Monitoring Home Sales Data with Optimization of Information Systems

Sri Rahayu[1], Tuti Nurhaeni[2], Panji Bangun Pangestu[3]
[1]Universitas Gunadarma, Jalan Margonda Raya Nomor. 100, Depok
[2,3]STMIK Raharja , Jl. Jendral Sudirman No. 40, Modernland Cikokol,Tangerang
e-mail: srirahayu@raharja.info, tuti@raharja.info, panji@raharja.info

Abstract

PT. Sinar Property Group is a company that deals in home sales. Marketing Division of the company is the most dominating division in home sales data processing and it is very needed. Consumers data who buy a home become the basic reference in monitoring, it is also used for monitoring consumer payment transaction status and payment transaction archiving. The research is using SWOT as its method that used for knowing strength of the company, weakness, opportunity, and its threat. The results of the analysis show the company needs a system that capable to monitoring centered home sales data which functionally, marketing manager knows the total of consumer and total of sold home using a system which can be accessed in realtime using web-based system, so it will be easier in making decision.

Keywords*: Sales, Monitoring, Sales Report, Website*

1. Introduction

The development of the information technology world from time to time is increasingly experiencing enhancement. Technological progress has significantly dominated in all aspects human life, so that the presentation of information must get attention seriously in order to get information quickly and accurately. This is caused because the importance of information in all aspects of the needs of the community, institutions, and company. thus applied is a website used for information presents a media information [1]. In general, a company needs information for improve the quality and quantity in various management factors, both in terms of service and productivity. In service companies, the role of computer technology is the thing very important and very necessary in processing data quickly and precisely so can produce accurate information and influence in improving performance efficiency management. These factors are important factors that are also needed at PT. Sinar Property Group to be able to compete and advance.

PT. Sinar Property Group is a service company engaged in the field home sales marketing. Until now PT. Sinar Property Group has experienced in marketing more than 50 housing, both housing with Facilities Housing Finance Liquidity (FLPP) and exclusive commercial and cluster housing. In its development, PT. Sinar Property Group experienced an increase in sales very good, but not yet balanced with a good information system inside processing of sales data, this company is only limited to using semi-computerization the procedure is inputting from manual notes into Microsoft Excel. This data processing method raises several obstacles, including prospective data archives Home buyers are not stored properly so the data search is not efficient.

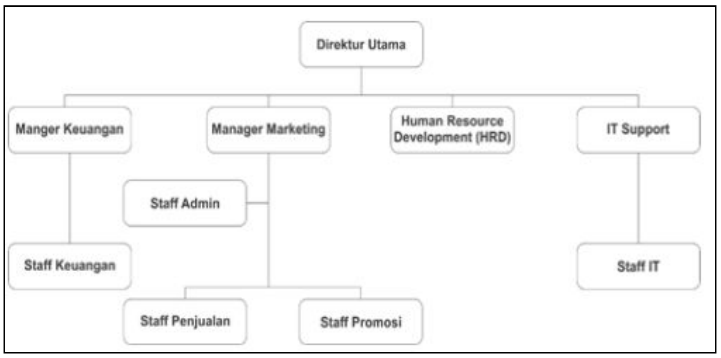

Figure 1. Organizational Structure of PT. Sinar Property Group

Because accessing the sales report data is done individually in control is very influential on the operational work of the company, so this is not yet can realize effectiveness in handling data processing, especially regarding reports sales. with the hope that the process of monitoring data done more efficiently because it is accessible to every time by employees [2]. Given the obstacles that often occur in the report data processing sales at PT. Sinar Property Group, Looking at existing conditions then do research about the system what makes the system information for efficient monitoring of sales data so that this company can improve its performance [6].

