Viewboard Implementation Based on Javascript Charts As a Media for Submitting Sales Information on a Green E-Commerce Website Light Cafe

Author Notification
22 March 2019
Final Revised
27 March 2019
Published
31 March 2019

Po Abas Sunarya[1], Zuroni Md Jusoh[2], Dian Maharani Damanik[3]
[1,3] Raharja University, Jl. Jendral Sudirman No. 40 Modernland, Tangerang, Indonesia
[2] Universiti Putra Malaysia, T43400 UPM Serdang Selangor Darul Ehsan, Malaysia
e-mail: abas@raharja.info , mdjusoh@gmail.com , dian.maharani@raharja.info

To cite this document :
Sunarya, P., Jusoh, Z., & Damanik, D. (2019). Viewboard Implementation Based on Javascript Charts As a Media for Submitting Sales Information on a Green E-Commerce Website Light Cafe. *Aptisi Transactions On Technopreneurship (ATT)*, *1*(1),11-19. Retrieved from https://pandawan.aptisi.or.id/index.php/att/article/view/28.

Abstract

A media that can display information concisely is needed in presenting information effectively and efficiently. Information on the results of the Green Light Cafe sales report can now be easily accessed by *top management* and *staff* through the ledger. However, the process of presenting information with ledgers still uses tables, so it is not in line with current technological developments. In this study, 4 (four) methods will be described which are used to overcome 4 (four) problems, as well as 1 (one) solution, namely the implementation of a *viewboard* with *Highcharts* charts. The advantage of Green Light Cafe's *viewboard* is that it can be accessed through the *website* and *mobile* , as well as other advantages, namely minimizing the use of paper, so that it can help *staff* work in registering reports. By applying the graph as a medium for presenting information on the Green Light Cafe *viewboard*, it causes *top management* and employees to find out more about sales reports. Thus, it can be concluded that the use of *Highcharts* graphics is able to improve the quality and overcome the problems found in the Green Light Cafe.

Keywords*: Viewboard, Chart, Green Light Cafe*

1. Introduction

The right and fast information is needed to support life activities. The process of delivering information from time to time is always changing, giving a big influence to the recipients of information [1]. The system and model used will also determine how well and effectively the process of delivering information is running [2]. At present, information is no longer absorbed only by relying on conventional and old-fashioned tools, thus the role of computers is very crucial to provide solutions to problem solving. In addition, computers are also very reliable tools to develop a system that is still lagging behind the age [3].

At this moment, every tertiary institution is required to compete globally. One of the keys to the success of global competition lies in how efficient and fast services can be provided by universities to students [4]. Effective services will improve the learning process of higher education, and can improve the learning system that is being applied [5]. Raharja College is a college that is always motivated to keep up with the dynamic times in the fields of technology and information. Effective learning methods at Raharja College are not only following the direction of the lecturer, but also inviting students to pray, work and play [6]. In addition, the Raharja College also provides facilities to meet the various needs of trusted and reliable students, namely Green Light Cafe.

p-ISSN: 2655-8807

Green Light Cafe located in Raharja College provides a variety of services, such as printing, *installing* , scanning, and offering various tools such as USB, *keyboards* , computer books, etc. [7, 8]. Although with all the advantages, Green Light Cafe still has disadvantages, especially in sales reports, which have an important role for *top management* to monitor developments.

The reporting activities that run at Green Light Cafe are still using manual media such as paper, which are not in line with the times. For the sake of conveying information reporting smoothly, it must have a media that delivers the right information. The use of conventional methods in the reporting process must be changed in other, more sophisticated ways, so that the information presented can be more easily understood by *end-users* who want to find out about sales reports. *The* Green Light Cafe *website is* a *web* and *mobile e-commerce* system that can be accessed anytime and anywhere, with a proven level of system security, thus increasing efficiency for Green Light Cafe. With the use of *the* Green Light Cafe *website*, the conventional reporting process using paper media has decreased dramatically.

