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The Development of Web-Based Correspondence Information Systems in University

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Abstract. Correspondence management at Universitas PGRI Yogyakarta (UPY) is still managed manually. When a student needs a letter from UPY, he or she must come directly to the Faculty admin. Students are required to write down the type of letter needed and their personal data. After that the letter will be signed by the dean of the faculty. This process takes a long time, especially when the faculty dean has a busy agenda or is not in place. This article will propose a web-based Information System for PGRI Yogyakarta University that can be used to store and manage data in the form of correspondence information needed by students. With this system students can apply for the letters they need from UPY anywhere. Information system that has been implemented can be seen that the system can manage student correspondence online. The time needed in the correspondence process by students has become faster when done by the system. Correspondence reporting can also be done automatically by the system.

Key words: correspondence, information systems, mobile webStart your abstract here...

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1. Introduction

Universitas PGRI Yogyakarta (UPY) is an organizer of education and profession in undergraduate and magister degree that refers to the National Education Standard. The UPY education process is related to the administration of correspondence needed by students and stakeholders.

Letter is an essential tool for every institution, including the regional secretariat of Pacitan regency. Important and confidential information relating to the agency is contained therein. Therefore, every activity related to the mailing must be done storage of the mail archive and well documented. Timeliness in the receipt of letters both outgoing and incoming mail should also be considered. Therefore the management of incoming and outgoing letters must be implemented appropriately [1].

This letter management activity includes an important activity that must be done by an organization, and the management activities of the letter can be different for each institution. The activities of correspondence must be very considerate because the contents of the letter in the company or the agency will be the means of achieving the objectives of the organization or agency in question. Therefore it is necessary to manage the letter. In an organization or company, letters according to its procedures are differentiated into two, namely incoming and outgoing letter [2].

An institution both private and government in conducting its activities are not separated from the correspondence activities, because the letter has a function and important role in the means of achieving the objectives of the company/agency concerned [3].

One of the important applications of information technology is the archiving system. This is because the archives system serves as the collective memory of the agency (corporate Memory), data or information for decision making (decisions making), the supporting material of the court proceedings (litigation support) and depreciation of work files (retention)[4].

Currently, management of letters needed by students is still done manually. Students who need a letter from UPY should come directly to the Faculty of Administration where the student is enrolled. Then students should write down the types of letters needed and data themselves. Students should also wait when the administration makes letters and ask for signatures from faculty leaders. This process takes a long time, especially when the faculty leader has a robust agenda. The registration of this letter is still done manually by the administration is only written on the ledger.

An incoming letter-and-letter-out in a manual manner has also occurred at the Medan High Court office. The process is still by separating between incoming mail and outgoing mail so that it takes a long process and time, with the information system of the letter Pengagendaaan as a means of useful information and facilitate the management of mail [5].

The condition of filing a conventional letter of correspondence causes UPY services to students to be less effective and efficient. Even because the recording of letters done manually can happen to lose archive on outgoing mail, therefore, a system will be able to manage the letters needed by the students and organize them well.

With the letter management information system, students can directly submit a letter as he wants, the letters that are commonly described by the Faculty of Engineering are the payment of final project, admission permit, permit research, KKN, Active students, book assistance, submission of the thesis, late Heregistrasi, late KRS, KP. Furthermore, a dean can immediately accept or reject a letter submitted by a student with just one click. Students who have received his letter submission can directly print the letter in PDF form in a standard format and standardized from the Faculty of Engineering of University PGRI of Yogyakarta.

The Academic Assessment Information System, the study was to create a Web-based academic assessment information system used in education to facilitate student assessment. The results showed that the academic assessment system facilitates school information on assessing and issuing value to students and is also expected to be more efficient [6].

The letter handling system of the governor's office of Bangka Belitung, with a computerized mail handling system, the processing of letters, information presentation will be faster, and data security will be more secure because the place Or storage media is more awake [7].

Codeigniter Framework to construct the Letter Information System Application of teaching assignments and practical work letter at the Faculty of Engineering of Sangga Buana University that can help secretarial staff faculty in processing outgoing letter. Information System for a letter of teaching assignment and letter for student practice can improve the performance of the Faculty of Engineering secretarial staff in providing information accurately, effectively and efficiently in the processing and data retrieval [8] [9].

The use of mobile web in thesis management administration system can facilitate the management of the letters needed and the final project recap. This system can also browse the titles of final assignments that have been made so as to reduce duplication of final assignment titles. This study concludes that using the system can facilitate and speed up the management of the documents needed. This system can also sort the titles of final assignments that have been taken so as to avoid duplication [10].