2. Research Methods

The study material will be examined concerning the technical implementation and testing on the system [3]. The research method used in this study is as follows: 1. Method Data Collection, this method consists of observation method, interview method, and study library. 2. System Analysis Method, this method uses the SWOT analysis method for evaluate Strength: the strength of the company used as an evaluation material is the company's ability in terms of customer quantity and company quality; Weakness (Weakness): the weakness of the company analyzed is a method of worker performance and the quality of the device used; Opportunity: opportunity that becomes material analysis in addition to the main product sales strategy is technological advancement in order service prospective customers are increasingly interested and customers are more comfortable; and Threat (Threat): the average technological progress of other similar companies is the aspect that becomes consideration in terms of threats to the company. 3. Design Method, Visual Paradigm for UML 14.0 CE. Enterprise Edition is used to make designs in the form diagram. 4. Testing Method, this method is used to analyze a system identity to detect, evaluate conditions, and features that want to know the quality. Studies Literature is also used in this study, including the following:

1. Research conducted by Mudjahidin and Nyoman Dita Pahang Putra with title "Design of Monitoring Information System Development Based Projects Web Case Studies at the Highways and Stakeholder Service ". This study discusses PHP-based website monitoring for reports (especially project development reports) not late and can be easily monitored.
2. Research conducted by Gentisya Tri Mardiani with the title "Monitoring System PT Asset and Inventory Data. Telkom Cianjur Web Based ". This study discusses system for monitoring processes to ensure data compatibility and clarity information is well maintained so as to reduce problems that will occur and can immediately solve the problem.
3. Research conducted by Muhammad Andang Novianta and Emy Setyaningsih with the title "Web Server-Based Railway Monitoring Information System Using GPRS Services". This study discusses web-based design server as an online monitoring system that utilizes GSM networks use GPRS service.

4. Research conducted by Fandi Setyo Prambudi, Mochamad arifin, and Vivine Nurcahyawati with the title "Information Systems Monitoring Based on Student Problems Web and SMS Gateway (Case Study: SMA Negeri 2 Trenggalek) ". This research discuss student monitoring information systems for web-based and sending the report to parents of students / i. This website also collects statistical data student's behavior as a reference for one of the system features to predict students may or may not have problems without the knowledge of the teacher and parents.
5. Research conducted by Princess Mandarani with the title "Design and Implementation of Web-Based User Interface for Monitoring Temperature, Humidity and Smoke in a room is different from using a local area network". This study discusses designing web-based monitoring systems for monitor the condition of some rooms by utilizing LAN networks.
6. Research conducted by Rausan Fikri, Boni P. Lapanporo, and Muh Ishak Jumarang with the title "Design of Surface Height Monitoring System Water Using ATMEGA328P Microcontroller Based on Web Service ". Research this discusses web-based water level measurement tools so that control can be done in real time and online through a web page.
7. Research conducted by Indri Handayani, Ary Budi Warsito, and Singgih Aji Pangestu with the title "RAHARJA.AC.ID WEBSITE USE AS INFORMATION MEDIA AND UPLOAD ARTICLES FOR NS-CCIT USING YII FRAMEWORK ". This study discusses a system web-based database on the website raharja.ac.id to simplify the process dissemination of seminar schedule information by utilizing PHP technology and MySQL and implement it as a medium for delivering information about seminar schedule that will be held [7].
8. Research conducted by Angi Bingar Kusuma and Lies Yulianto with the title "Making Website Monitoring Customer Complaints at PT. Telkom Service Unit Ngadirojo ". This research is about the system that has been going on and to be implemented in creating a new system, which is to create an interactive website that can help the process of distributing information and as a place to interact between customer with PT. Telkom online [8].
9. Research conducted by Dina Fitria Murad and Nia Kusniawati with the title "WEBSITE INTELLIGENCE APPLICATION FOR SUPPORTING PAUD REPORTS IN HIMPAUDI KOTA TANGERANG ". This study discusses website-based application design that can be used PAUD easily. PAUD administrators can access the HIMPAUDI website, upload reports in the form of an excel file and can be recapitulated automatically by the system into graph form. HIMPAUDI can also easily select parameters graph that can be seen by year, age, study group, and others etc [9].
10. Research conducted by Sri Nurhayati and Lucky Feliciano Waha with the title "Modeling Monitoring of Website-Based Natural Disaster Assistance Distribution". This study discusses the model of monitoring the distribution of natural disaster assistance website-based to be able to manage and view disaster relief data information as well can provide information whether the assistance provided has been received or not. The application model is designed using a structured approach with one of the tools it's a DFD [10].

