

Personalized E-Commerce Applications with Reports Feature

Safitri Juanita, Muhamad Arsyhan and Wiwin Windihastuty
Universitas Budi Luhur

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Abstract: E-Commerce is growing rapidly; the increasing number sees this fact of companies switching to using E-Commerce as a supporting tool in marketing their products or even making E-Commerce a business strategy by completely transforming traditional business transactions into online transactions. Seeing this, companies that use E-Commerce need financial management features that can help companies manage online sales transactions. The purpose of this study is to design and implement a report feature that functions as the company's Financial Management and management product in E-Commerce Applications, case studies at Rinjani Outdoor Shop. The methodology for this research is using the prototyping process which includes stage initial prototype (using an HTML Programming language), user review of the prototype (build an application using PHP programming language and database MySQL), Revise or refine the prototype. The results of this study are E-Commerce applications that are personalized with Feature Reports can help companies, especially Rinjani outdoor shop to see reports relating to online sales so that corporate financial management and product management can be managed faster, accurately and can be accessed anywhere.

1 INTRODUCTION

E-Commerce is currently growing very rapidly, increasing number of companies are transforming traditional business transactions into online transactions by building E-Commerce applications. However, there are still some companies that just starting to market their products online using social media, because according to research conducted by (DHL, 2015) Social Media has shown to be an effective platform for customers to discuss and voice opinions about products and brands, as well as for Business to communicate with customers. Social Media is one of Social Marketing tools to familiarize the consumer with Business, but E-Commerce Application is an enterprise business process after the occurrence of Business, electronic documents and settlement go for automated processing, business data is online inputted and formed the original documents (Meharia, 2012).

E-Commerce Application integrates the product marketing process as well as managing products, financial management, and goods supplier management. However, to achieve a successful online business, an E-Commerce application is needed that has additional features that can help meet business needs, a measure of the success factors of

online businesses based on research conducted (Otanasap et al , 2019) one of which is the precise direction of goods and services business, this means a strong understanding and proficiency and service to customer behavior, as well as an optimal delivery system and after-sales service, Have large enough variation of goods and services for consumers to take into their consideration, this means online customer typically conduct research before actual purchase, accordingly, Business with well-presented details and significant variation of goods and services will hasten and ease customer decision.

Besides the above factors, according to research on E-Business models and financial management companies based on cloud computing concluded that The rise of E-Commerce has brought new opportunities for the development of enterprises, financial services will no longer be confined to a country or a region, and will be moving towards internationalization, precision, computerization, network direction (Dongmei et al., 2016). With E-Commerce application should help the whole process of enterprise financial management become dynamic and timely, making the whole financial information generation and transmission efficiency significantly increased (Li, 2017). Moreover, other research conducted by (Sin et al., 2015) observes that the

CEOs who implement E-commerce adoption significantly believe that E-commerce not only able to increase sales, expand market share, cut down costs, exploit new business prospects but also will improve the relationship with dealers and companion

Based on the results of the above research, it can be concluded that an E-Commerce Application requires product management and financial management that will help the company achieve success in running an online business. So the problem that will be discussed in this study paper is how to meet the needs of financial management and product management on standard e-commerce applications so that it can help companies achieve success in running an online business. The purpose of this study is to design and implement a report feature that functions as the company's Financial Management and management product in E-Commerce Applications, case studies at Rinjani Outdoor Shop.

2 RELATED WORK

In this section, we briefly introduce related work on two topics. First, we investigate the implementation of E-Commerce in several case studies; then, we study the relationship between financial management strategies and E-Commerce and how other studies apply this concept.

2.1 Implementation of E-Commerce application in Several Case Studies

To see whether existing e-commerce applications have met these needs, a review literature has been conducted on previous research such as research (Nahlah et al, 2018) the purpose of this study was to implement the OOP technique with UML Modelling in building an E-Commerce website for KSM Tenggarai Ceria in Sinjai Regency, E-Commerce applications built in this study only display standard E-Commerce features and do not display report features related to recapitulation of online sales transactions. Other research is from (Soegoto, Marbun, and Dicky, 2018). The purpose of the research is to investigate the building of e-commerce design. Additionally, the research was aimed to investigate how e-commerce design influenced the success of e-commerce. The result of this research showed that the building of website design significantly influenced e-commerce successfully. Same as in previous research, the E-Commerce application built in this study only displays standard

E-Commerce features and does not display report features related to online sales transaction recapitulation. For the best of our knowledge, we have not found in previous research on developing e-commerce applications with report features, so in this research, we propose on personalizing e-commerce applications with report features.

