

The Online Sales Application Of Black And White Print Based On Yii Framework On Higher Education E-Commerce Website

Mardiana¹, Ninda Lutfiani², Rivialdo Sultan Saga³

^{1,2,3}University Of Raharja

e-mail: mardiana@raharja.info, ninda@raharja.info, rivialdo@raharja.info



Author Notification

14 August 2019

Final Revised

15 August 2019

Published

15 August 2019

To cite this document:

Mardiana, M., Lutfiani, N., & Saga, R. (2019). The Online Sales Application Of Black And White Print Based On Yii Framework On Higher Education E-Commerce Website. *Aptisi Transactions On Technopreneurship (ATT)*, 1(2), 118-127.

DOI:

<https://doi.org/10.34306/att.v1i2.90>

Abstract

Raharja Internet Cafe as a facility in Raharja College which is provided for Personal Raharja in helping provide the need for lecture activities. Raharja Internet Cafe has a problem that the system of selling black and white print products that apply consumers must come directly to the RIC room at LV-002 at Raharja College, but Raharja Internet Cafe cannot accommodate many consumers because of the limited area. These problems are the background for the establishment of an electronic sales system (e-commerce) based on Yii framework with the aim of facilitating the sale of black and white print products for consumers and staff of Raharja Internet Cafe. E-commerce website at Raharja Internet Cafe is a web-based application with a structured programming concept. The e-commerce application development Shop Copy Nicky uses 4 (four) stages according to the steps that exist in software development, including the stages of observation, analysis, literature study consisting of 10 (ten) literature and implementation. The conclusion of the e-commerce website development on Raharja Internet Cafe is that the website built can make it easy for consumers to make transactions, and Raharja Internet Cafe can get comprehensive and real time reports about sales data, and payment systems for consumers that are easier because they use payment system that is done online.

Keywords: E-Commerce, Black and White Print, Raharja Internet Cafe

1. Introduction

In the business and economic world, information technology can no longer be separated from society, almost in all aspects of life that is inseparable from information technology [1]. The technology used can support the success of a store or company. At present many shops or companies are competing to use technology to be able to advance and compete with other companies [2]. With the rapid development of times, resulting in stores or companies must follow the development of existing technology [3]. The store or company applies an information system to improve its business and make it the most important capital in winning competition with other stores or companies [4].



Figure 1. Raharja Internet Cafe logo

Raharja Internet Cafe (RIC) as a facility in Raharja College which is provided for Personal Raharja in helping provide the need for lecture activities [5]. Prog requirement provided in the Internet Cafe is like installing iOS, *upgrades*, iPad and Laptop *Accessories*, as well as provide *service* iPad and laptops, as well as several other needs. Raharja Internet Cafe provides a comfortable and safe room by facilitating students of Raharja College in conducting *scanning*, *printing* and Student Information Systems (SIS) [6-8].

Consumers are required to come to Raharja Internet Cafe to order black and white print products while Raharja Internet Cafe cannot accommodate many consumers because of the limited area. From the problems described, it can be concluded that Raharja Internet Cafe needs a solution to overcome existing problems. The use of the internet especially web applications called *electronic commerce (e-commerce)* based on Yii framework can help customers to make transactions and find out information about existing black and white print products without having to come to Raharja Internet Cafe [9]. Everyone can access the Raharja Internet Cafe website directly from home or office [10].

2. Research Method

In this study there are 4 (four) stages used [11], namely as follows:



Figure 2. Research method

Description:

1. This observation or observation method is done directly to see the system directly running before at Raharja Internet Cafe.
2. The analytical method, after making further observations is to analyze the black and white print sales system on Raharja Internet Cafe (RIC), and after analysis it turns out it is still running *offline* , so the transaction process is still not optimal.

3. Library study method. Many previous studies have been conducted regarding the discussion of the utilization of e-commerce websites. In research on the use of e-
4. commerce websites this needs to be done as a literature study as one of the application of research methods to be carried out as well as reference material to strengthen the results of the research.
5. Implementation. In this study an implementation has been carried out by implementing an e-commerce website on Raharja Internet Cafe as a media for reporting information and sales transactions for black and white printed items.

