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Application Model of Laboratory Assistant Performance Measurement Faculty of Computer Science

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Abstract— Information plays an important role in an organization for the survival of an organization that specifically underlies decision making in tactical and strategic decisions. Currently the organization is faced with a large amount of information that plays an important role in decision making. Application of Information Technology within Mercu Buana University has a very good and big role to run the operational activities of the university. Information Technology to be built is to make the design of the model of performance assessment system of laboratory assistant at the Faculty of Computer Science. It is hoped that with the design of this system model, the performance of lab assistants becomes better so that the learning process becomes more effective. Application of Information Technology helps users in solving existing problems. Faculty of Computer Science (FasilKom) Mercu Buana University in developing the learning process has very good results. FasilKom requires the design of a laboratory assistant performance appraisal system, with the aim that the laboratory assistant in assisting the learning process will be the best in the University level. By using the application of sisten performance then the quality improvement and uniformity of learning quality becomes better and can improve the quality of learning in Information System Prodi in general. With this increase is expected UMB image especially Fasilkom will be better and become the priority of prospective students to gain knowledge.

Keywords— Management Information System, Performance, Information System, assistant, quality, operational

I. INTRODUCTION

Information plays an important role in an organization for the survival of an organization that specifically underlies decision making in tactical and strategic decisions. Currently the organization is faced with a large amount of information that plays an important role in decision making. Decision-making done by the organization today can be done using the media of information technology, which by using information technology media is expected organizations and institutions can quickly get the results of a data processing ie information [9, 10, 11].

Information technology has a great opportunity value in the world of education, information dissemination is very rapid and very useful for its users. Decision-making systems are used in an institution to get the best possible step in choosing the information to be used in development. A DSS (Decision Support System) can assign tasks in the process of decision making by processing input information according to need [7, 8].

The current application of Information Technology is the focus of life that leads to the advancement of Information Technology. The development of Information Technology is supported by the life of every person who

wants to use the Information Technology in helping solve existing problems. Development of Information Technology in the world of education has a very big role in everyday life.

In today's life technology, information and communication becomes indispensable to humans in every layer. The use of this information technology depends on a management, called the MIS (Management Information System) [2,12,13,14].

Application of Information Technology helps users in solving existing problems. Faculty of Computer Science (FasilKom) Mercu Buana University has an important role in education. FasilKom Mercu Buana University in developing the learning process has very good results, it is not apart from the activities of lecturers and lab assistants who always uphold the concept of learning. FasilKom requires the design of a performance assistant assessment assistant lab, with the aim that the assistant lab in assisting the learning process will be the best in the University level.

Assessment appraisal performance assistant laboratory will help faculty in improving the quality of assistance and uniformity of learning quality to be better and can improve the quality of learning in the course of Information Systems in general.

II. LITERATURE REVIEW

Information System and Information Technology: Core Concepts. An information system aims to collect, process, store data, perform data analysis and distribute objectively needs. The basic functions of information systems are as follows [3]:

