

Implementation of Rapid Application Development Method on Academic Staff System of Harapan Bersama Polytechnic

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Abstract — Lecturers are required to implement Tri Dharma to improve his career. Besides Tri Dharma is also a criteria to assess the lecturers each semester for which has to get a certificate of lecturers. Not a few lecturers who forget to implement the Tri Dharma due to busy, so that occurred at Harapan Bersama of Polytechnic. It provides a negative impacts on his career as a lecturer and his institutions. Therefore, then made is an application based on the website using Rapid Application Development method that used to report on the implementation of the Tri Dharma. The application makes it easier for the lecturer to reporting the implementation of Tri Dharma and make it easier for the institution for career assessment lecturer.

Keywords — application, website, rapid application development

I. INTRODUCTION

In running the role, task and obligation as a lecturer, then the implementation of Tri Dharma college which is the obligation of a college in accordance with the Act No. 20/2008 on National Education System Article 20 verse 2, already should be in harmony held also by a lecturer. Tri Dharma is meant is Education, Research and dedication to the community.

Tri Dharma College conducted by a lecturer is a prerequisite required to get or increase the functional position lecturer, good Expert Assistant, Lektor, Lektor Head and the teachers. Besides Tri Dharma is also a criteria required met by a lecturer to report BKD (the burden of the performance of lecturers) each semester for lecturers who have to get a certificate of the educators.

Along with the routines and the workload of lecturers with high enough, and not a few lecturers who often ignore its obligations as a functional workers in implementing the Tri Dharma college. This course will have an impact on the functional career path lecturers and high perguruan where lecturers ber- homebase. The lack of the system that make it easier for the lecturer in to reporting Tri Dharma college became one of the college indication difficulties in performing control of the obligation of the lecturers, so that the workload of

lecturers thus more on education alone and the implementation of Tri Dharma university sewajibnya done by lecturers in a balanced way to the weight of the next. This is currently experienced by one of the private universities in Central Java, namely Polytechnics shared hopes. Therefore needed a system that can be used as reporting in implementing the Tri Dharma college lecturer easily, efficient realtime services with user friendly view, so that the college can easily control activity implementation of Tri Dharma university lecturers.

Rapid Application Development (RAD) is life cycle strategy which is intended to provide a development much faster and get the results with better quality compared with the results achieved through traditional cycle [1]. Another definition states that RAD is an object-oriented approach to the development of a system that includes a method of the development of the device and the software [2].

Using the Rapid Application Development and the building blocks of functional system was built to ease the lecturer in to reporting the implementation of Tri Dharma university and easy technical colleges shared hopes to perform the control of the performance of lecturers.

II. RELATED RESEARCH

Research bound entitled Analysis and Design Academic Information System Politeknik Malang Land Use methods of Rapid Application Development (RAD). The research implementing technology information from the institutional level to study program at Politeknik Malang Land (POLINEMA) namely with developing Academic Information System (SIKAD) with web technology. The SIKAD applications developed using the methods of Rapid Application Development (RAD). This method is selected for the needs of the applications SIKAD urged. parties POLINEMA wants SIKAD application can immediately are reinforced to users of the lecturers and students POLINEMA. The results of the study showed that by implementing RAD, new SIKAD applications more quickly are reinforced on a user, when compared to the existing SIKAD application. Using RAD, SIKAD applications are reinforced after ± 1 to 3 months, while existing SIKAD are reinforced to a user after ± 12 months [3].

In the research titled Application Development of Tourism Map Garut Android Based using the Rapid Application Development produce Garut Tour Maps application based on Android capable of displaying a route to the location of the objects of the city tour to Garut from home users to access this application. This application there are 2 parts, namely frontend applications and accessing backend applications . Frontend is the application tourism map garut already installed in the mobile device used. Gpgme is supporting applications that function as suppliers or data source on the application frontend [4].

Rapid Application Development also applied p no sales system bike online . The method RAD (Rapid Application Development) applied to produce bike sales system online through the integration of data base and build relationships with customers in a more personal. The goal is more toward expanding the range of marketing and increase sales through the media that is more flexible and more economical. The modeling of the system using UML (Unified Modeling Language). This research in the form of the case study research method research and development (R&D). Design software system includes the part of the front-end and content management system that is specifically negate the intermediary, reduce operational cost of sales, menpermudah, delivery and receipt of payment in online . The test result shows the process of sales digitisasi have verification of accurate information on the navigation system, an assessment of the contents of the basket shopping, easy to navigate the order data processing, and confirm receipt of payment [5] .

D nature of research entitled the implementation of Rapid Application Development on the revocation Application Regular Service Smart PT. PLN) produce applications that can make it easier to admin staff in the process of data processing revocation administration service. This application provides data base that can store data service revocation of Rhesa, so that can help the admin staff in search of mounting data that is used for the revocation process of Rhesa service. The method of software application development in this research using the methods of Rapid Application Development RAD) and for test applications using Black Box testing method that consists of User Satisfaction Awarded testing and Testing [6] .