One method used to overcome the problem is by controlling the Internet Cafe website, so that buyers and sellers can make transactions without constraints [12]. The maintenance of adding up to date information must also be done, so communication errors between the seller and the buyer can be avoided. As a result, the transaction process received is necessary for support and smooth sale and purchase smoothness [13].

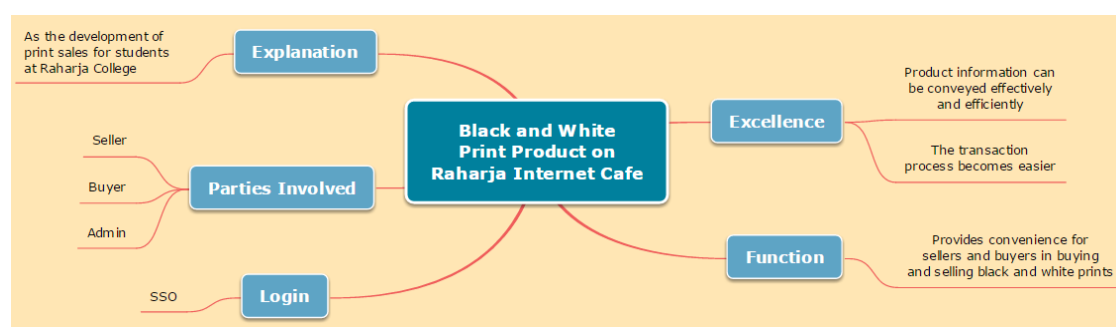


Figure 3. *Mind map* of black and white print products at Raharja Internet Cafe

Figure 3 is a *mind map* display that describes black and white print products on *the* Raharja Internet Cafe *website*, which consists of: (1) Explanation: as the development of print sales for students at Raharja College. (2) Excellence: product information can be conveyed effectively and efficiently, and the transaction process becomes easier. (3) Function: provides convenience for sellers and buyers in buying and selling black and white prints. (4) Parties involved: *top management*, secretaries and employees. (5) Login: SSO (*Single Sign On*).

After examining the problems in the system of selling black and white print products that are running, then the process flow of buying black and white print products using *the e-commerce website* Raharja Internet Cafe done by *end-users* is illustrated in the following *flowchart*:

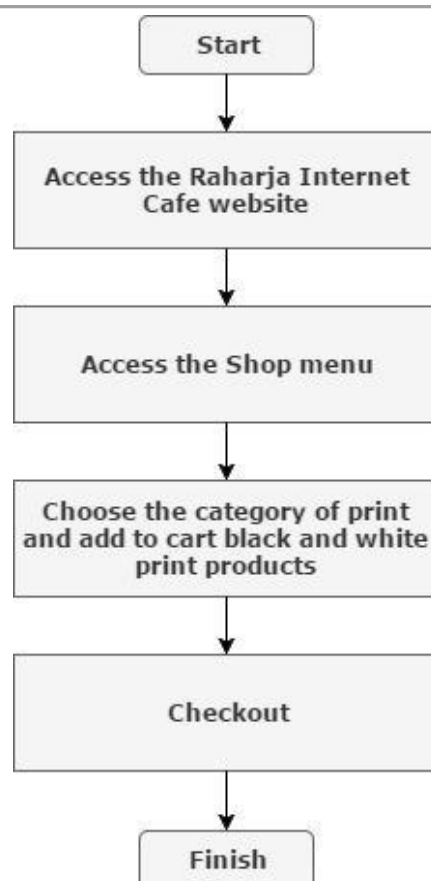


Figure 4. *Flowchart* buying black and white print products

Figure 4 above explains 4 (four) steps in the process of buying black and white print products on the Raharja Internet Cafe website *online*, namely as follows: (1) *End-users* access the Raharja Internet Cafe website. (2) *End-users* access the Shop menu. (3) *End-users* choose the print category and add to the black and white product basket. (4) *End-user* checkout for an order has been made.

2.2 Literature Review

The following is 10 (ten) scientific literature are used as references in this study [14].