1. *Input*
2. *Process*
3. *output*

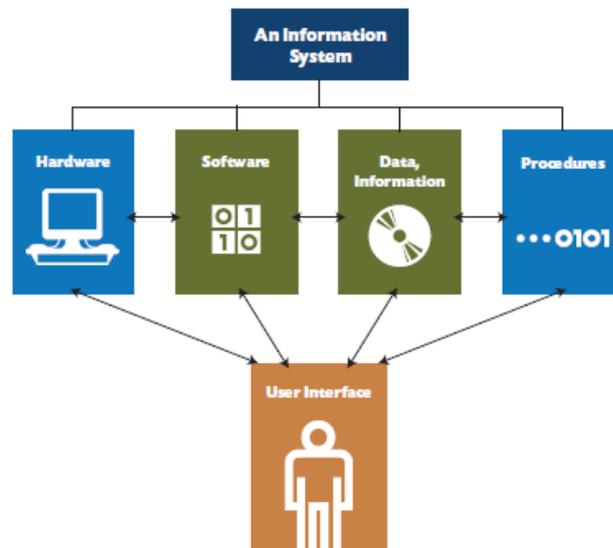


Figure1 *Information Systems and Information Technology: Core Concepts*

Learning Management System (LMS) is a unified software suite that is comprehensively integrated in features for the delivery and management of the course. LMS will automatically handle course catalogue features, course delivery, ratings and quizzes. Features available in LMS for educational institutions are as follows: (1) User rights management, (2) Management courses, (3) Management (4) Management activities, (5) Value management, (6) Value display, (7) Management of e-learning visualization, so that it can be accessed with web browser [6,13,15,16].

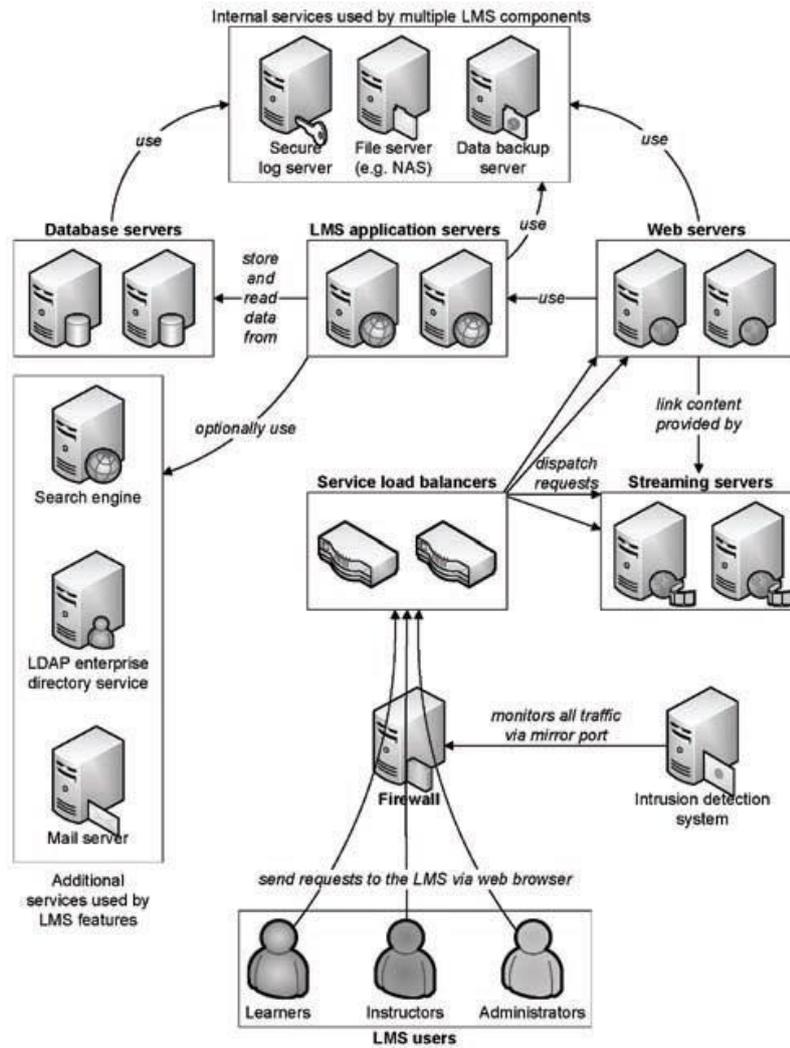


Figure 2 Components of A Typical Learning Management System Infrastructure

SDLC (System Development Life Cycle) is a process that describes how Information System can support business need, design from system, design it and distribute it to users delivering it to users). The design and development of systems using SDLC (System Development Life Cycle) usually have 4 stages, the stages are: planning (planning), analysis (analysis), design (Design) and implementation (implementation).