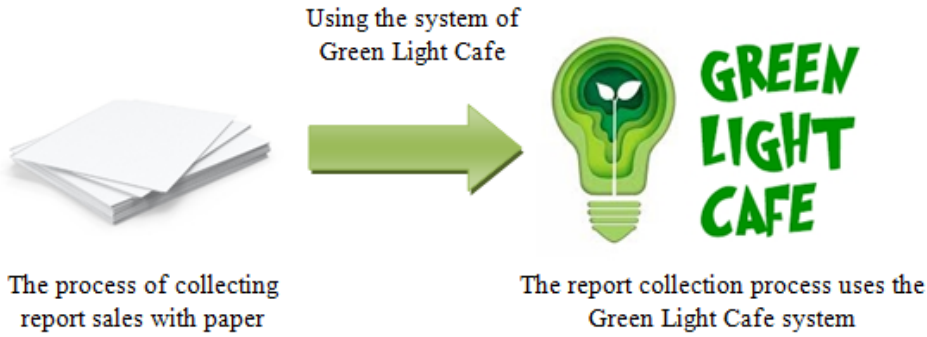
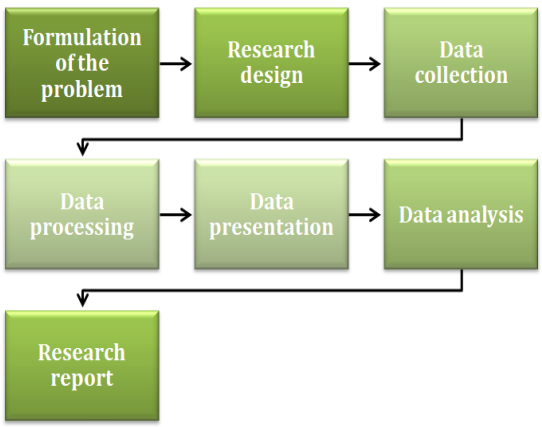


Figure 1. Transformation of reporting

Based on Figure 1, a transformation regarding the reporting process is explained. With the use of *the* Green Light Cafe *website* system, conventional reporting systems can be changed to *online* [9]. Thus *staff* can easily carry out the report *input* process , and *top management* can know the results of sales practically through a computer or *smartphone* , which is presented in the form of tables arranged in order. So that it can have a positive effect in increasing sales performance [10]. It is hoped that with the Green Light Cafe website system, it can minimize obstacles in the process of reporting to the Green Light Cafe.

2. Research Method

There are several things that need to be considered in designing the system so that problems and shortcomings can be addressed. In this study, the authors used 7 (seven) steps of research, which can be seen in Figure 2 [19].



The first step is the formulation of the problem, in this step the observation is carried out on the system. Then the second step is research design, the Green Light Cafe *website* concept is designed in the form of a *prototype* , intended to facilitate the understanding of researchers about the system to be accessed. Then data collection, some data is needed as a source of information. Next is data processing, where data contained in the *database is* then integrated. After that the data presentation, where the processed data will then be presented. Information is presented in graphical form that is useful as a basis for reliable decision making. The next step is data analysis, the results from the first method to the next method will be analyzed, to get information about what things are the cause of problems in the system. The seventh step or the last step is the research report, all the results of the research obtained are then reported in detail, so that in the end it is found that the right solution to the problem at hand.