Research conducted by Mahdi Choshin and Ali Ghaffari from the Institute of Mizan and Islamic Azad University in 2016, entitled "*An Investigation of the Impact of Effective Factors on the Success of E-Commerce in Small-and Medium-Sized Companies*". This study discusses the strategies of companies and organizations in capturing and mastering buyers so that they can survive in the world of commerce. One precise strategy is to use *e-commerce*, which can be used in marketing, sales and services *online*, giving a significant role in identifying, acquiring and retaining buyers. However, in *e-commerce* there are many factors from within and outside the organization that influence success. After the experiment, the results showed that what gave a significant influence on the success of *e-commerce* was buyer satisfaction, total costs, infrastructure, knowledge and information [15].

Research conducted by Nasrin Rasouli, Lela Abedi and Sara Ghaei from the Islamic Azad University and Computer Group in 2018, with the title "*Designing Agents for Information Extraction from Persian E-Shops*". In this study, the researchers discussed *E-shops* which is one of the conventional applications of *e-commerce* or electronic commerce. To find the desired

product, a buyer must write the right *keyword* in the search column. However, often products that appear are not in accordance with what is sought, such as product forms that are not the same and different product descriptions on each *website*. Constraints in the search for this product cause buyers difficulties in the search process. Therefore, a *software* is made that can extract product information, displayed in the form of a table that buyers can use to compare prices and conditions of sellers without having to spend much time looking for it [16].

Research conducted by Untung Rahardja, Qurotul Aini and Desi Sartika from Raharja College in 2014, with the title "*Build a Business to Online Customer Store Using Airzone Content Management System*". This study discusses the progress of technology and information in the world of commerce, which is required to be able to provide services to sell goods and services quickly in accordance with buyer demand. In the business world, *online* sites have provided buying and selling services with *online* transactions better known as *e-commerce*. Airzone is one form of a system that uses *e-commerce*, as a medium for doing business using the internet with the *Business to Consumer* (B2C) methodology. Airzone can also be used as a vehicle for the development of *online* transactions, product promotion and *after sales support* [17].

Research conducted by Wei-Tsong Wang, Yi-Shun Wang and En-Ru Liu from National Cheng Kung University and National Changhua University of Education in 2016, entitled "*The Stickiness Intention of Group-Buying Websites: The Integration of the Commitment–Trust Theory and E-Commerce Success Model*". In this study, the researchers discussed the relationship between buyers and *Group-Buying Websites*, which is the key to the success of *Consumer to Business* (C2B). *Group-Buying Websites* are a system of purchases that are done collectively, so that buyers and sellers benefit, such as discount *vouchers* for buyers, and sellers can sell many of their goods effectively. By integrating successful *e-commerce* models and trust-commitment theory, the results show that the relationship between commitment, trust and satisfaction is the main determinant of *stickiness intention*, a model of *Group-Buying Websites* developed by researchers [18].

The research was carried out by Untung Rahardja, Eka Purnama Harahap and Ririn Eka Cipta Devi from Raharja College in 2018, with the title "The Influence of Services and Facilities at the Internet Cafe Service for Lecture Activities at Higher Education". This study discusses the quality of Raharja Internet Cafe, a place in Raharja College that provides various facilities to meet student needs. Raharja Internet Cafe has a website with an *e-commerce* system that can be accessed anytime and anywhere, serves as a media information viewer and facilitates the transaction process. In order to obtain data on the quality of service at Raharja Internet Cafe, 30 (thirty) visitors to Raharja Internet Cafe were given an *online* questionnaire, and the average benefit *section* was obtained at 85.42%. So that it can be concluded that Raharja Internet Cafe is very influential and provides quite a lot of benefits for student lecture activities [19].

The research conducted by Aminudin (2014) entitled "Implementation of *Single Sign On* (SSO) to Support the Interactivity of Application E-Commerce Using the Oauth *Protocol*". This study discusses *Single Sign On* technology which is a technology that is in demand, especially in very large and heterogeneous networks (in the current operating system and applications used by computers originating from many vendors are asked to fill in the information itself to each different platform for accessed by users). By using SSO, users only have to try to authenticate only once to get permission, access to all services contained in the network [20].