Based on the 10 literature reviews above which discuss monitoring and the system, this monitoring system is made to facilitate the monitoring process and reporting on certain things, can also improve company performance. That is the reason become the basis for making this website-based monitoring system.

3. Results And Discussion

3.1 Problem Analysis

The analysis compares several cases that ever existed with the problems that arise and concludes the finish on this research [5]. The process of recording sales data and making sales reports at PT. Sinar Property Group is still running manually. Noting sales data yet have a centralized system so the manager has difficulty knowing the number of homes sold from each

housing marketed in real time so impact on information on house lots that are still available to be re-marketed. Another thing, consumer data is not well organized in its archiving that has not efficient because there is physical data or hardcopy and there is data input or soft copy both must be archived. Information on house data that has been sold is needed to find out how many plots in each housing have been ordered or purchased, as well as information regarding the data of consumers who have paid the booking fee and the down payment has been set. This has an impact on the manager's difficulty in searching for the data takes a long time which usually has to wait from the sales reporting process.

3.2 Problem Solving

Problems that exist in the Marketing Division regarding the process of recording data sales and sales reporting results in a solution, which will be designed information system for monitoring real-time website-based sales data. This system function in order to facilitate the marketing manager in knowing information about house data that has been sold [14], as well as to find out about consumer data that has been propose a home purchase by optimizing a more efficient information system in its use both in terms of data archiving, and of course reporting sales can be done effectively [15].

3.3 Sales Data Monitoring System Procedure

Monitoring is the process of collecting information on an ongoing basis with the aim to be able to keep an eye on activities that have been undertaken to improve and refine our goals will be achieved [4].

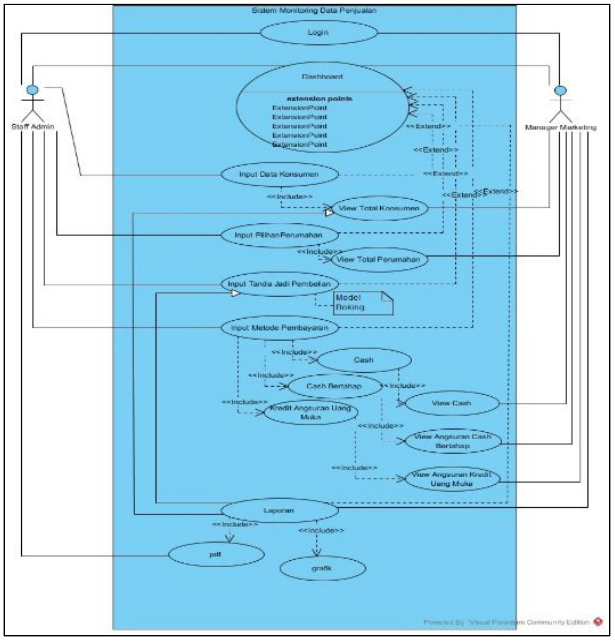

Figure 2. Use Case Procedure Diagram of Sales Data Monitoring System

Picture of Use Case Procedure Diagram Sales Report above explains the flow on the system, which is as follows: For the first stage, Admin Staff and Manager Marketing login. After logging in, the page displayed is the Dashboard, and on the Dashboard page there are several features available. On this page, Admin Staff inputs Consumer data and input housing options, and can see the total view of consumers and views total housing. Total consumer view and total housing view can also be accessed by Marketing Manager. After that, the Admin Staff input the sign into a purchase and choose a booking model. Admin staff who have finished inputting data

before, then input the payment method. The payment method consists of several types, namely cash, gradual cash, and advance installment credit. View cash, cash incremental, and advance installment credit can also be accessed by the Marketing Manager. After all previous stages are complete, Admin Staff and Marketing Manager can find out a report consisting of a total view of the consumer and a sign of purchase. Admin staff can also print the report whose output file is in pdf format. While Manager Marketing can find out detailed reports in the form of graphs.

