based on Small and Medium Enterprises (SMEs) is very useful for special users of batik and cleaver SMEs. this is shown in the evaluation stage using QC ISO 9126 that the quantity of web-based Financial Transaction Information System for the SMEs is very good. the percentage of 88.04%. The highest quality aspect is based on the Usability aspect with a percentage of 91.87%, followed by the Functionality aspect with 90.22%. Reliability with a percentage of 83.2%, while the lowest quality aspect is from the aspect of Efficiency with a percentage of 79.33%. Based on the test results, testing for the second hypothesis in this study proved that the quality of the web based Financial Transaction Information System for Small and Medium Enterprise (SMEs) ISO 9126 models exceeded the original expectations of Good. The final result of software quality according to respondents is Very Good with the percentage of respondent responses of 88.04%. and increase in sales transactions after using SIA around 79%.

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