Research conducted by Ragil Widiharso, from ITS (Institute Sepuluh November Technology) in the year 2009 with the title "Analysis of the Implementation of *Single Sign On* on *Learning Management System* and *Internet System Protocol Television*". This study describes the use of other technologies to support the *Learning Management System* (LMS). Use the SSO system to give users permission to access multiple applications at once without having to log in repeatedly. The SSO method that supports libraries from clients for PHP, the programming language used to create web based IPTV [21].

The research conducted by Gilang Ramadhan, from Bina Darma University in 2012 with the title "Single Sign On (SSO) Technology Analyst with the Application of Central Authentication Service (CAS) at Bina Darma University". This study describes how to integrate and give permission to access several web application centrally on the system using Single Sign On (SSO) Technology Analyst [22].

Indahni, Frisilia and Kunang, Yesi Novaria and Muzakir, Ari (2015), this study entitled "SSO Security System on SAML-Based Communication Path Using Digital Signature" Single sign on is a technology that allows users to authenticate on several web applications using only one *username* and one *password*. Users only need to log in once to be able to access several integrated web applications. Single sign on provides the Security Assertion Markup Language (SAML) facility as a connecting portal between users and web applications. By using several web applications, namely moodle and wordpress. SAML SSO uses digital signatures as a security system between servers using SP certificates, Idp certificates and CAS certificates. Digital signature has a function as a marker on data that ensures that the data is actual data (nothing has changed) using the RSA algorithm [23].

The research conducted by Manisha Bhardwaj, Sarbjeet Singh and Makhan Singh in 2011 was titled "Implementation of Single Sign-On and Delegation Mechanisms in Alchemi. Net Based Grid Computing Framework". This research was motivated by analyzing the detailed performance of Alchemi, identifying that Alchemi was based. The NET Grid Computing Framework does not support mechanisms such as single sign-on, so it is desirable to add this mechanism to improve its usability and application. Single sign-on (SSO) is a desirable feature of grid computing, although there are several ways to implement single sign-on and delegation, but in this study it was implemented at Alchemi.Net based on a grid computing framework through X.509 proxy certificates. Then currently there has been applied a single sign-on and delegation mechanism for Alchemi.Netbased by utilizing X.509 proxy certificates. In this implementation communication has been established between two hosts. Then the host acting as the client has been confirmed by the host acting as the server. After being authenticated, clients are allowed to access various applications provided by Alchemi. Computerized grid netbased framework with single sign-on and full delegation rights [24] .

Of the 10 (ten) existing library studies, there has been a lot of research regarding the use of e-commerce and SSO websites (*Single Sign On*), with this method can facilitate users in logging in to be able to attend services on the Yii framework-based website.

3. Findings

The electronic media needed to access *the* Raharja Internet Cafe *website* is not limited to the *Personal Computer*, various electronic media such as *notebooks* , laptops, *tablets* and *mobile phones* can be used to access, if accompanied by support from a good internet connection. Besides that, the appearance of *the* Raharja Internet Cafe *website* that is neatly arranged and comfortable to see will have a positive impact on the *end-users* who come to visit. The following are 4 (four) images from *screenshots* of *the* Raharja Internet Cafe *website* taken using *notebook* media.