3.4 Database Design
3.4.1 *Class* Diagram

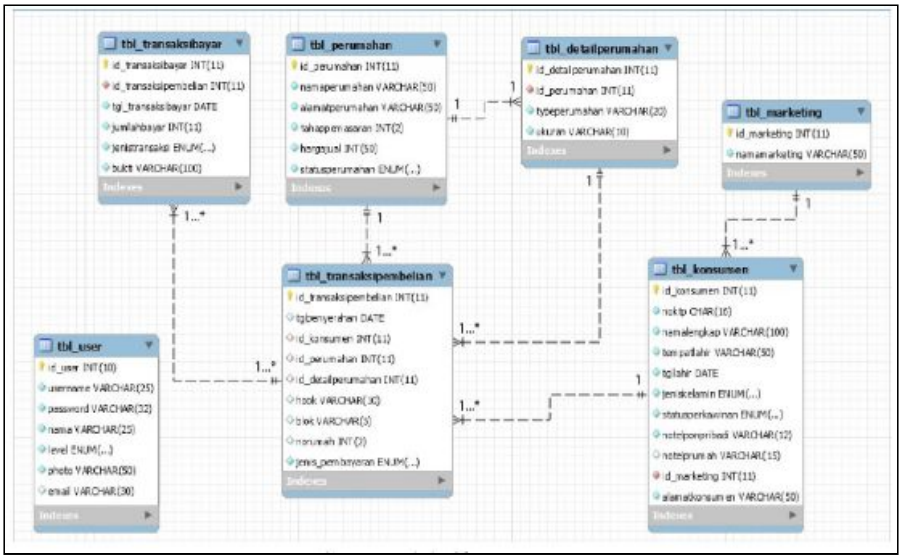

Figure 3. Class Diagram

As shown in the table above, the database in this information system has 7 tables that are used, namely tbl_transaksibayar, tbl_perumah, tbl_detailperumahan, tbl_marketing, tbl_user, tbl_transaksipembelian, and tbl_user. Of the 7 tables, there are several master tables and operational tables. The table included in the master table are tables of consumer, home, and tbl_marketing. While the tables included in the operational table are tables tbl_detailhome, tbl_transaksi purchase, and tbl_transaksi paid.

3.4 Implementation

a. Dashboard

On the Side Menu there is a button Dashboard, Consumer, Marketing, Housing, Purchase, User and Report Transactions. Side Menu is also available on several pages after this. The Dashboard page itself provides a main view, namely Graph Purchase. In addition, at the top, this page also provides the number of consumers, marketing activities, purchase transactions and housing.

Figure 4. Display Dashboard

b. Input Consumer Data

The Consumer Data page is the first thing that is very important in the process transaction. Consumer data such as No. ID card, full name, etc. must be immediately filled, also marketing officers who are on duty while serving consumers who are currently fill in the data.

Figure 5. Input Consumer Data

c. View Consumer Data

After inputting consumer data, it will proceed to the View Data page Consumer. This page provides the overall results of the data just inputted, as well provides an Update option to change data, and Delete to delete the whole new consumer data inputted.

