

Design and Development E-Mading System for Information Students

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Abstract – This study aims to facilitate the provision of information and reduce the amount of paper used in the Department of Electrical Engineering, Faculty of Engineering, State University of Padang. With the large number of papers used to provide information on conventional e-mading, it causes too much paper to be wasted and is not very effective in providing information. With a lot of wasted paper also causes inefficient time. Because there is too much information and announcements that are reported to the Department of Electronic Engineering, the admin in the Department of Electrical Engineering, Faculty of Engineering, State University of Padang cannot manage. Therefore, for now it is necessary to have digital madding to manage information and reduce the amount of paper use. There are 2 methods used in this research, namely Data Collection Methods and System Development Methods. This data collection method uses interview and observation techniques, while the system development method uses USDP. In this study using the USDP method, where this method can perform object-oriented software development, design and analysis of software design using the UML (Unified Modeling Language) approach. The results of this study are a E-Mading Information System that can be used by students, lecturers and staff of the Department of Electronics Engineering.

Keywords – Web Based; Information System; Digital Madding

I. INTRODUCTION

E-Mading is a type of information media that is the simplest and easiest to use to be a means of communication such as mass media. Every piece of information provided can be a good and appropriate marketing tool for information. Not only as a marketing tool, e-mading can also be used as a communication tool for students. This is an activity of a department or organization that can show dynamics[1]. Therefore, e-mading management must be done properly and correctly so that the development process can always be followed[2].

With the many developments in information technology making one of the main factors in the provision and dissemination of information so that the academic community including lecturers, engineering faculty staff and students are encouraged to use such technology. The development of information technology can also reach a process within the scope of the engineering faculty to improve the effectiveness and efficiency of performance[2][3].

One example is the efficient performance of the archives department because it still employs a conventional e-mading system. In a data collection method, several methods can be used, namely the method of observation, interviews and library research. In a USDP system development can be used as a reference object-oriented software development[4]. This UML was chosen as one of the tools to analyze the software requirements to suit what is desired. The design of a digital e-mading system is expected to be able to operate and maximize the system that has been running so that the information is right on target and can facilitate the management or access of information. Digital madding can also reduce the amount of excessive paper usage so that it can also support a government program in reducing the amount of paper usage[5].

The system is a unity, both real or abstract objects consisting of various components or elements that are

interrelated, interdependent, mutually supportive, and as a whole unit in one entity to achieve certain goals effectively and efficiently. A system consists of various interconnected subsystems, to get the output of a process into information, then input in the form of data is needed. This definition is a collection of several interconnected components in achieving goals[6]. This system itself consists of several groups in its definition is the emphasis on components and emphasis on procedures. In this case the system can also be defined to be an interconnected whole. Data in the form of raw materials if not processed will not be useful. The data can produce information if it is processed through a model. The model that processes the data is called the data processing cycle[7].

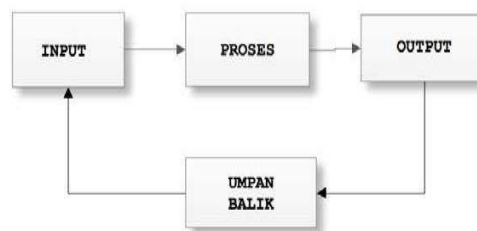


Figure. 1 Data Processing Cycle

Fig. 1 describes an event that defines reality through the input element. After that, the data is processed into an output or information that will be used. An information is received by the user, then there is a response in the form of evaluation and the results of the response will be data that will be entered into input again, and so on. The quality of information depends on three things: accurate, timely and relevant[8]. A simple communication medium on campus is a e-mading. E-mading has many functions as the role of one of the student activity facilities, including

communicative, informative, creative and creative[9]. E-mading plays a role in the formation and formation of students, both in the aspects of knowledge skills/abilities, interests and talents and attitudes. Most of the writers use e-mading as a place to practice. Start from the habit of writing simple things, and in the end the insight will be open to having an interest in developing the writing in-depth. The database is an important part of an information system because it can make a basis in providing information for its users[10]. Databases that determine a quality of information generated by a system, because a system will change or make the database as a center for holding all data has been arranged so that users can add, change and reduce the data needed in accordance with the wishes or goals in making digital madding[11]. The purpose of establishing a database in a company is to facilitate the retrieval of data as shown in Fig. 2 that the database can replace and modify the file cabinet save lots of documents.

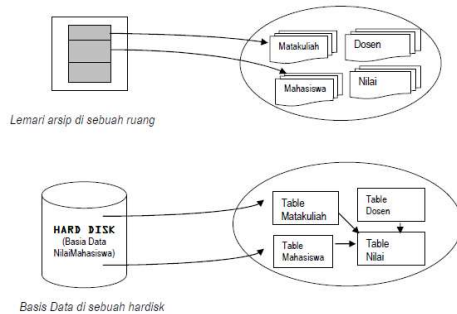


Figure. 2 Archive and database

Some modeling of a system that can be used, one of which is a modeling device for the Unified Modeling Language that is used for systems that are the object-oriented paradigm[12]. According to Jesse (2003: 16) To improve the results of development and productivity, can use UML. UML was created for object-oriented system design. Basically, modeling is done to simplify complex problems so that it can be more easily learned and understood. To understand UML, it takes a form of concept from a modeling language, and learn the three main elements of the UML, namely building blocks, rules that state how a building block can be put together and some common mechanisms[13].