For the sake of the smooth sales process, Raharja College has innovated in various IT fields. However, there are still a number of issues that must be addressed in order to support sales reports at Green Light Cafe.There are 4 (four) problems in presenting the report results. The first problem is, the system used in the assessment process used *staff* Green Light Cafe in performing *input* still use paper reports and *Microsoft Excel.* The second problem is, the possibility of *human error is* quite high, because accuracy in the data *input* process *is* needed. The third problem is, information about sales reports cannot be known *online* whenever and wherever [20].And the last problem is the fourth one, after the application of *the* Green Light Cafe *website* , the sales report information can be conveyed well, but it is not effective because the data presented is still in the form of tables

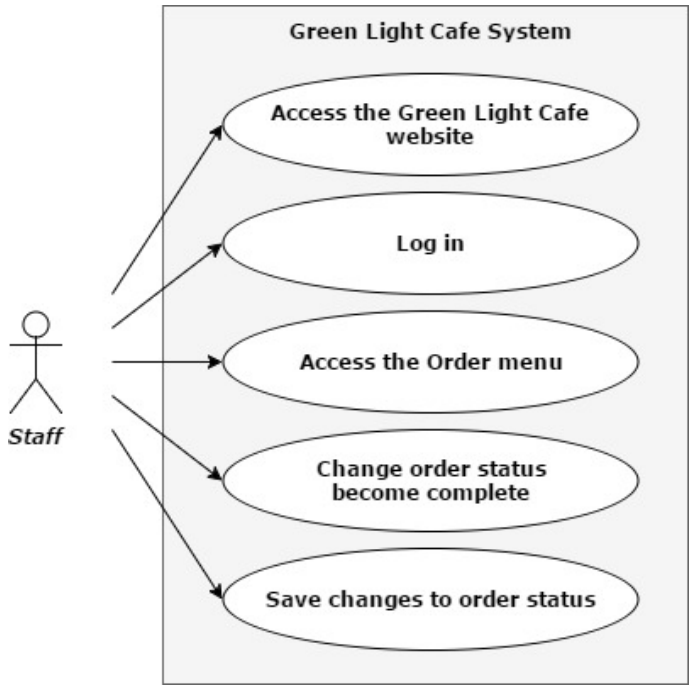


Figure 3. *Use case* of input data

In Figure 3, it is explained about 5 (five) steps in the sales data input process, which is carried out by Green Light Cafe *staff* using the Green Light Cafe *website* system , namely: (1) *Staff* access *the* Green Light Cafe *website* . (2) *Staff login.* (3) *Staff* access the *Order* menu at the *back office* Green Light Cafe *website* . (4) *Staff* changes the status of orders that were previously *pending* to *complete* . (5) *Staff* keeps changing order status.

p-ISSN: 2655-8807

The sales reporting process on *the* Green Light Cafe *website* is already computerized, but it is still not effective because the information presented is still using tables. To deal with problems based on the explanation above, it is necessary to have a better media information media than tables, namely graphs that can present data more effectively and concisely, making it easier for *end-users* to understand information [21].

In overcoming the problem of presenting data that is still less effective on *the* Green Light Cafe *website*, it is necessary to apply *Highcharts* graphics so that the data presented can be more easily understood.

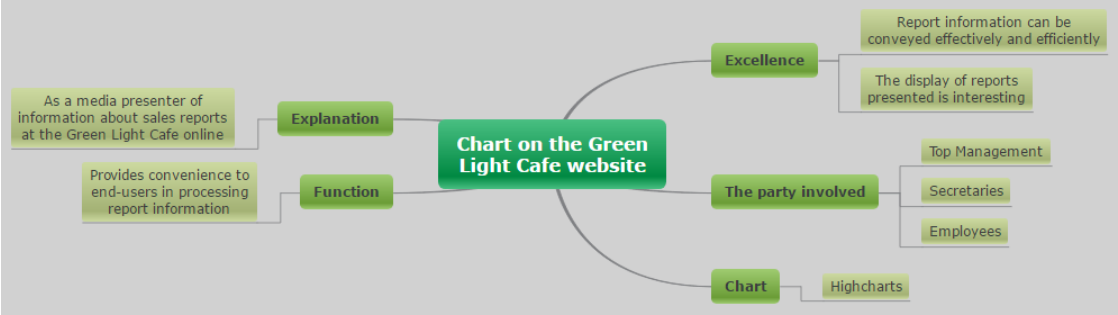


Figure 4. *Mind map* chart at Green Light Cafe

Figure 4 is a *mind map* display that describes the graph on *the* Green Light Cafe *website*, which consists of: (1) Explanation: as a media presenter of information about sales reports at the Green Light Cafe *online*. (2) Excellence: report information can be conveyed effectively and efficiently, and the display of reports presented is interesting. (3) Function: provides convenience to *end-users* in processing report information. (4) Parties involved: *top management*, secretaries and employees. (5) Charts: *Highcharts*.