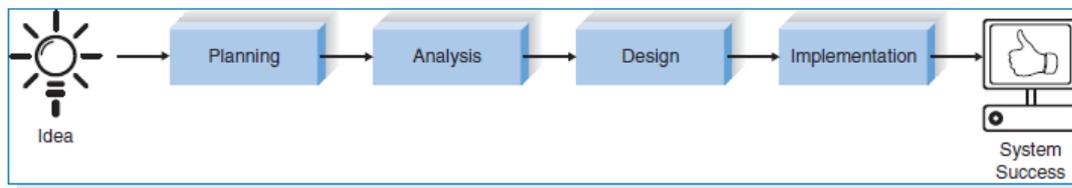


FIGURE 1-2
The Systems Development Life Cycle

Figure 3 The System Development Life Cycle

Use Case Diagram illustrates the very simple path of the main function in the system and gives the number of actors (users) involved in the system, where the purpose of the actor is to interact with other actors [1].

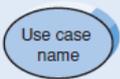
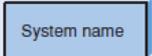
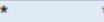
Term and Definition	Symbol
<p>An actor</p> <ul style="list-style-type: none"> Is a person or system that derives benefit from and is external to the system. Is labeled with its role. Can be associated with other actors by a specialization/superclass association, denoted by an arrow with a hollow arrowhead. Is placed outside the system boundary. 	 Actor role name
<p>A use case</p> <ul style="list-style-type: none"> Represents a major piece of system functionality. Can extend another use case. Can use another use case. Is placed inside the system boundary. Is labeled with a descriptive verb-noun phrase. 	 Use case name
<p>A system boundary</p> <ul style="list-style-type: none"> Includes the name of the system inside or on top. Represents the scope of the system. 	 System name
<p>An association relationship</p> <ul style="list-style-type: none"> Links an actor with the use case(s) with which it interacts. 	

