

***ELECTRONIC DOCUMENT FOR RESEARCH AND SERVICE
WITH WEB-BASED IN HIGHER EDUCATION
(CASE STUDY: LP4M IIB DARMAJAYA)***

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Abstract

This research produces information on e-data for research and community service, which can help the administration department at LP4M IIB Darmajaya. The current problem is that submission of research proposals and community service by the proposing lecturer or researcher is carried out conventionally, i.e. not referring to the paperless concept, submitting proposal files, administrative inspection processes, filing not having a special database, so it is ineffective and efficient. The waterfall method through the stages of needs analysis, design, coding, and testing, e-data information can help LP4M management. The proposer or researcher can upload with a template, the reviewer can evaluate the proposal, the results of the review are informed to the researcher, and inform whether the proposal is accepted or not. Super admin of LP4M, can inform, update, coordinate, and organize documentation. Another benefit of this system is that the faculty or other management department requires information related to research data and service data as forms that can be downloaded through the system. This shows that the performance of e-data increases the productivity of research and service document administration that can be utilized by the Darmajaya academic community.

Article history:

Received: Oct 15, 2020

Revised: Nov 6, 2020

Accepted: Nov 14, 2020

Keywords:

Information system;

e-data;

research proposals;

darmajaya;

I. INTRODUCTION

The implementation of the tri dharma of higher education by lecturers is not only learning but also research and service. Informatics and Business Institute Darmajaya is very supportive of research and community service activities to support the direction of development towards Higher Education that is Superior and Competitive based on Technology and Business (Rienstra LP4M Darmajaya). The Institute for the Development of Learning, Research, and Community Service (LP4M) is one of the units for managing the results of research and community service lecturers at IIB Darmajaya, both funding from the Higher Education and the Institution.

Currently, the information process for the existence of grants and the administration of submitting proposals for institutional research and community service is still conventional, less effective and efficient, which allows late information on research or service grants, which results in some lecturers or researchers not knowing or being late in getting information. The absence of an interface that provides the facility for proposal writing templates and the slow administration checks and results in data loss.

Research proposals or service proposals that enter the LP4M institution after being checked administratively will be distributed to reviewers for review by reviewers in the field of concentration. Reviewers will provide input and assess whether the proposal is feasible or not. All these administrations are not only archived but will be conveyed to the researchers as material for improvement so that the proposal can be funded. The incoming proposal documents, proof of administrative pass checks, and the results of the review are stored in LP4M in the form of reports which are stored in a filing cabinet. From this background, LP4M needs e-document media that can help and facilitate the search for the research historical data. The E-document application is not only a media but an information system that makes it easy to search for information related to research and service, starting from incoming proposals, administrative notes, notes of improvement and reviewer assessments, and information on whether or not proposals are accepted. As in previous studies, writing 'Research data is an application that makes it easy for lecturers to store and send research data information on a website and also a directory' (Widi et al, 2012).

The development of E-Data is not only a data bank, it can also help researchers get information, view standardized proposal writing templates or rules, researchers and service providers directly input the draft proposal through the system. Based on the reference letter for filling in the assessment of incoming proposals, reviewers simply log in and input the assessment and input on the assessment form, so that it becomes an effective solution and does not occur manipulation. This e-document application will certainly help Higher Education, not only the LP4M administration department or research and service data manager. E-documents are well organized, which can be used by any related department if there is a request for related data, for example, completeness of college or faculty form data such as proposals per year that are accepted or rejected, amount of funds, academic year, majors and names of lecturers. From the above background, it is necessary to have an E-document as a medium of information so that information is fast and accurate, paper base checking errors, and scheduled reviews as well as all recorded data and repositories properly.