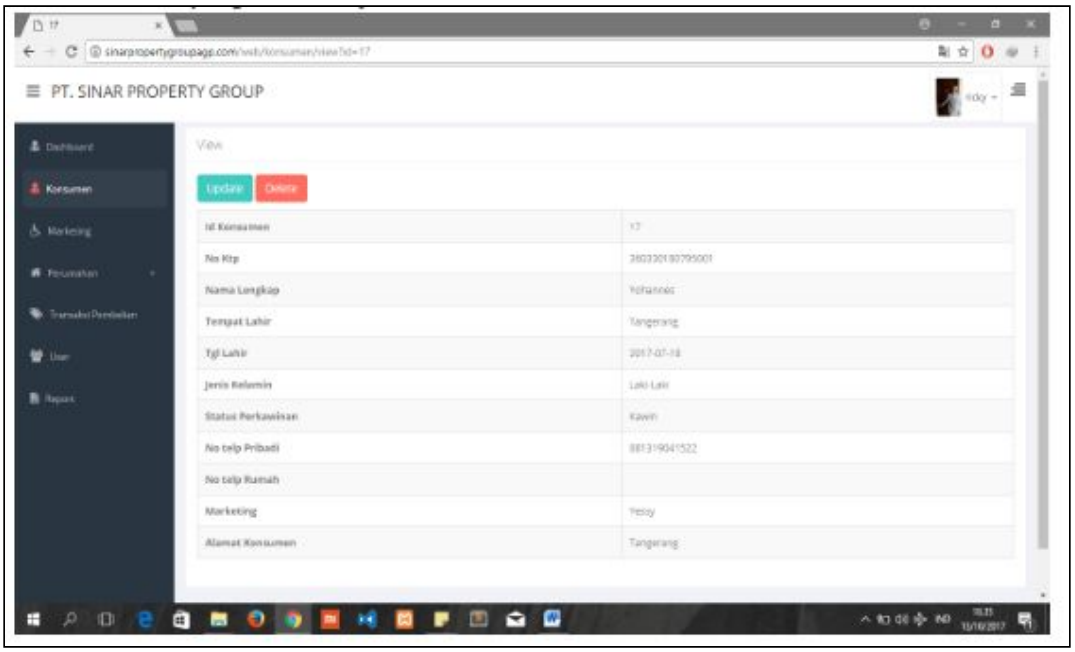

Figure 6. View Consumer Data

d. Input Data Marketing

The Marketing page provides Input Data Marketing intended to input data marketing that is on duty or serving consumers.

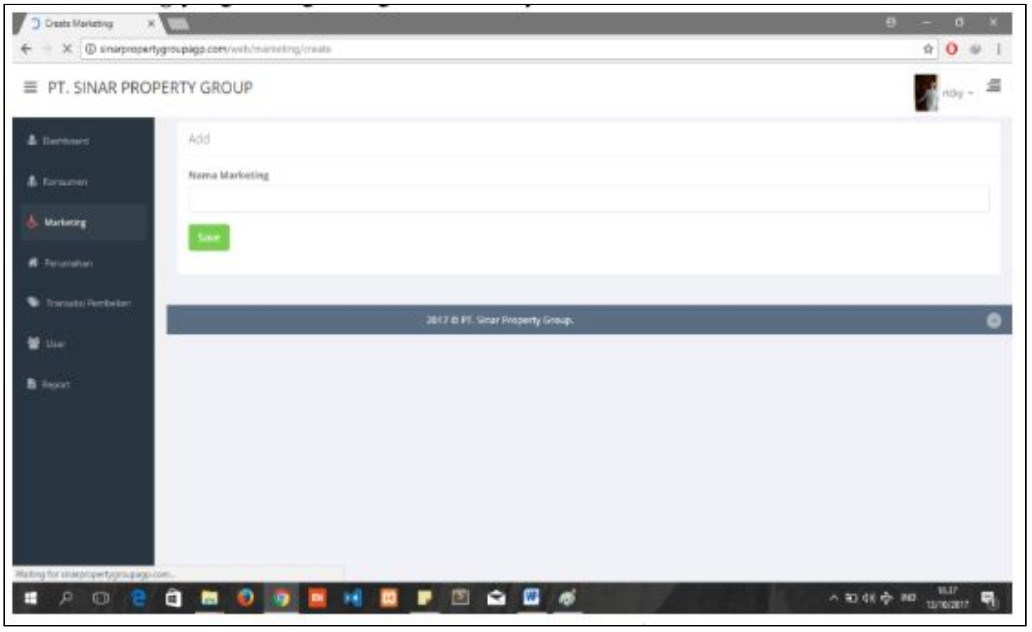

Figure 7. Display Input Data Marketing

e. Consumer List

Consumer data from several consumers will appear on the Purchase Transaction page. Besides displaying consumer data, this page also provides a shortcut located in the right corner of each data, namely the shortcut to edit data, delete, and go to transaction details.