2.2 Enterprise Financial Management System And E-Commerce

The overall objective of the financial strategy of E-Commerce enterprises is to mobilize, configure and use resources, to seek a balance of enterprise funds, adequate flow, to build the core competitiveness of the enterprise, and ultimately to achieve the maximization of enterprise value (Dongmei et al., 2016).

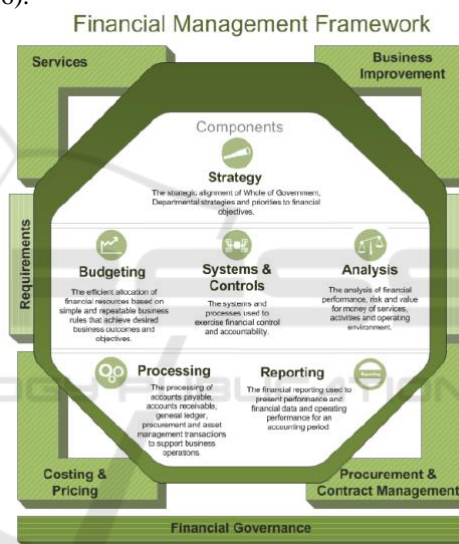


Figure 1: Enterprise Management Framework (Dongmei et al., 2016)

Seen in figure 1, part of the enterprise management framework is Reporting, the financial reporting used to present performance and financial data and operating performance for an accounting period.

2.2.1 Network Financial Management Model

The definition of network finance includes the following aspect: Internet/Intranet Cooperative open network formation, a comprehensive system of collaborative business management and financial management, financial enterprise application, internet financial should fully support the E-

Commerce, financial function based on management rather than accounting. The combination of network technology and financial management, a new model of financial management is the future of financial accounting (Dongmei et al., 2016)

2.2.2 The function of the Network Financial System

The primary function of the network financial system is (Dongmei et al., 2016): to achieve the supply and marketing of Business and financial management (storage and other processing and automatic inventory cost accounting); the effectiveness of cost control (data will be automatically generated during each cost); Effective control of the risk of financial operations (through the network financial software to achieve the integration of financial services to control inventory information and sales information so as to control the business risk more effectively). Based on previous research, there is a connection between financial management strategies and e-commerce, so in this study, we build features that can help companies evaluate and monitor sales transactions, order transactions and transactions of goods sold.

3 RESEARCH METHODOLOGY

The research methodology has stages starting from the data collection stage and the system design stage. Below are the stages of the research and explanation

3.1. The phase of collecting data

This research requires a case study to implement E-Commerce Applications so that at this stage data collection is carried out at Rinjani Outdoor Shop. Data collection methods used in this research are: Interview; In this stage, the researcher interviewed with Owners, employees, and customers of Rinjani Outdoor Shop to get information from owner and employees as a seller and customer as a buyer side and to get data related to the current system. (b) Literature review; The researcher collects data related to the research topic by reading books, articles or journals about E-Commerce to find out the theory of E-Commerce and the latest information from research that has been done before. (c) Observation; The observation has been carried out located on Jl. Gen. Sudirman No.4 Rt.02 / 015 Kranji Bekasi Barat, Jawa Barat, Indonesia. Observations that have been made are a collection of primary data such as observation of processes, accounting procedures, and others. The

data is used as a reference in the preparation of system (as-is business process) which is then compiled the design of the proposed business process system in the future (To-be business process). (d) Document analysis; In this research, the document was carried out from the location of the case study such as sales receipts, purchase invoices to suppliers, shipping document from the supplier. These documents are analyzed and become a reference source in the preparation of conceptual data models that are implemented in design database and screen design.

3.2. Phase Planning

In phase planning, we used Prototyping development process; the following are the stages of the Prototyping process (Carr & Verner, 1997):

(a) Initial Prototype; In this stage, we developed a E-Commerce application model in the form of a user interface using an HTML programming language with editor Sublime Text software. (b) User Review of Prototype; the End user is asked to evaluate the appearance of the user interface that has been made to get the user needs that do not yet exist in the prototype. If the form of user interfaces according to user requirements, then objectives attained. Then we do the stages of building an E-Commerce application as a whole according to the results of user reviews. This application is made using the PHP and MySQL programming languages, using XAMPP and Sublime Text software. However, if end-user did not feel satisfied with the prototype that has been made, then we do revise or refine the prototype. (c) Revise/Refine Prototype; We rebuild the prototype based on the user review of the prototype stage.