II. LITERATURE

2.1 System

A system is a series of two or more interconnected components, which interact to achieve a goal. Most systems consist of smaller subsystems that support larger systems. [5]

2.2 Information

Information is data that is processed into a form that is more meaningful and more useful for those who receive it to make present and future decisions. [5]

2.3 Information System

Information System (IS) is a combination of information technology and the activities of people who use that technology to support operations and management. In a very broad sense, the term information systems are often used to refer to the interactions between people, algorithmic processes, data, and technology. [5]

2.4 Database

The database is one part of computerized software engineering and the main objective is to maintain processed data or information storage media so that it can be accessed easily and quickly

2.5 Application of research and service e-data

The information system for research and community service FTIK USM functions to assist the UP2M FTIK USM admin in managing research data and community service, as well as monitoring the implementation of research and community service [2]. The application is intended for all STMIK Eresha lecturers, where later lecturers can upload their research results directly

through this website. The programming language used is PHP [1].

III. RESEARCH METHODS

After identifying and creating a design flow in the data collection process, the next step is carried out in the process of making web-based e-data and simulating it at LP4M IBI Darmajaya. Sources of data used in this study, most of them are research data and lecturer service who get institutional grants, data obtained from LP4M IBI Darmajaya, retrieve data reports, notes, and results of research and dedication.

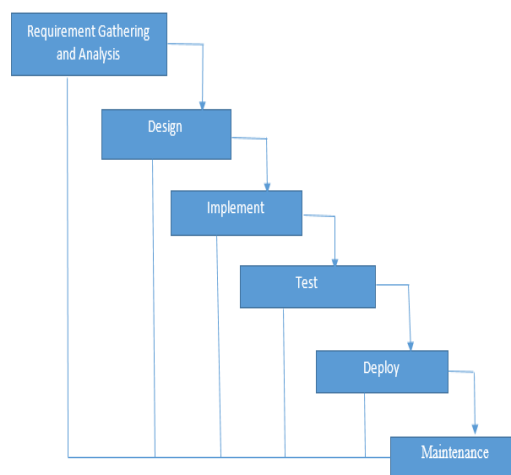


Figure 1. Waterfall model

3.1. System Analysis

The Analysis system here describes the process that is running at the Social Service Agency which is related to e-data research in the process of giving grants as follows:

1. The applicant/research lecturer registers and completes the submission proposal that will be submitted to LP4M.
2. Proposals that have passed the administrative check will proceed to the seminar and review process
3. Proposals received will be informed as the winner of the grant
4. All files are stored in the database

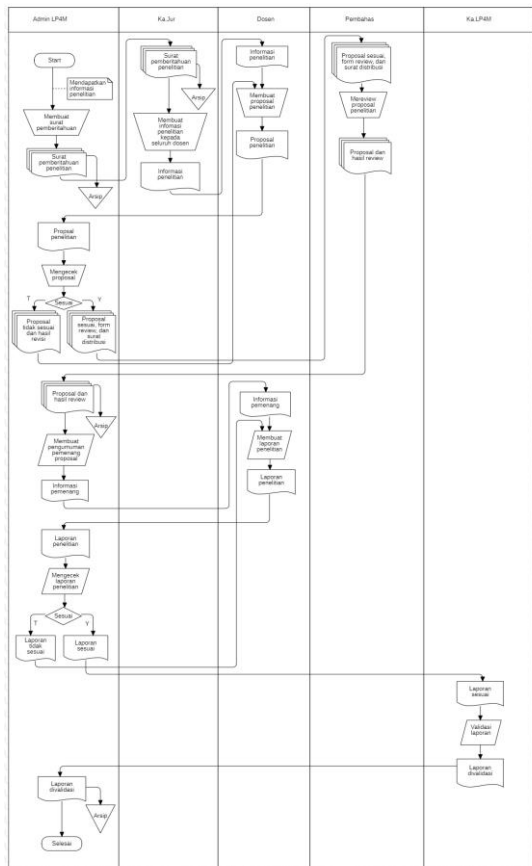


Figure2. The flow of the E-data System Research and community service that is running

The results of the analysis are illustrated by the flow of the system, showing that it is less effective and efficient in processing research and service data. Starting from the administrative check process, review, and archiving conventionally.

3.2. The Proposed System Design

The e-data information system for research and service is described with a context diagram, as follows. Researchers after receiving information on grants can upload proposals. The proposal will be checked for administrative completeness by the admin, then submitted for review. Reviewers can review and assess the proposal whether it is feasible or not furthermore, the admin will provide improved information for the proposal from the review results. Researchers can re-upload the revised results, Proposal information passes and is given funding as well as the availability of incoming proposal reports, and proposals are accepted.