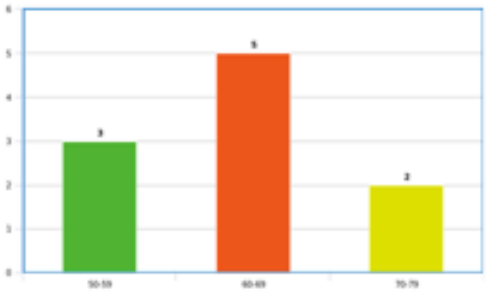


Figure 5. *Prototype* graph *Highcharts*

Highcharts is a charting library for presenting data in the form of interactive graphics on websites that are easy to use. The Highcharts chart looks beautiful and neat, also works fast. In addition, Highcharts is also suitable for use in various browsers [22]. In the prototype in Figure 5, Highcharts bar charts are used with 3 (three) data displayed in various colors.

After examining the problems in the online reporting system that are running, the process flow of viewing the report using the Green Light Cafe viewboard carried out by the end-user is illustrated in the following flowchart:

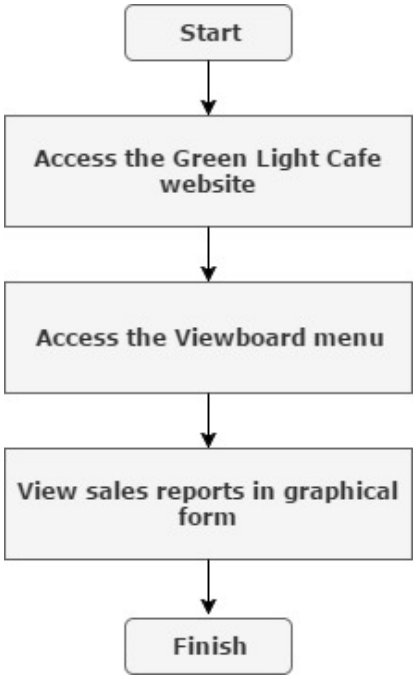


Figure 6. *Flowchart* view report

Figure 6 above explains 3 (three) steps in the process of seeing sales reports at Green Light Cafe *online*, as follows: (1) *End-users* access *the* Green Light Cafe *website*. (2) *End-users* access the *Viewboard* menu. (3) *End-users* see sales reports that are briefly presented in graphical form.

The following are seven (7) scientific literature referenced in this study [11]. "Viewboard research as a report on the overall number of articles on iLearning Raharja Ask and News". Discuss the use of the *iRAN* viewboard (iLearning Raharja Ask and News) as a special or general information media [12]. Then the research "Optimizing the Bootjap Based RhjFox Viewboard as a Decision Support System". This study discusses the use of RhjFox (Raharja Fox) as an *online* information provider forum [13].

Furthermore, the study "Implementation Viewboard in Supporting Information Dissemination by Presentation Artificial Informatics in Higher Education." This study discusses *viewboard* to assess statistical *overview* of student [14]. The study "Optimization Dashboard on the System Assessment Exam Students as Media Information Higher Education", discusses the use of *dashboard online* scoring system [15].