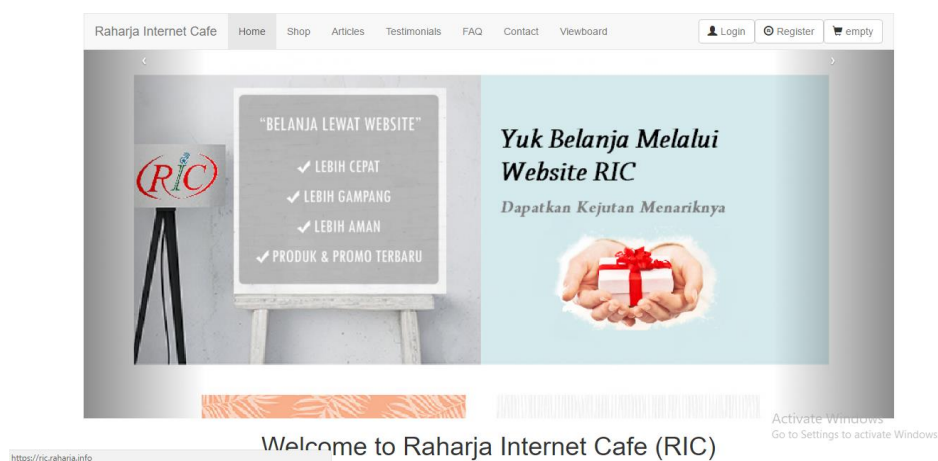


Figure 5. Raharja Internet Cafe's *website* homepage

Seen in Figure 5, the *interface* of the *homepage* or main page of the Raharja Internet Cafe *website*. At the top, there are 7 (seven) menus, namely home, shop, articles, testimonials, FAQ, contact and viewboard. The log in, register and check out menus are also located at the top right. In addition, there is also a banner that informs about interesting news from the Raharja Internet Cafe website, 5 (five) top products that are often purchased by buyers, and some photos from the situation that occurred at Raharja Cafe located in the L-002 room of the Raharja College.

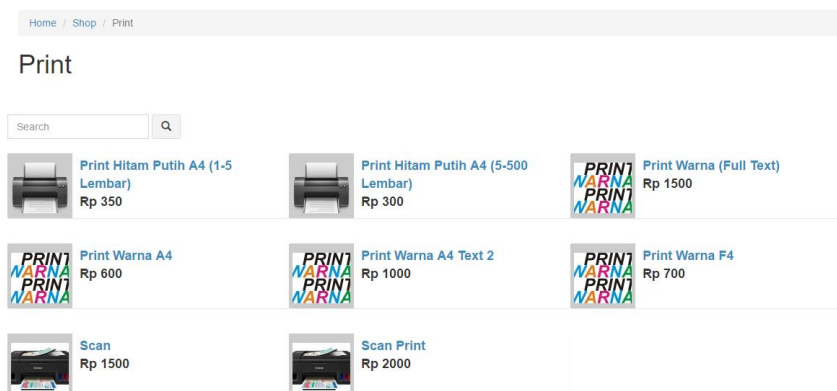


Figure 6. List of products

Then as seen in Figure 6, it is a display of the print product list. There are 8 (eight) products, namely A4 black and white print (1-5 sheets), A4 black and white print (5-500 sheets), color print (full text), A4 color print, A4 text 2 color print, f4 color print, scan, and print print along with the price. Based on this page the buyer can choose the product you want to order.



Figure 7. Black and white print products with their descriptions

Next is Figure 7, product descriptions such as samples, prices and details are displayed as important information for buyers. With this product description, the seller does not need to explain the product repeatedly to many interested in black and white print products.

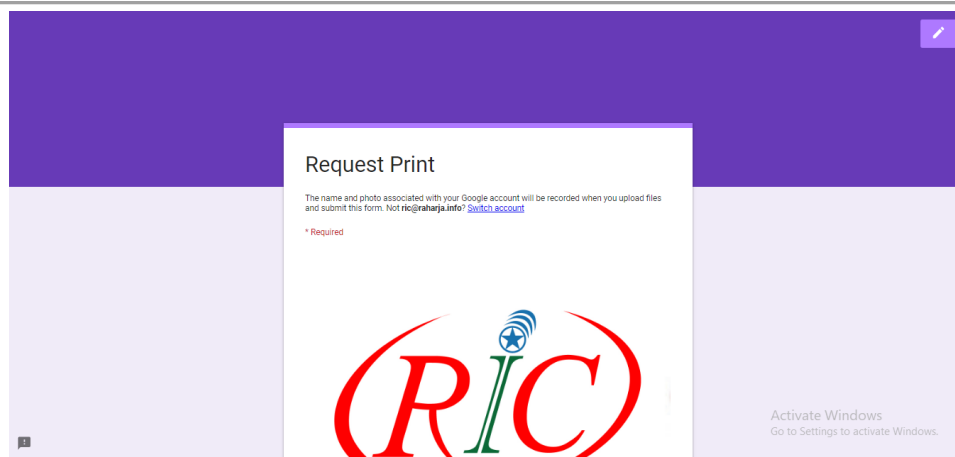


Figure 8. Order form

And the last one is Figure 8, an *interface* from an *online* form is displayed that is used by sellers to collect important data from buyers. With this form, the buyer can inform the wishes of the print order effectively and efficiently [25]. Because of the existence of this form, the buyer does not need to bother to explain the print output he wants.