Based on previous research above, the Web-based information system can be used in the management of correspondence existing in UPY. This article will propose Web-Based Correspondence Information Systems is a Web-based information system that can be used to store and manage data in the form of mail information needed by students. With this system, students can apply for the required letter from UPY anywhere. Students come to the administration of the faculty only take the mail file that has been signed by the faculty leader without a long time. Additionally, outgoing mail can be well managed.

2. Methodology

Information system is a set of organizational procedures which when implemented will provide information for decision makers and / or to control the organization [11]. The speed of data processing and information delivery has a very important role for every agency, data and information that must be processed, of course, cannot be done all manually.

The subjects involved in the Web-Based Correspondence Information Systems are the Dean of the Faculty of Engineering, Lecturers in the Faculty of Engineering, and students in the Faculty of Engineering.

2.1. System Development Methods

Development of Web-Based Correspondence Information Systems using the Waterfall Method [12]. The Waterfall method is a sequential software development process, in which progress is seen as continuously flowing downward (like a waterfall) through the phases shown in Figure 1.

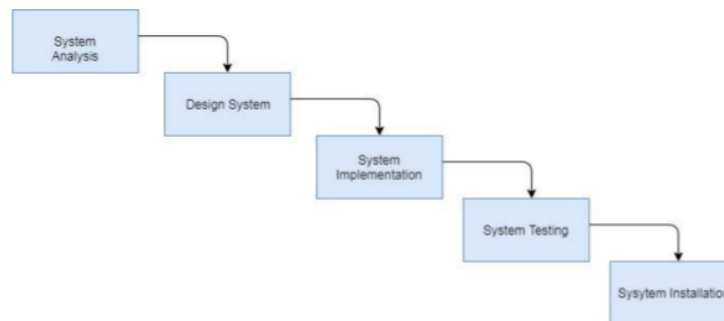


Figure 1. System Development System Method

2.1.1. System Analysis

This phase is an analysis of system requirements. Data collection in this stage will extract as much information as possible from users, namely administration, deans, heads of study programs and students so that an information system will be created that can perform the tasks desired by the user.

2.1.2. Design System

The system design phase will translate the requirements into a software design that can be estimated before coding is made. This process focuses on: Model design, Database design on My SQL, and Interface Design.

2.1.3. System Implementation

The system implementation phase is the translation of the system design into a language that can be recognized by the computer. This stage is a real stage in working on a system. In the sense that computer use will be maximized at this stage.

2.1.4. System Testing.

After the coding is complete, testing will be carried out on the system that was created earlier. The goal of testing is to find errors in the system and then fix them. System testing is carried out by students, administrators and dean.

2.1.5. System Instalation

This phase can be said to be final in making a system. After testing the system that has been installed into the Faculty sub domain system. This stage also includes the creation of a system manual and training.

2.2. Flow Chart System

The process of submitting letters by students is presented in the form of a flow chart which can be seen in Figure 3. The system can be accessed on the ft.upy.ac.id, then a menu for the type of letter will be presented. After the type of letter is selected, students can fill in the required forms. The completed form will then be forwarded to the dean for approval, if it is approved the letter submitted can be printed, otherwise it will return to the type selection menu.

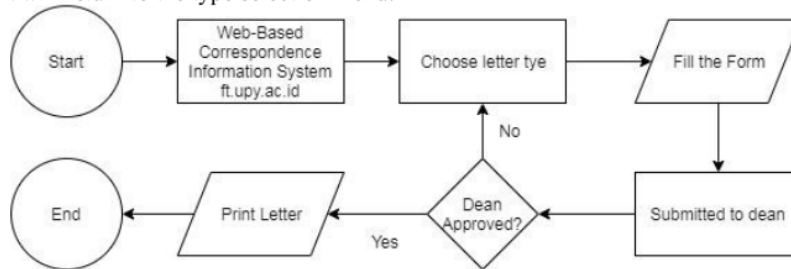


Figure 2. Flow Chart System

2.3. Context Diagram

In the Information System of Letter Management (Simas FT UPY) consist of 4 users: Students, lecturers, Head of Department, and Dean. Data identification (input) and information (output) shown in Table 1.

Table 1. Data Identification

Users	Data (Input)	Informasi (Output)
Students	<ul style="list-style-type: none"> Letter submission form Students data 	<ul style="list-style-type: none"> Application proved
Administration	<ul style="list-style-type: none"> Letter number 	<ul style="list-style-type: none"> Approval Information Letter submission and students data Report
Department Head/ Dean	<ul style="list-style-type: none"> Approval 	<ul style="list-style-type: none"> Letter submission information

Based on the user identification table, data and information can be described in a context diagram as shown in Figure 1.