4 RESULT AND ANALYSIS

The following are the steps in designing personalized e-commerce applications with report features :

4.1. Business Process

The flow of a business process for E-Commerce Application; customer, can view the main menu, add and update purchase order after that admin can manage all order list in back end site. After admin validation customer order, then the customer can add and update payment confirmation, then admin will validation all payment confirmation in back end site after that admin will add or update delivery order. Every month, admin or owner can view or print sales

report, view or print report for sold item, view or print report purchase order, view or print payment, view, or print delivery order.

4.2. E-Commerce Application Menu Hierarchy

In E-Commerce applications, there are two user interfaces, namely admin and customer. In figure 2 is a hierarchy of menus for admin pages.

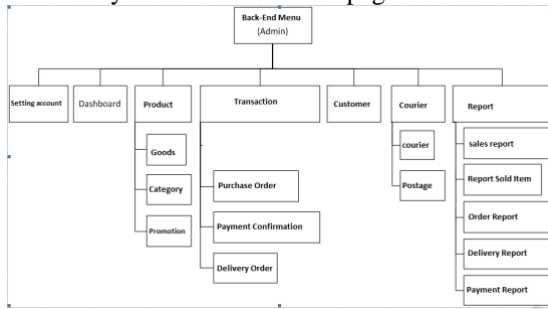


Figure 2. Back-End Menu Hierarchy

4.3. User Interface Display For E-Commerce Applications

The following is a screen display of E-Commerce applications that have personalized report features:

4.3.1. Main Menu

Figure 3 is a screen display from the customer's main menu as a shortcut to other pages that customers want to visit, such as Home, Catalog, Discount, Best Seller, and Category.

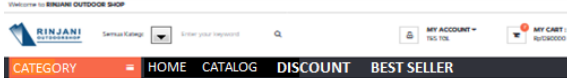


Figure 3. Main Menu E-Commerce

4.3.2. Homepage

The homepage is the front page when entering this online store, containing superior products and products that are being discounted. On this page, visitors can immediately understand what is being sold in the store. (See Figure 4).

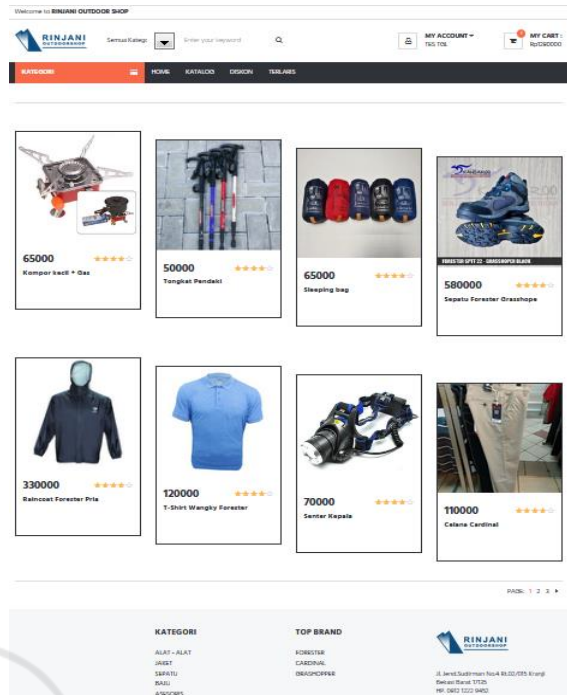


Figure 4. Homepage E-Commerce application

4.3.3. Dashboard Admin page (Back-End)

Figure 5 is Dashboard on the main admin page that displays specific sales data such as the number of items sold, number of customers, number of orders, number of successful transactions, income this month, and sales charts per month.

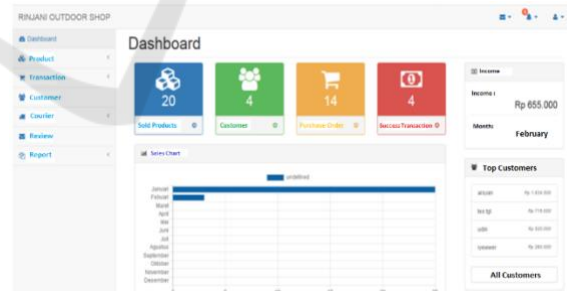



Figure 5. The dashboard on Admin Page

4.4. User Interface E-Commerce Application with Report Feature

The following are user interface outputs of the Report feature that can assist companies in conducting financial management and product management.