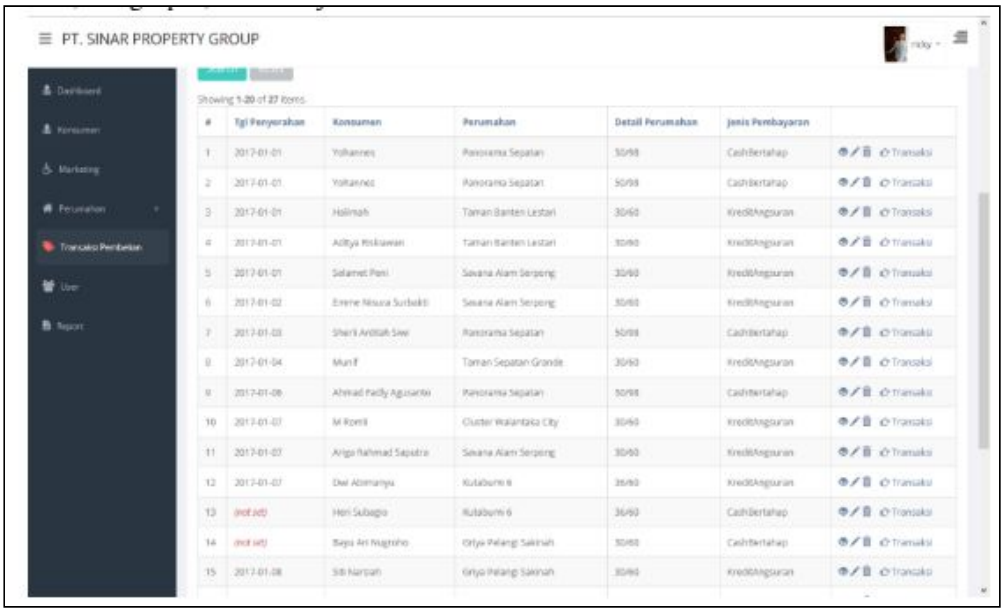

Figure 8. Display Consumer List

f. Report Data

The Report page displays detailed report data as before, but on the page, there are several tables related to transactions, such as Pay Booking, Type of Booking, and Transaction Total. At the very top, the Report page too provides a data search feature according to the desired date, month and year.