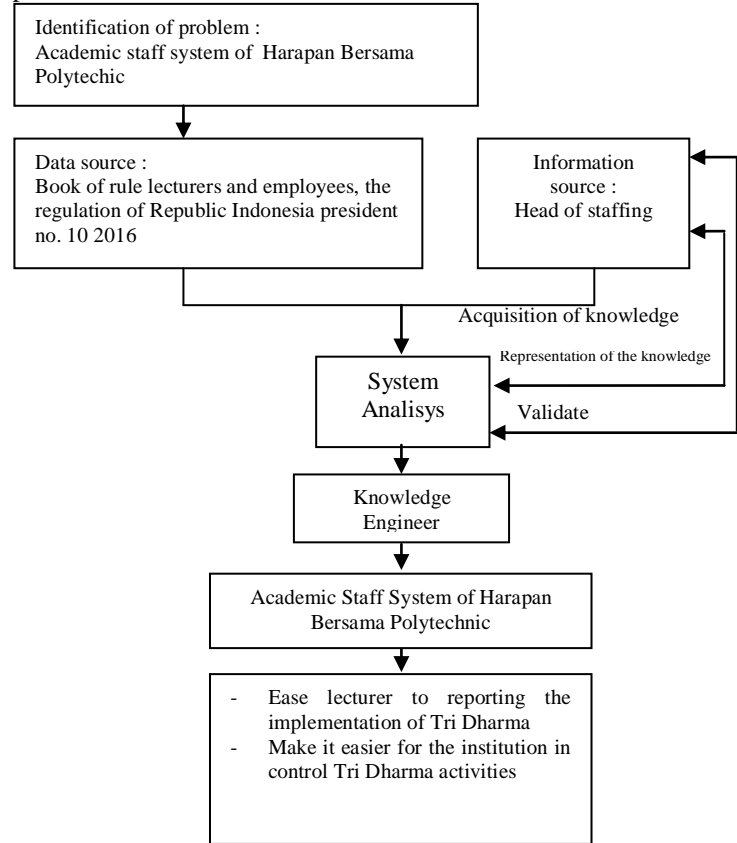
Methods of Rapid Application Development is also applied in Electronic Commerce System Furniture. The results of the research shows the electronic commerce software system can be a new breakthrough in the way and mechanism to interact with visitors or customers, the flow of information are more interactive and transparent, more specific services/specific to individual customers, ease of consultation in the product purchase furniture, can accommodate the number of furniture product more without hindered building area. The test results

showed the system of electronic commerce have verification and validation members member, order and a purchase invoice, payment system, shipping and bill payment [7].

III. RESEARCH METHOD

A. Research Framework

The research framework is displayed on the pictures 1.



B. Research Flow

RAD method is an object-oriented approach to produce a system with the main goal of the shorten the time execution of applications and the process as soon as possible in order to empower the software system in a timely manner and fast [8]. Now f ase of his phase that applied in this research is as follows :

1. Requirement Planning

This phase is a beginning phase in a research, where in this phase done a problem identification and data collection in the form of the primary data directly obtained from the user or user stakeholders about the purpose of the end or goal that is desired. In this case the primary data obtained from : Director, Vice President Director II (Financial and staffing and the Head of staffing.

2. Design Workshop

At this stage is done in the analysis of the system that will be built based on the data that has been obtained and akisisi knowledge from an expert. After doing a system analysis, then who is to make

the design or prototype of a system that will be built. In this research application system based on the website that produced, designed or designed using the Unified Modeling Language (UML). UML is the association of the structure and techniques for modeling in the design of object oriented programs (OOP) and its application 9 . UML is a language that is used to determine, visualizing, build and document a system information [10] .

3. Implementation

After the design has been completed and agreed with the user , so the next step is to translate the design into the code programming technique . In this research, programming language that is used is the PHP programming language is a server side [11] with My SQL Server database as a program due to the ability to receive and send data very quickly, multiuser and use the basic command (Structur SQL Query Language) [12] and CodeIgniter as framewok him . After the coding phase is completed, then the next step is to perform p engujian , i.e. system with how to charge each input on an application of research results and then process and search for some error / error there, testing is also done with how to ensure the process of CRUD (Create, Reade, Update and Delete) has been running with good.

C. Research Process

The process of the building blocks of the academic staff system at Harapan Bersama Polytechnic are as follows :

1. Determine the research object that will be applied in the implementation on the academic staff system at Harapan Bersama Polytechnic.

2. Collect and identify the data about the academic staff system at Harapan Bersama Polytechnic.

3. The election of an expert who will then manage the knowledge and information with certain criteria

4. Analyze the problems of the academic staff system at Harapan Bersama Polytechnic and then validate data functionality lecturer there by the speakers

5. Create a system design lecturer functionality .

6. System Architecture lecturer functionality

Technically the architecture system design lecturer functionality is divided into 3 parts, including :

a. The Interface

This interface can be used by user in interacting with the system applications functionality lecturer, this section used lecturer to menginputkan functional performance data lecturers per semester.

b. Part of the Application

Part of the application from the system functionality this lecturer contains knowledge and

data that has been analyzed and has been validated by expert.

c. Exodus

Exodus from the system functionality is a lecturer of information that is needed in the form of an interface that is easy to be accessed, a recapitulation of the functional performance reporting lecturers who have inputted by each lecturer.

7. The needs of the user interface

Between the face of the user to function as a bridge or communication media that connect users with your computer. In this case the academic staff system made as between the face of the user to provide easy which contains information. This software using visual display menu and sub-sub menu that user friendly so that can provide easy access to online information and realtime services.

IV. CONCLUSIONS

The academic staff system produced based on the web and can be used as a media reporting administration and implementation of activities Tri Dharma lecturer, besides that can be used for assessment of the functional activities of lecturers for the managers of the institution. The academic staff system has been integrated with website of Harapan Bersama Polytechnic.

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