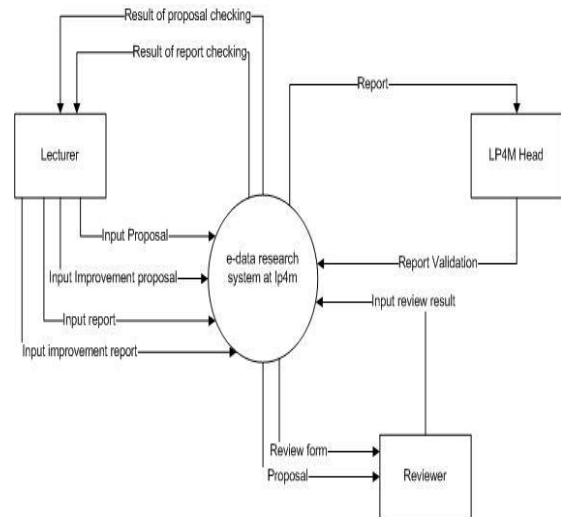


Figure 3. Context diagram of the E-data Application of the proposed research and service

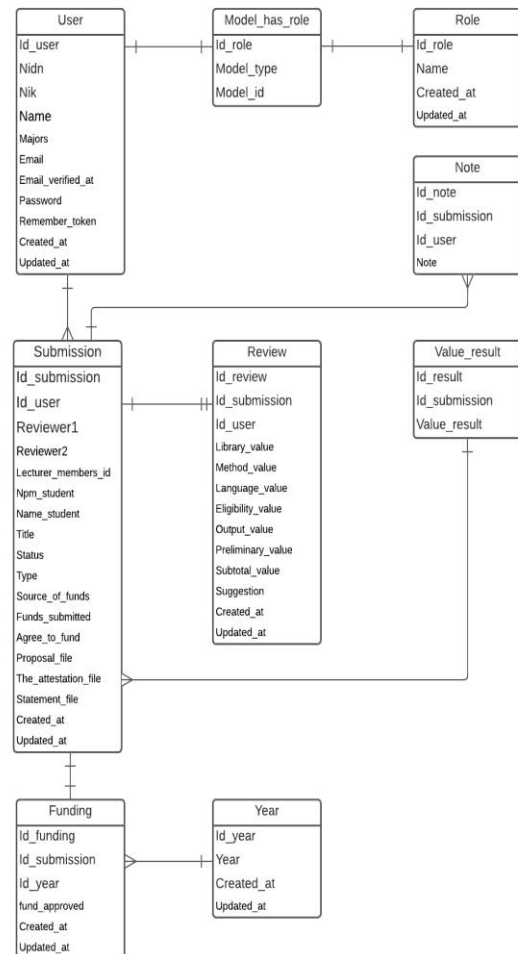


Figure 4. Relationships between tables

IV. RESULT

This e-data research and service application serves as an interface between the researcher and LP4M IIB Darmajaya in informing the

administrative process until the proposal is received, as for the facilitation of the application as follows:

Login page

Is the initial display when going to a web page in a browser. The login page is as follows:

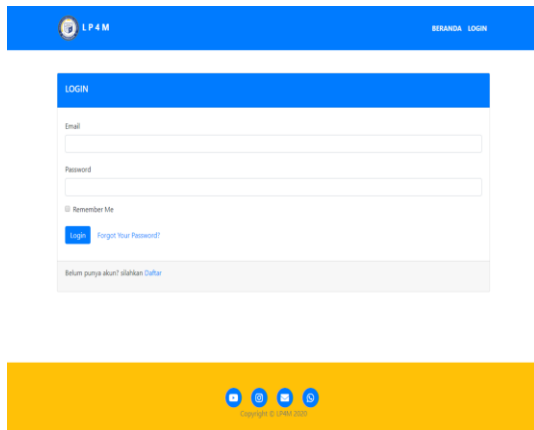


Figure 5. Display Admin Login Page

This page will appear when the admin wants to access the main admin page. The purpose of the login page is to maintain the privacy of any data entered into the application. On this login page, there is one button, namely the login button. login button functions to check whether the email and password entered is valid or not. If the email and password are entered correctly, the application will continue to the next page, namely the main page of the application, but if the email and password are wrong or have not been registered, this page will display a warning that the email and password are wrong.