4. Conclusion

It can be concluded that the *e-commerce* system can help Raharja Internet Cafe in developing its business. Black and white print products that are sold *online* in addition to making it easier for sellers and buyers, they can also develop *the* Raharja Internet Cafe *website* that previously never sold print products *online*. Then, with the presence of black and white print products on *the* Raharja Internet Cafe *website*, if *banners* or articles are made *eye catching* and informative, it will attract buyers. Because of the ease of transactions caused by technological advancements, distance is no longer a significant obstacle. Information about black and white print products can be found easily in your hand. Then with the use of *online* forms, the informative order data can be received by the seller neatly and easily. Misunderstandings in the order can be minimized because the *online* form has presented clear questions, requiring the buyer to fill them clearly too. The advice given for the progress of this research is that the development of product types is needed. In addition, the promotion of black and white print products on *the* Raharja Internet Cafe *website* also needs to be expanded, so that buyers can get more and Raharja Internet Cafe can continue and develop.

References

- [1] Aini, Q., Rahardja, U., Supriyati, R., & Khoirunisa, A. (2019). Pengaruh Mailing Groups Sebagai Media Diskusi Dalam Motivasi Belajar Mahasiswa. *MEDIA INFORMATIKA BUDIDARMA*, 3(1).
- [2] Rahardja, U., Aini, Q., Apriani, D., & Khoirunisa, A. (2019). Optimalisasi Informasi Manajemen Laporan Assignment Pada Website Berbasis Content Management System. *Technomedia Journal*, 3(2), 213-223.
- [3] Harahap, E. P., Rahardja, U., & Salamuddin, M. (2019). Aplikasi Panduan dan Pembayaran Tiket Masuk Mendaki Gunung Menggunakan Metodologi Sistem Multimedia Luther-Sutopo. *SATIN-Sains dan Teknologi Informasi*, 4(2), 9-16.
- [4] Aini, Q., Rahardja, U., Arribathi, A. H., & Santoso, N. P. L. (2019). Penerapan Cloud Accounting dalam Menunjang Efektivitas Laporan Neraca pada Perguruan
- [5] Tinggi. *CESS (Journal of Computer Engineering, Science and System)*, 4(1), 60-64.