FIGURE 14-11
Syntax for Use Case Diagram

Figure 4 Use Case Symbols

III. RESEARCH METHOD

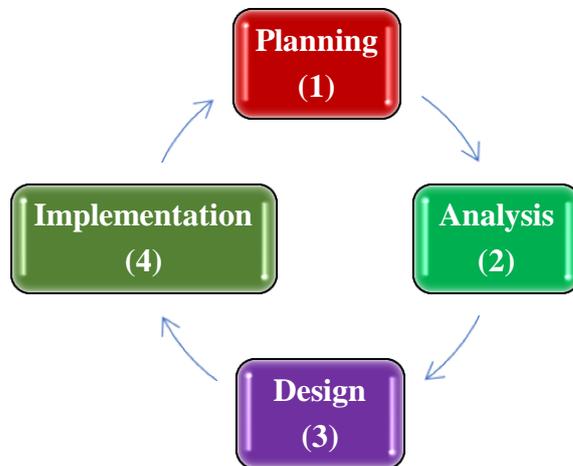


Figure 5. Flow Chart of Research

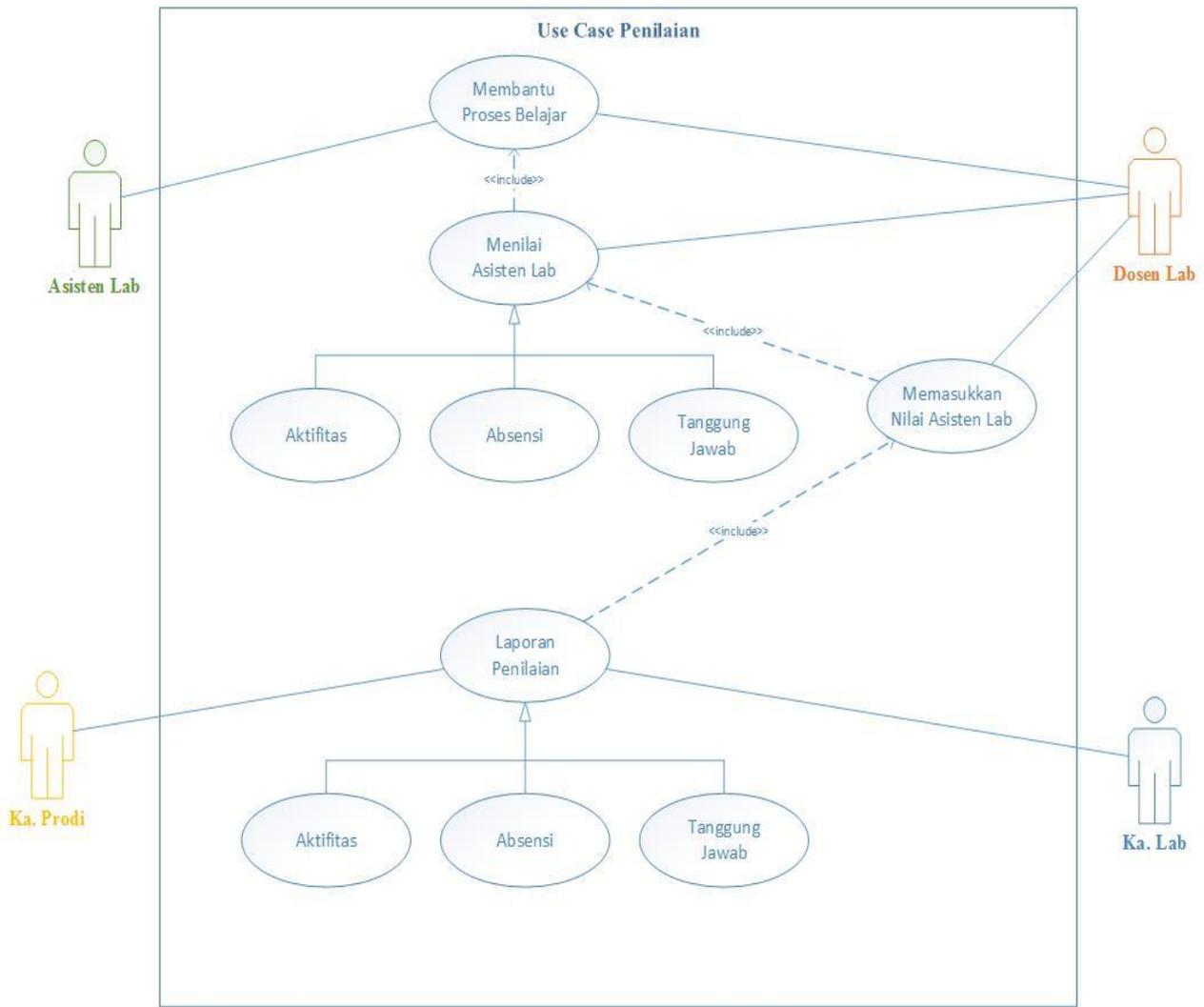


Figure 6 Use Case Diagram Penilaian Asisten Lab

The Design stage describes how the model of this system will work. This model will work based web service, all activities are based on online media.

