QR Code As the Delivery of Information to Universities

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Abstract

Wall or magazine magazines are a means of delivering information on Raharja College campus. In the delivery of information, the magazine has been widely spread in several applications of Raharja College, iRan and GreenDoc. However, this is still not optimal because the method used is still using paper. And also the lack of awareness of students will read the information on the magazine. QR codes are a type of two-dimensional matrix code or bar code developed by Denso Wave in 1994. With that, the form of information is reduced to a QR code that can store detailed information displayed on a monitor screen available at several strategic corners of the campus and scan the code on the main page of the online magazine website. The method used is the waterfall method, observation, and literature study and journal references as supporting in writing. This research was designed to make it easier to access information and attract reading interest to students of Raharja College.

Keywords: Wall magazine online, Information, QR Code, Waterfall

1. Introduction

Wall magazines, or often synchronized as mading, are one of the simplest types of written mass media aimed at disseminating information [4]. Mading is used by universities, especially Raharja College, which is now the land for disseminating information. Information in the form of internal, and external information that has been selected.

Higher Education Raharja the role of mading is very important for notification of information about the campus. To add knowledge and become the subject of informative and communicative information. Not only that, the magazine can function as the aspirations of students to express their opinions, works or other events in providing useful information to readers, especially students of the campus environment.

Mading is currently being implemented, in fact the system is already in very good development. Information on the magazine has been included in several applications of Raharja Higher Education, iRan (i-Learning Ask and News) and Greendoc, but in the dissemination of information on the campus environment has not been maximized. And 3 problems arise, namely, (1) Layout of paper sheets on irregular mading (2) The information sheet becomes dull and damaged because it is not durable, (3) Lack of interest in reading on mading. Online mading with the QR Code helps problems in the applied magazine, (1) Layout of information on online

website mading that is made more attractive (2) Online magazine does not require paper for information media, therefore there will be a monitor that displays campus information , (3) With attractive display on the monitor screen while making it easier to access information by scanning integrated QR code.

With the existence of this system, it is hoped that it can maximize the delivery of information on the Raharja College, increasing reading interest in students, making it easier to access information and distribute information that is useful for the campus environment.

2. Research Method

2.1 Literature Review

In this study, it has been based on several theories that support this research, namely:

[1] Research conducted by Rayi Septipiani Agustina from Esa Unggul University in 2017 entitled "Rancang Bangun Majalah Online Berbasis Web (Studi Kasus : Smk Al-Chasanah)". This web displays news information, gives comments, and can provide input easily.

[2] Research conducted by Sudarmaji, MM from the 2015 Indonusa Surakarta Polytechnic entitled "Rancang Bangun Majalah Kampus Online Berbasis Web". The web that has features in online mading to facilitate news management, provides facilities to users in seeking information and is permitted to read and interact with magazines online.

[3] Research conducted by Wahyudi Firdaus from Sultan Syarif Kasim Riau Islamic University in 2016 entitled "Rancang Bangun Mading Online Berbasis Web (Studi Kasus:Program Studi Sistem Informasi Fakultas Sains Dan Teknologi Universitas Islam Negeri Sultan Syarif Kasim Riau)". This web provides information about the results of student creativity, about departments and discussion forums.
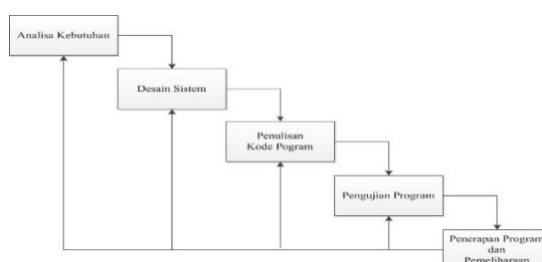
2.2 Method

Figure 1. Waterfall

2.1.1 Requirement Analysis

In this study, a direct survey will be conducted on the delivery of information to Raharja Higher Education. In this study, a direct survey will be conducted on the delivery of information to Raharja Higher Education.

2.1.2 Data Collection

a. Observation

This research was conducted by direct observation at Raharja College.

b. Literature review

This research in collecting data in the form of looking for theories that can be the basis of writing, such as knowing the means of delivering information, QR Code, and several existing journals and examining to compare theory with the facts that exist in Raharja College.

c. System Requirements Analysis

At this stage, it will be carried out on the need for the means of delivering information as outlined on the available online magazine website QR code on the monitor screen to facilitate access to information.

d. System Design

In the system design, the admin is in charge of providing information, and selecting through the online magazine website that is connected to the monitor screen is located at the strategic corner of the campus. Students can scan the QR Code provided a brief description of information on the main page of the display screen using a smartphone device that has access to a QR

scanner, then students can easily get the information needed in detail equipped with download and print features to be read anywhere anytime
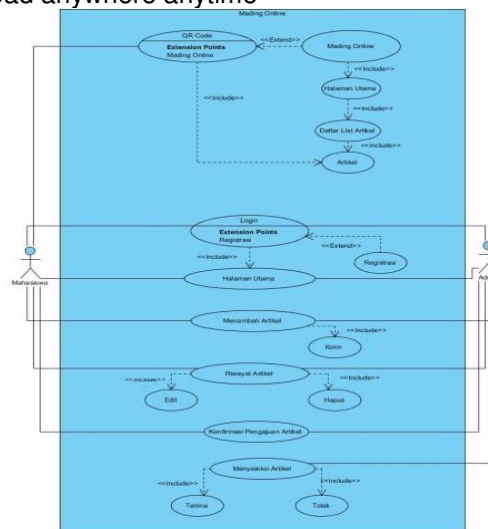