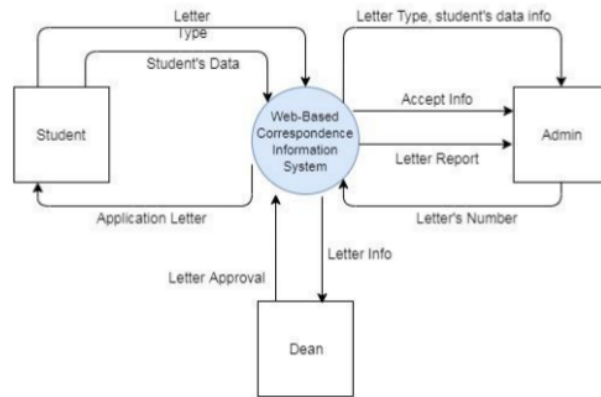


Figure 3. Context Diagram

3. Result and Discussion

Web-Based Correspondence Information Systems development can be accessed at the address ft.upy.ac.id. This system has four authorities, namely students, deans and administrators. An admin must log in on the Administrator page, the admin can log in using a username or email. This admin page is made simple and is intended as a super user or user with the highest access rights in the Mail Management Information System. The access rights that the admin has are adding users, deleting users, editing users and viewing all existing transactions. Transactions that occur in the system are submission of letters by students, providing letter numbers when approved by the dean, printing letters that have been approved and printing any letters that have been issued for a certain period.

On the dean side, the system will report letters submitted by students. The approval submitted by the student will be carried out by the dean after checking by the administration. When the application is approved, the dean verifies the system.

Web-Based Correspondence Information Systems on the student side can make letter application transactions as needed. Types of letters that can be submitted are student activity letters, thesis payments, practical work permits, research permits and KRS late letters. To enter the student system, you must log in using your student ID number and password. The form for submitting a letter can be seen in Figure 4.

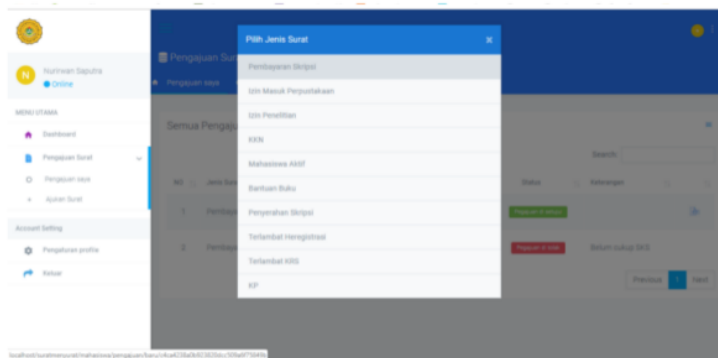


Figure 4. Letter's Type

Web-Based Correspondence Information Systems testing was carried out with Alfa testing conducted by 30 respondents. The test results regarding the content provided are simple, making it easier for application users, namely 60% strongly agree, 37% agree, 3% say normal. Figure 5 shows a graph of the system test results.

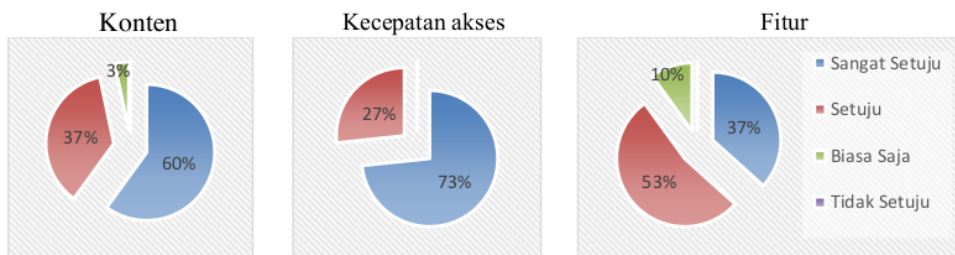


Figure 5. Evaluation System Diagram

Based on the results of a survey of 30 respondents regarding the application having easy navigation, namely 73% strongly agree, 27% agree, 0% say that it is normal, 0% disagree, and 0% strongly disagree. Based on the results of a survey of 30 respondents regarding whether the speed of application access is relatively fast, the following results were obtained: 70% strongly agreed, 30% agreed, 0% said they were normal, 0% disagreed, and 0% strongly disagreed. Based on the results of a survey of 30 respondents regarding whether the features of the complete system were as follows: 53% strongly agreed, 37% agreed, and 10% said they were normal.

4. Conclusions

A Web-based Letter Administration Information System for PGRI Yogyakarta University using Codeigniter has been built. The stages used are using the Waterfall approach which includes the following stages: (1) system analysis; (2) system design; (3) system implementation; (4) system testing; and (5) system installation. Based on the black box testing, the results show that all functions have run well, the functions tested include: (1) User Verification (2) Data Management (3) Information and reporting. Based on alpha testing, it can be seen that the system developed by reusability is considered good, the assessment aspects include: ease of use, ease of navigation, speed of access, completeness of features and an attractive appearance.

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