Further research, "Development of Downtime Reporting Features and Summary Modules on Monitor Systems and eCRM Machine Operational Reporting". In this study, the system of *Highcharts* [16] is used in the display of the system . The next research is "*A Framework for Web-based Data Visualization Using Google Charts Based on MVC Pattern*". This research is about the crucial presentation of data, and one of the effective ways of presenting data is with *Google Charts* [17]. Then research " *The Importance of Using Google API Chart as a Content of QR Code* ". This study discusses the use of *Google API Chart* on *QR code* [18]. Thus it can be *concluded* that the *Javascript* based interactive *viewboard charts* have the uniqueness and benefits for various *online* systems .

3. Finding

The result of the research is a *viewboard* that can be accessed at https://greenlightcafe.com/. *The viewboard* serves to display various sales reports at the Green Light Cafe in a certain period of time.

p-ISSN: 2655-8807

Figure 7. Daily product sales

Based on Figure 7, sales information is presented in the form of *bar* charts *Highcharts,* the whole of total sales that have been conducted in the period per day recorded by the *staff of* Green Light Cafe, where five (5) *top* the most widely purchased product is a color print A4, A4 black and white print (5-500 sheets), A4 black and white print (1-5 sheets), Ades (600ml) and NUTRIBOOST.

Figure 8. Weekly product sales

In Figure 8, sales information is also presented in the form of *bar* charts *Highcharts,* the whole of total sales that have been conducted in the period per week recorded by the *staff of* Green Light Cafe, where five (5) *top* the most widely purchased product is a black and white print A4 (5-500 sheets), black and white print A4 (1-5 sheets), A4, Ades (600ml) and NUTRIBOOST color print.

Figure 9. Monthly product sales

In Figure 9, sales information is also presented in the form of *bar* charts *Highcharts,* the whole of total sales that have been done within a month that recorded by the *staff of* Green Light Cafe, where five (5) *top* the most widely purchased product is a black and white print A4 (5-500 sheets), black and white print A4 (1-5 sheets), A4, Ades (600ml) and NUTRIBOOST color print.

Figure 10. This year's *top product*

Then in Figure 10 displayed sales information presented in the form of *bar* charts *Highcharts*, regarding the whole of the most comprehensive total sales, which have been done in a period of time per year. Recorded by the *staff of* Green Light Cafe, where five (5) *top* the most widely purchased product is a black and white print A4 (5-500 sheets), A4 color print, black and white print A4 (1-5 pieces), print color text A4 2 and Ades (600ml).

4. Conclusion

Based on the system that has been made, it can be drawn 4 (four) conclusions that with the implementation of the *viewboard* accompanied by *Highcharts* graphics *,* can provide progress in the reporting process, namely:

1. The applied reporting process is more effective and efficient, because the presence of a *viewboard* can facilitate *top management* and *staff* .
2. The occurrence of *human error* can be minimized, because the process of *input* sales data with *the* Green Light Cafe *website* does not require high accuracy such as *input* sales data using *Microsoft Excel* .
3. The sales data input process performed by *staff* can be well documented and recorded. Evident from the information presented on *Highcharts bar charts* that summarizes the overall sales and can be known *online* .
4. With the *bar* graph *Highcharts* is *up-to-date* and full of colors on *the* Green Light Cafe *website* , the information presented is more concise and interesting, so it can be used as the basis for making the right decisions.

There are 3 (three) suggestions recommended by the author based on the discussion described earlier, so that it can be useful for designing this system, namely:

1. Development is needed in the use of graphics so that it does not only display information about reports of items sold only.
2. *Viewboard* on the Green Light Cafe website can be further developed in order to provide more detailed and complete information.
3. The use of charts on sales reporting can be used on all *e-commerce websites* to support the sales process performance.

p-ISSN: 2655-8807

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 Tinggi. *CESS (Journal of Computer Engineering, Science and System)*, *4*(1), 60-64.

[5] Aini, Q., Dhaniarti, I., & Khoirunisa, A. (2019). Effects of lLearning Media on Student Learning Motivation. *Aptisi Transactions On Management*, *3*(1), 1-12.

[6] 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.