-
- [6] Aini, Q., Dhaniarti, I., & Khoirunisa, A. (2019). Effects of ILearning Media on Student Learning Motivation. *Aptisi Transactions On Management*, 3(1), 1-12.
 - [7] Aini, Q., Alwiyah, A., & Putri, D. M. (2019). Effectiveness of Installment Payment Management Using Recurring Scheduling to Cashier Performance. *Aptisi Transactions On Management*, 3(1), 13-21.
 - [8] Rahardja, U., Sunarya, P. A., Aini, Q., & Dewi, S. R. (2019). Solusi Payment Online Berbasis Cloud Accounting Pada Manajemen Perguruan Tinggi. *InfoTekJar: Jurnal Nasional Informatika dan Teknologi Jaringan*, 3(2).
 - [9] Rahardja, U., Aini, Q., & Khoirunisa, A. (2019). Monitoring Kinerja User Akuntan Menggunakan Dashboard Pada Web Based Accounting Online di Perguruan Tinggi. *SATIN-Sains dan Teknologi Informasi*, 4(2), 58-62.
 - [10] Rahardja, U., Aini, Q., & Khoirunisa, A. (2019). Monitoring Kinerja User Akuntan Menggunakan Dashboard Pada Web Based Accounting Online di Perguruan Tinggi. *SATIN-Sains dan Teknologi Informasi*, 4(2), 58-62.
 - [11] Rahardja, U., Handayani, I., & Elinda, B. D. (2019). Viewboard Jadwal Sidang Mahasiswa Pada Sistem PESSTA+ Menggunakan Yii Framework di Perguruan Tinggi. *Technomedia Journal*, 3(2), 235-245.
 - [12] Rahardja, U., Lutfiani, N., & Yolandari, A. (2019). Penerapan Viewboard Informatif Pada Asosiasi Perguruan Tinggi Swasta Indonesia Dalam Era Industri 4.0. *Technomedia Journal*, 3(2), 224-234.
 - [13] Febriyanto, E., Rahardja, U., Faturahman, A., & Lutfiani, N. (2019). Sistem Verifikasi Sertifikat menggunakan Digital Image Processing pada Central Event Information. *Techno. Com*, 18(1), 50-63.
 - [14] Aini, Q., Rahardja, U., Arribathi, A. H., & Santoso, N. P. L. (2019). Penerapan Cloud Accounting dalam Menunjang Efektivitas Laporan Neraca pada Perguruan Tinggi. *CESS (Journal of Computer Engineering, Science and System)*, 4(1), 60-64.
 - [15] Nirmalasari, L., Harahap, E. P., & Faradilla, F. (2018). Implementation of Problem Formulation Management in Improving the Quality of Research in Higher Education. *Aptisi Transactions On Management*, 2(1), 20-27.
 - [16] Rahardja, U., Lutfiani, N., Lestari, A. D., & Manurung, E. B. P. (2019). Inovasi Perguruan Tinggi Raharja Dalam Era Disruptif Menggunakan Metodologi iLearning. *Jurnal Ilmiah Teknologi Informasi Asia*, 13(1), 23-34.
 - [17] Choshin, M., & Ghaffari, A. (2017). An investigation of the impact of effective factors on the success of e-commerce in small-and medium-sized companies. *Computers in Human Behavior*, 66, 67-74.
 - [18] Rasouli, N., Abedi, L., & Ghaei, S. (2018). Designing an Agent for Information Extraction from Persian E-shops. *TELKOMNIKA*, 16(1), 455-462.
 - [19] Rahardja, U., Aini, Q., & Sartika, D. (2015). Build A Business To Customer Online Store Using Airzone Content Management System. *CCIT Journal*, 8(2), 112-122.
 - [20] Wang, W. T., Wang, Y. S., & Liu, E. R. (2016). The stickiness intention of group-buying websites: The integration of the commitment-trust theory and e-commerce success model. *Information & Management*, 53(5), 625-642.
 - [21] Devi, R. E. C., Rahardja, U., & Harahap, E. P. (2018). Pengaruh Pelayanan dan Fasilitas pada Raharja Internet Cafe Terhadap Kegiatan Perkuliahan Pada Perguruan Tinggi. *Jurnal Teknoinfo*, 12(2), 23-28.
 - [22] Amiudin. 2014. Implementasi *Single Sign On* (SSO) Untuk Mendukung Interaktifitas Aplikasi E- Commerce menggunakan Protocol OAuth. Universitas Muhammadiyah Malang.
 - [23] Widiharso, Ragil. Analisa 2012. Implementasi *Single Sign On* Pada Learning Management Sistem dan Internet Protocol Television Pada Institut Teknologi Sepuluh Nopember.

-
- [24] Ramadhan, Galih. 2012. Analisis Teknologi *Single Sign On* (SSO) Dengan Penerapan *Central Authentication Service* (CAS) Pada Universitas Bina Darma. 2012. Universitas Bina Darma.
- [25] Indahni, F., Kunang, Y. N., & Muzakir, A. (2015, August). Sistem Keamanan SSO Pada Jalur Komunikasi Berbasis SAML Menggunakan Digital Signature. In *Student Colloquium Sistem Informasi & Teknik Informatika (SC-SITI)* (Vol. 1). Fakultas Ilmu Komputer Universitas Bina Darma.
- [26] Bhardwaj, M., Singh, S., & Singh, M. (2011). Implementation of Single Sign-on and Delegation mechanism in Alchemi. Net based Grid Computing Framework. *International Journal of Information Technology and Knowledge Management*, 4(1), 289-292.
- [27] Rahardja, U., Lutfiani, N., & Alpansuri, M. S. (2018). Pemanfaatan Google Formulir Sebagai Sistem Pendaftaran Anggota Pada Website Aptisi. or. id. *SISFOTENIKA*, 8(2), 128-139.