Home page

The following is the main page display on the e-data research and service application. This view contains summary information of some of the features available on the system.

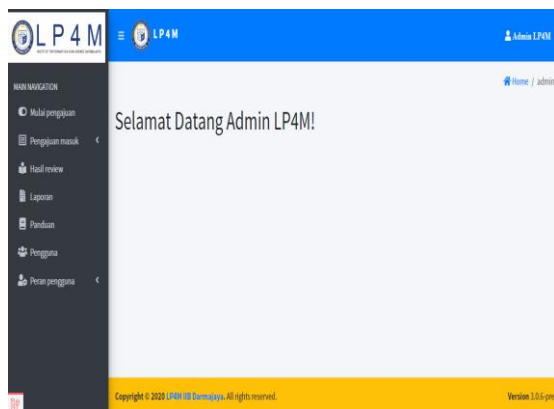


Figure 6. The home page of the e-data research and service application

The home page is the initial display after logging in to the main application page. This page is managed by the LP4M admin to process data, change data, and delete data.

Input proposal page

The following is a display of research proposal input from the proposer or research lecturer.



Figure 7. Proposal input page

The image above is a display on the submission proposal data page. This page will be managed by the admin to check the completeness of the file, add data, delete, or update the proposal information data

Research and service proposal checking the page Is a display of administrative checking of research and service proposals that are entered at LP4M Darmajaya, to be verified administratively according to research procedures

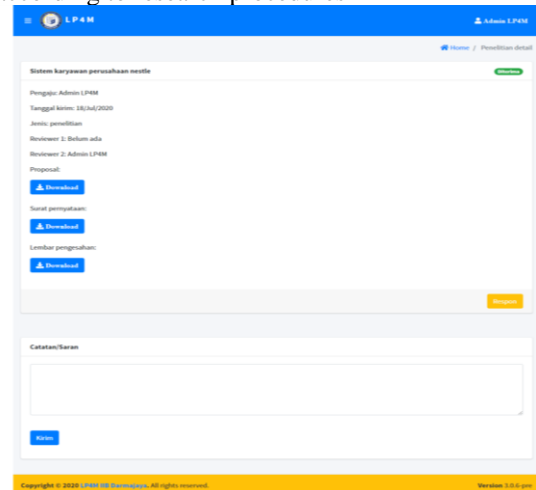


Figure 8. The administrative check page for research and community service proposals

Reviewers page

This page is a display containing reviewer data that has been inputted by LP4M and can only

be accessed by reviewers who have been inputted by the admin.

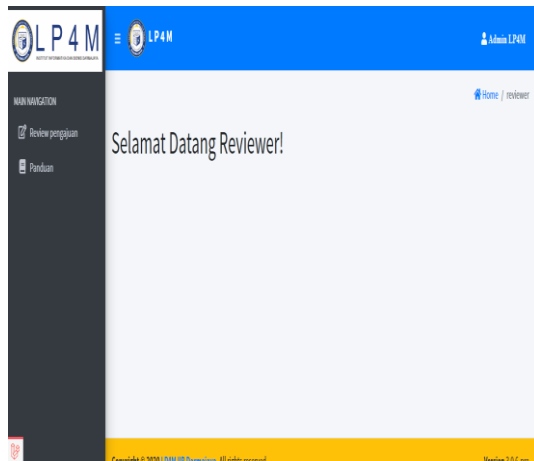


Figure 9. Reviewer Data Page

This page will be managed by the admin to view reviewer data, add update data, and delete reviewer data.

The following is a display of information on proposals that were received or not funded by LP4M IIB Darmajaya.