II. RESEARCH METHODOLOGY

In this study using the type of research development. Development research is a type of research that has a goal in developing and producing a product. The products that can be produced in this research are digital madding applications. Application development design uses the main tool in designing software applications, namely UML (Unified Modeling Language)[14]. UML has the following stages:

1. Use Case Diagram

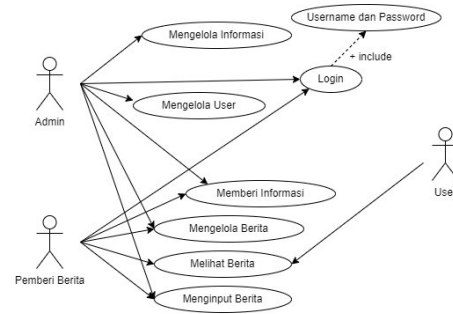


Figure. 3 The step of Use Case Diagram

In the Use Case diagram above there is an admin who can manage the input and output processes of data and processes on the system. Announcers can provide information to the admin so that information can be disseminated through digital e-mading[15]. While the User can see the information available on the digital e-mading whose data has been managed by the admin.

2. Class Diagram

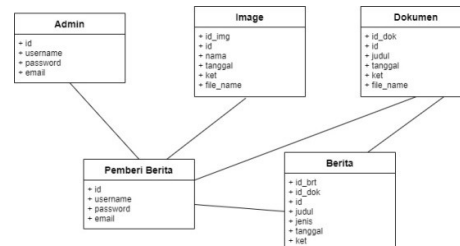


Figure. 4 Example of Class Diagram

In the Class diagram above are the details of the class-class relationships found in digital applications available at the Faculty of Engineering (FT) of the Universitas Negeri Padang (UNP).

III. RESULTS AND DISCUSSION

1) Main Page

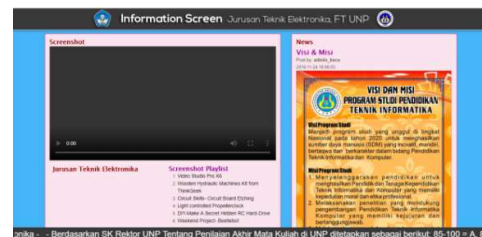


Figure. 5 Main Page

The above display is the main page that will appear on digital madding. This digital madding has a header, body, and footer. In the body there are 2 pages:

- Screenshot Page
- News Page

The News page contains the order of information or the latest announcements being displayed. While the Screenshot Page is a video display that will be displayed.



2) Admin Page

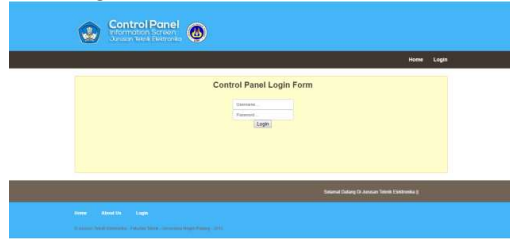


Figure. 6 Admin Page

The view above is the admin page. This page can only be accessed by admin which contains all data that can only be managed by the system.

3) Menu Home

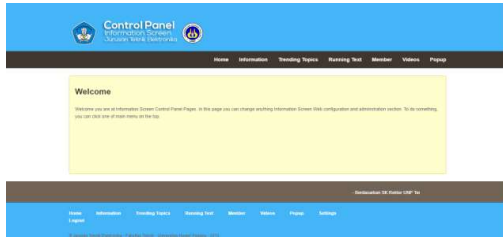


Figure. 7 Home Menu

This is the Home Menu display on the Admin Page. This display will appear when the admin is successful in logging in by inputting the username and password.

4) Menu Information



Figure. 8 Information Menu

This display is a display of input information that will be displayed on the start page of e-mading. Admin can add the latest information that will be displayed on digital madding through this Information Menu.

5) Menu Trending Topics



Figure. 9 Trending Topic Menu

This display is the input news display that will be

displayed on the e-mading home page. Admin can add the latest news that will be displayed on digital madding through this Trending Topic Menu.

6) Menu Running Text



Figure. 10 Running Text Menu

The running text in the footer located on the Home page can be added and changed by admin in this menu.

7) Menu Member



Figure. 11 Member Menu

In this menu, the admin can add and even edit the list of digital madding members.

8) Menu Videos



Figure. 12 Videos Menu

In this menu the admin can add a list of videos that will available on digital e-mading.

9) Menu Popup



Figure. 13 Popup Menu

Admin can add a pop-up image on this menu.



IV. CONCLUSION

Based on the results and discussion obtained, it can be concluded :

1. This research has succeeded in achieving the goal of making digital e-mading that can be used by information users to be able to access information contained on the website.
2. With the digital bulletin board, the problem of delivering information through a e-mading (bulletin board) namely the limited space of information that can be loaded can be resolved.

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