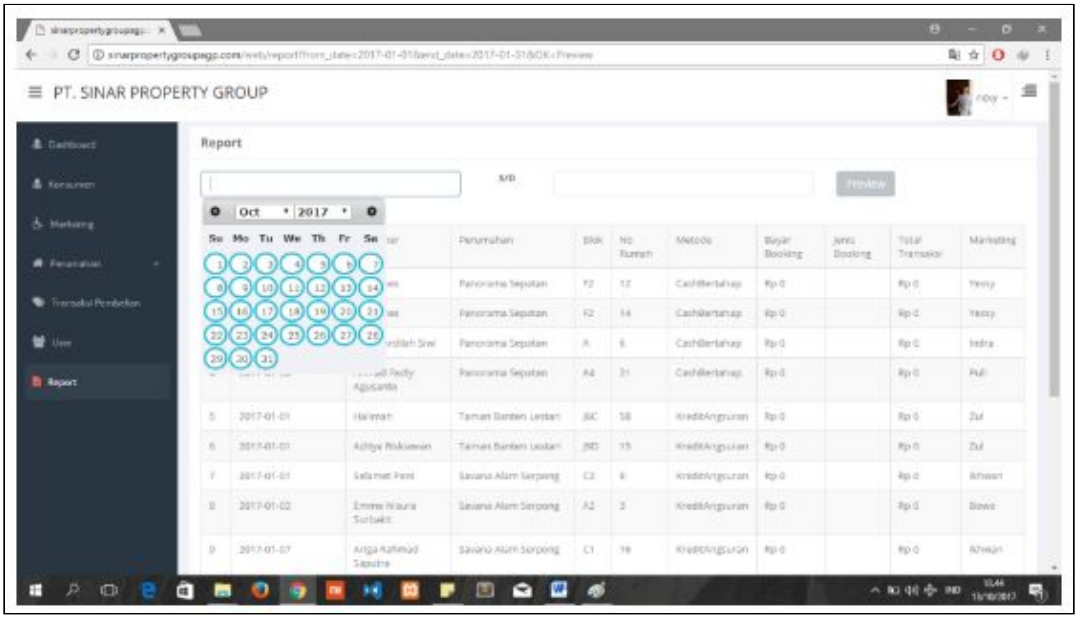

Figure 9. Display Report Data

g. Print Report

Report Print Page provides a sheet that has been arranged with logos, tables, and fill in. So it is not necessary to rearrange logos, tables, and contents. Print feature on the page this is also the same as the print feature in general, there is an option to choose the page you want to print, type of layout, and color, and additional settings can be added according to will.

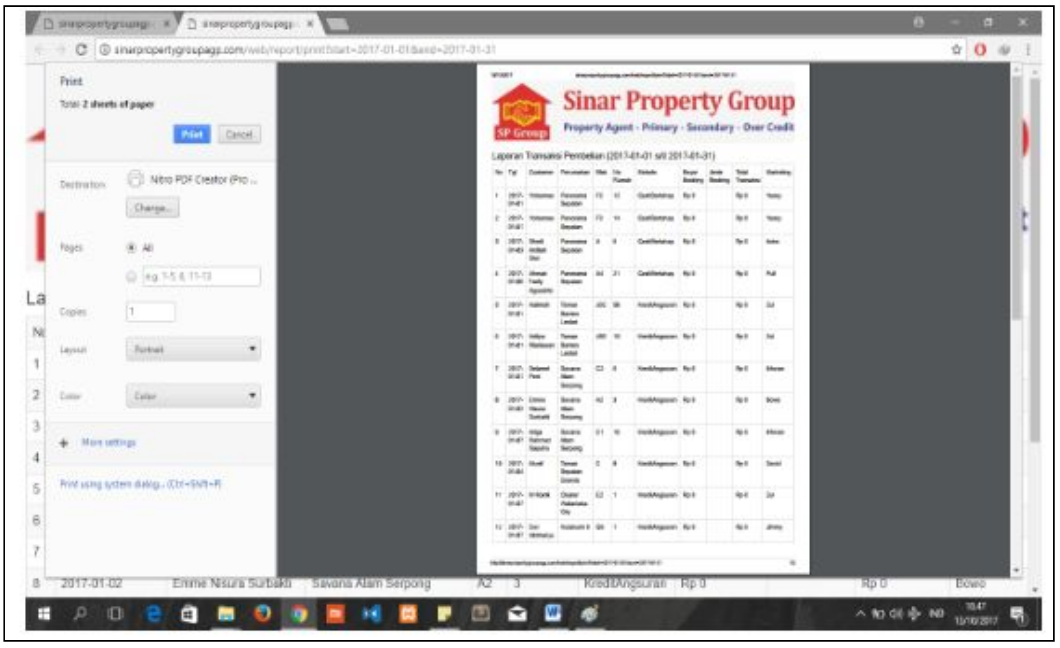

Figure 10. Print Report Data

3. **Conclusion**

This company is a company engaged in services, of course very requires speed and reliability during the input process, especially in the division Marketing. The input and archiving process is the main focus that is addressed in this problem. Previously, the process was through input to Microsoft Office Excel reporting is only once a month and must wait for quite a long time because must wait for sales data from several branch offices that are operating about data on home sales that have been bought and that have not been bought. Whereas the process archiving is still in the form of physical files and files. Files are very susceptible to infiltration even viruses even with anti-virus, and physical files are easily lost and damaged, as well it takes a long time to look for it even though it has been marked. Monitoring this website has solved all these problems and constraints, so that the performance the company can increase rapidly and more efficiently.