4.4.1. Sales Report

The following is the user interface as an admin to view annual sales reports, each line in this report showing monthly sales transaction data which is an accumulation of sales turnover, sold items, amount of capital, discount, and profit. (See Figure 6).




Sales Report
YEAR : 2019

	Sales Turnover	Sold Items	Amount of Capital	Discount	Profit
Januari	Rp 1.860.000	20	Rp 1.487.000	Rp 210.000	Rp 163.000
Februari	Rp 75.000	1	Rp 55.000	Rp 20.000	Rp 0
Maret	Rp 0		Rp 0	Rp 0	Rp 0
April	Rp 0		Rp 0	Rp 0	Rp 0
Mei	Rp 0		Rp 0	Rp 0	Rp 0
Juni	Rp 0		Rp 0	Rp 0	Rp 0
Juli	Rp 0		Rp 0	Rp 0	Rp 0
Agustus	Rp 0		Rp 0	Rp 0	Rp 0
September	Rp 0		Rp 0	Rp 0	Rp 0
Oktober	Rp 0		Rp 0	Rp 0	Rp 0
November	Rp 0		Rp 0	Rp 0	Rp 0
Desember	Rp 0		Rp 0	Rp 0	Rp 0

Figure 6. Sales Report User Interface

4.4.2. Order Report

The following is the annual order report display which shows the order date, invoice number, customer code and total order, shipping costs, discounts, total after discount and order status. (See Figure 7).



ORDER REPORT
Start Date : 2019-02-01 End Date : 2019-02-28


Order Date	Invoice	Customer	Shipping Cost	Discount	Total	Status
2019-02-06	INV00013	(PLG00003) tes tgl	20.000 (JNE-YES(Yakin Esok Sampai))	20.000	580.000	belum dibayar
		Detail Pemesanan : (580.000)	Barang : (1) Tongkat Pendaki (1) Sepatu Forester Grasshope	Harga : @ 50.000 @ 580.000	Diskon : 0 50.000	Sub Total : 530.000
2019-02-06	INV00014	(PLG00006) arsyian	10.000 (JNE-REG(Regular))	0	75.000	belum dikirim
		Detail Pemesanan : (65.000)	Barang : (1) Kompor kecil + Gas	Harga : @ 65.000	Diskon : 0	Sub Total : 65.000

Total Pemesanan : 2

Figure 7. User Interface for Order Report

4.4.3. Sold Item Report

The following is a report of sold product that contains details of the data of goods sold, purchase price, selling price and the number of items sold. (See Figure 8).



SOLD ITEM REPORT
Start Date : 2019-01-01 End Date : 2019-02-28

Product ID	Product Name	Category	Purchase Price	Selling Price	Sold Amount
BRG001	Kompor kecil + Gas	(KTG01) Alat - alat	55000	65000	5
BRG002	Tongkat Pendaki	(KTG01) Alat - alat	40000	50000	6
BRG003	Sleeping bag	(KTG01) Alat - alat	50000	65000	6
BRG004	Sepatu Forester Grasshope	(KTG03) Sepatu	520000	580000	3
BRG005	Raincoat Forester Pita	(KTG04) Baju	275000	330000	1
BRG007	Senjer Kepala	(KTG01) Alat - alat	50000	70000	3
BRG008	Celana Cardinal	(KTG06) Celana	79000	110000	4

Figure 8. User Interface for Sold Item Report

5 CONCLUSIONS

The conclusion of this study is that the Personalization of E-Commerce applications by building a Sales Report feature is proven to help companies especially Rinjani outdoor shop manage financial management because companies can see the total revenue every month quickly and accurately, the product report features proven to help companies manage inventory product because the company can see quickly and accurately the number of items sold so that the company can find out the stock and help improve customer satisfaction, the ordering report feature also helps companies manage inventory product because the company can monitor the number of items ordered and order status, so the company knows the number of orders that have been processed and not yet processed.

Further research is needed to find out how important the report feature is for E-Commerce by conducting a survey of several online shop owners.

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