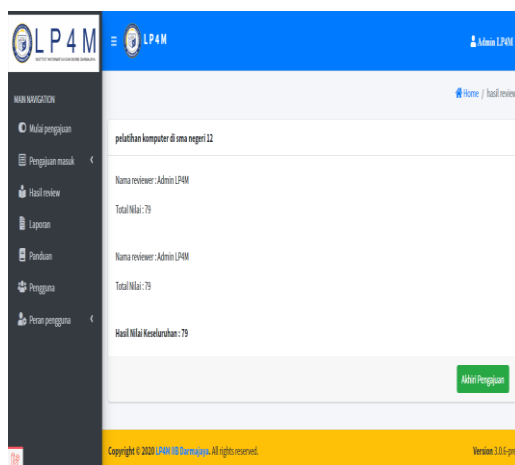


Figure 10. Information page of the review proposal

The picture above shows the information on institutional grant proposals. The following is a display of information on research or service proposals that have been administered at LP4M.

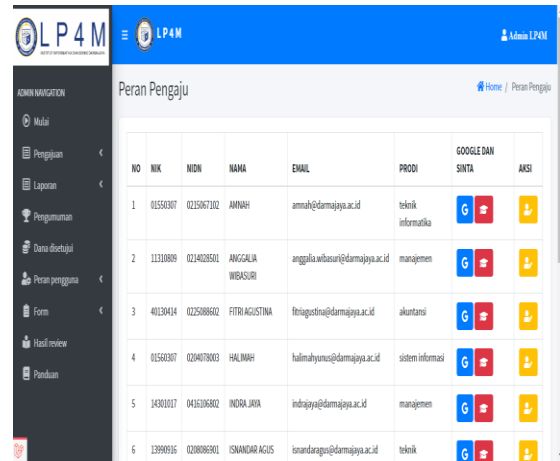


Figure 11. Display of research proposer data page

V. CONCLUSION

The E-Data application of research and service based on the Web which is applied to Higher Education, the authors can conclude as follows:

1. E-data research and service for information systems that can help LP4M management
2. Researchers in the IIB Darmajaya environment can upload proposals directly through this system.
3. Reviewers can evaluate the feasible and inappropriate proposals through admin login as a reviewer who has been assigned by LP4M
4. Super admin of LP4M, can inform, update, coordinate and organize the documentation of incoming proposals, received and final reports on the results of research and experience
5. Faculties or other management departments that require information related to research data and service data as forms can be downloaded through this system
6. Graph information of proposers for research and service proposals or recipients can be a standard measure for leaders in giving awards to research lecturers

REFERENCES

- [1] A.S, Rosa dan Shalahuddin, M. (2019). *Rekayasa Perangkat Lunak Terstruktur dan Berorientasi Objek Edisi Revisi*. Informatika, Bandung.
- [2] Dini Silvi Purnia, Syaifur Rahmatullah, Achmad Rifai, STMIK Nusa Mandiri (2019) *Pengembangan Implementasi Aplikasi Bantuan Sosial Berbasis Mobile Pada Dinas Sosial* 'K. Elissa, "Title of paper if known," unpublished.
- [3] Handayani ,Sri, 2017. Rancang Bangun Sistem Informasi Penelitian Dan Pengabdian Dosen Fakultas Teknologi Informasi Dan Komunikasi (FTIK) Universitas Semarang

- (USM). INFOKAM Nomor I Th. XIII/MARET/2017
- [4] Johani S Pasaribu, Politeknik Piksi Ganesha (2017) *Penerapan Framework YII pada Pembangunan Sistem PPDB SMP BPPI Baleendah Kabupaten Bandung*
 - [5] Luli Yuliyanti, Sekolah Tinggi Ilmu Ekonomi Bongayah Makasar (2015) *Implementasi Customer Relationship Manajemen (CRM) Terhadap Kepuasan Loyalitas Pelanggan pengguna Smartphone Samsung*
 - [6] Nugraheni setyanti, Politeknik Negeri Malang (2015) *Aplikasi Adobe Photoshop CS6 Untuk Pembuatan Desain Katalog Sebagai Media promosi Di CV Kajeye food Malang*
 - [7] Supriyadi, Dedi 2018, *Aplikasi Penelitian Dosen Berbasis Web. Jurnal Teknologi Informasi ESIT Vol. XII No. 01 April 2018*