[7] Kuntoro, P. T., Untung, R., & Siti, C. (1978). Pengontrolan Mutu Sistem Informasi Dengan Metode Database Self Monitoring. *CCIT Journal ISSN*, *8282*.

[8] 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.

[9] Rahayu, N., Lestari, F. H. N., & Aprilyani, U. T. (2017). Clothing Sales Information System Web-Based:“Bluelight Distro”. *VOLT: Jurnal Ilmiah Pendidikan Teknik Elektro*, *2*(1), 55-62.

[10] Rahardja, U., Aini, Q., & Khoirunisa, A. (2017). Implementasi Business Intelligence Menggunakan Highchart pada Sistem Penilaian Absensi berbasis YII Framework. *CSRID (Computer Science Research and Its Development Journal)*, *9*(2), 115-124.

[11] Rahardja, U. (2018). The Strategy of Enhancing Article Citation and H-Index on SINTA to Improve Tertiary Reputation. *TELKOMNIKA (Telecommunication Computing Electronics and Control)*, *17*(1).

[12] Rahardja, U., Handayani, I. dan Setiani, L. 2017. Viewboard sebagai Laporan Jumlah Keseluruhan Artikel pada iLearning Raharja Ask and News. CogITo Smart Journal. Vol. 3, no. 1, hal 42-55.

[13] Rahardja, U., Tiara, K. dan Erviani, M. I. 2016. Optimalisasi Viewboard RhjFox Berbasis Bootstrap sebagai Sistem Penunjang Keputusan. Technomedia Journal. Vol. 1, no. 1, hal. 50-64.

[14] Rahardja, U., Pratama, D. dan Susanti, E. 2016. Implementasi Viewboard dalam Mendukung Penyebaran Informasi dengan Penyajian Artificial Informatics pada Perguruan Tinggi. CCIT Journal. Vol. 9, no. 3, hal. 251-257.

[15] Rahardja, U., Aini, Q. dan Enay, N. 2017. Optimalisasi Dashboard pada Sistem Penilaian Ujian Mahasiswa sebagai Media Informasi Perguruan Tinggi. Jurnal Ilmiah SISFOTENIKA. Vol. 7, no. 2, hal 167-176.

[16] Oktivasari, P. dan Suhardi, Z. F. 2016. Pengembangan Fitur Downtime Reporting dan Modul Summary pada Sistem Monitor dan Pelaporan Operasional Mesin eCRM. Jurnal Teknik Informatika. Vol. 9, no. 1, hal 46-53.

[17] Supaartagorn, C. 2016. A Framework for Web-based Data Visualization Using Google Charts Based on MVC Pattern. King Mongkut’s University of Technology North Bangkok International Journal of Applied Science and Technology. Vol. 9, no. 4, hal 235-241.

[18] Surrah, H. A. dan Saeed, F. 2014. The Importance of Using Google API Chart as a Content of QR Code. Journal of Global Research in Computer Science. Vol. 5, no. 2, hal 1-4.

[19] Rahardja, U., Aini, Q., & Santoso, N. P. L. (2018). Pengintegrasian YII Framework Berbasis API pada Sistem Penilaian Absensi. *SISFOTENIKA*, *8*(2), 140-152.

[20] Untung, R., Suryo, G., & Valent, S. (1978). Access Restriction Sebagai Bentuk Pengamanan Dengan Metode IP Token. *CCIT Journal ISSN*, *8282*.

[21] Rahardja, U., Aini, Q., & Faradilla, F. (2018). Implementasi Viewboard Berbasis Interaktif Javascript Charts Pada Sistem Penilaian Perkuliahan. *Jurnal Ilmiah Teknologi Informasi Asia*, *12*(2), 91-102.

[22] Song, J. B., Song, J. H., Chai, J. P., & Yang, Y. (2016). Data Visualization of the Advertising Exchange Flow Statements Generation System on Demand Side Platform Based on Highcharts. In *MATEC Web of Conferences* (Vol. 63, p. 05029). EDP Sciences.