Figure 2. *Use Case online wall magazine*

In Figure 2, it is explained about 1 (one) system that covers all ongoing activities and 2 (two) actors who carry out activities, namely: students and admin and then 7 (seven) usecases, namely: scan QR Code, login, main page, add articles, history articles, confirm submission of articles, select articles.
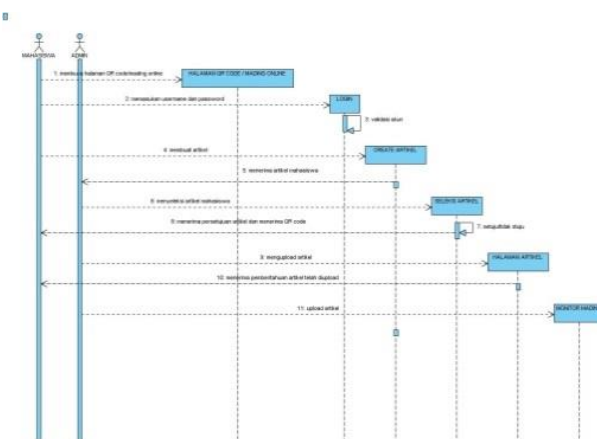

Figure 3. Sequence Diagram Create Articles
    In Figure 3, it is explained about 2 Actors, namely: Students and Admin and there are 6 Lifeline Procedures, namely: QR Code / online page, login, create articles, article selection, article pages, and article monitors and then there are 11 Message.
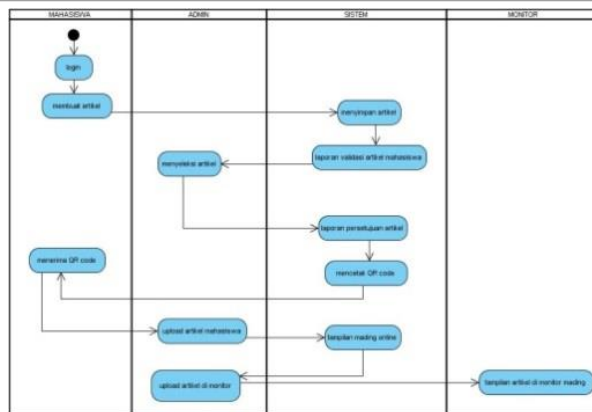
Figure 4. Activity Diagram Create Articles

In Figure 4, is is explained about 4 swimlane namely: Student, Admin, System, and Monitor and there is 1 (one) initial node where the first object starts and then there is an action that shows all activity streams, namely: creating articles, storing articles, student

3. Finding
3.1 Problem
    3.1.1 Analysis of System Requirements
        System requirements analysis is used to explain what is needed in designing the system and to describe it according to the integrity of the user, while analyzing the needs for the QR Code as a means of delivering information on online marketing for tertiary institutions, especially Raharja College, namely:
      a. Functional Needs Analysis
        The system can be displayed and access information about home, profile, gallery, events, student articles.
      b. Analysis of Non-Functional Needs
        1) Software Specifications
          The system is built with the following software: Microsoft Windows 8 operating system, XAMPP as a web server, Notepad ++ for its editor software and PHP programming language as the main script.

3.2 Research Implementation
    For the operation of this web program it is still in the development stage of the prototype.

Figure 5. *Scratch page scans QR Code*

Figure 6. *Monitor Screen Display*
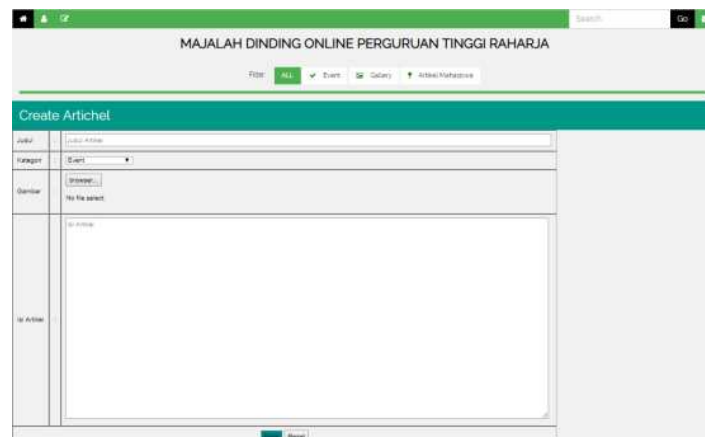

Figure 7. *Online Mading Page*

Figure 8. *Article Making Page*

Figure 9. *Article Page*

4. Conclusion

This system is still in the prototype process so it is still under development by the manufacturer. Mading Online is planned to facilitate students in providing information and developing creativity in delivering information. This system is expected to facilitate access to information and improve reading interest in the campus environment. Online Mading with the help of the QR Code is expected that every student can get information effectively, up to date and interesting. Now there are a lot of varied and interesting online mading, so this system needs further development. It is hoped that this system will be updated by the admin or students in order to improve the quality of online magazine.

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