References

[1] Tiara, K., & Nurhaeni, T. (2016). Penerapan Viewboard GO+ Berbasis Yii Sebagai Media Monitoring Pembayaran Mahasiswa. *Technomedia Journal*, *1*(1), 65-77.
[2] Mudjahidin, M., & amp; PUTRA, N. D. P. (2012). Information System Design Monitoring the Development of Web-Based Projects. Journal of Industrial Engineering, 11 (1), 75-83.
[3] Mardiani, G. T. (2013). PT Telkom Cianjur Asset and Inventory Data Monitoring System Web-based. Komputar: Computer and Informatics Scientific Journal, 2 (1).
[4] Novianta, M. A., & amp; Setyaningsih, E. (2015). Railway Monitoring Information System Web-based servers use GPRS services. Momentum Journal, 17 (2).
[5] Prambudi, F. S., Arifin, M., & amp; Nurcahyawati, V. (2012). Monitoring Information System Web-Based Problematic Students and SMS Gateway (Case Study: State High School 2 Trenggalek). JSIKA Journal, 1 (2).
[6] Mandarani, P. (2014). Designing and Implementing a Web-Based User Interface For Monitoring Temperature, Humidity And Smoke In Different Rooms Utilizing Local Area Network. Jurnal TeknoIf ISSN 2338-2724, 2 (2).
[7] Fikri, R., Lapanporo, B. P., & amp; Jumarang, M. I. (2015). System Design Monitoring Water Level Height Using ATMEGA328P Microcontroller Web Service Based. POSITRON, 5 (2).

[8] Handayani, I., Warsito, A., & amp; Pangestu, S. (2018). USE OF THE WEBSITE RAHARJA.AC.ID SEBAGAI MEDIA INFORMASI DAN UPLOAD ARTIKEL UNTUK NS-CCIT MENGGUNAKAN FRAMEWORK YII. CCIT Journal, 10(1), 127-
[9] Kusuma, A. B., & Yulianto, L. (2013). Pembuatan Website Monitoring Keluhan Pelanggan Pada PT. Telkom Unit Layanan Ngadirojo. IJNS-Indonesian Journal on Networking and Security, 4(3).
[10] Murad, D. F., & Kusniawati, N. (2013). Aplikasi Intelligence Website untuk Penunjang Laporan PAUD pada Himpaudi Kota Tangerang. CCIT Journal, 7(1), 44-58.
[11] Nurhayati, S., & Waha, L. F. (2015). Pemodelan Monitoring Distribusi Bantuan Bencana Alam Berbasis Website. KOMPUTIKA-Jurnal Sistem Komputer UNIKOM, 1(2).
[12] Rafika, A. S., Faridah, I., & Sangaji, A. A. (2017). KKN Management Center and Region Development Research Institutions and Community Devotion State University of Yogyakarta. Aptisi Transactions of Management (ATM), 1(1), 66-75.
[13] Yusup, M., Padeli, P., & Ilamsyah, I. (2017). General Journal Recording System Analysis In Companies using Online Accounting Software. Aptisi Transactions of Management (ATM), 1(1), 54-59.
[14] Rafika AS, Putri DI, Sanusi S. SISTEM PEMBAYARAN RINCIAN BIAYA KULIAH PADA PERGURUAN TINGGI RAHARJA MENGGUNAKAN GO+. CERITA Journal. 2017;3(1):64-74.
[15] Rahardja U, Handayani I, Firmansyah RA. Penerapan SPB Online Menggunakan Rinfo Transformation Pada Bagian Pengadaan Perguruan Tinggi. CogITo Smart Journal. 2016 Sep 18;2(1):69-81.