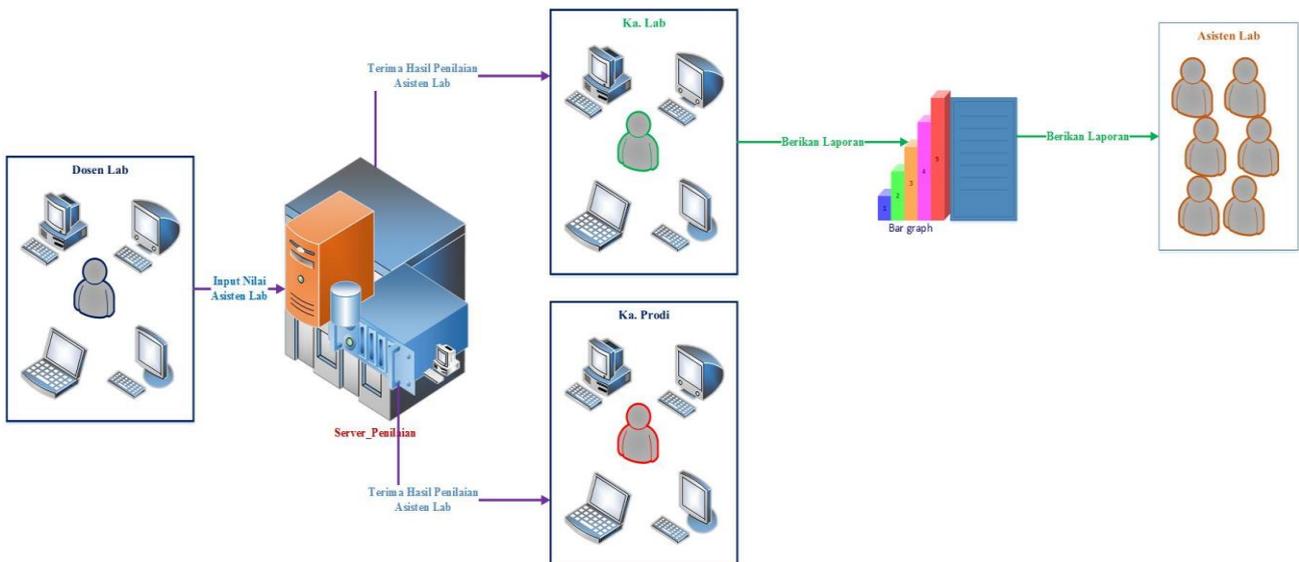


Figure 7 Conceptual Model Assessment Assistant Lab

Stage Implementation of all system models built will be implemented in accordance with the needs. After the implementation has been considered to meet the needs, the next stage is to design this application model into a system used to assess the performance of lab assistants [14]. The results of research that has been done got a system called Application Model Performance Measurement Laboratory Faculty of Computer Science.

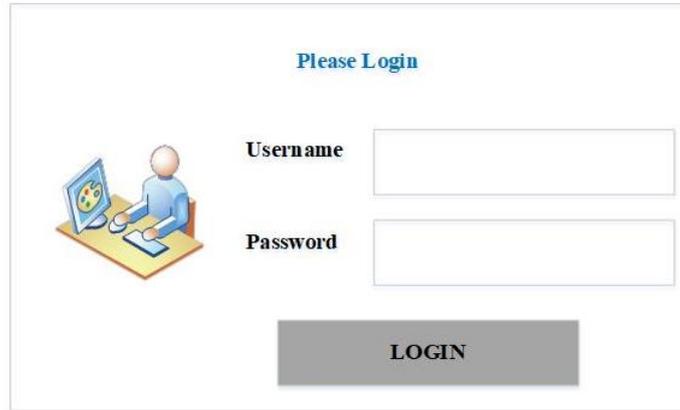


Figure 8 User Login

Home	Lecturer	Laboratory Assistant	Class	Assessment	Question	
Welcome Admin 		<i>Application to Assessment Laboratory Assistant Performance</i>				
		 Report of Lecturer	 Report of Laboratory Assistant	 Report of Class	 Report of Assessment	 Report of Question

Home	Lecturer	Laboratory Assistant	Class	Assessment	Question			
Input Lab. Assistant		Lab. Assistant Records						
No	Lab. Assistant Code	Lab. Assistant ID	Lab. Assistant Name	Gender	Semester	Schedule	Action	
1	xxx	xxx	xxx	xxx	xxx	xxx	Save	Delete
2	yyy	xxx	xxx	xxx	xxx	xxx	Save	Delete
3	zzz	xxx	xxx	xxx	xxx	xxx	Save	Delete

Figure 11. Home of Admin and admin managing assistant lab data

Home		Assessing	
Choose Lab. Assistant			
No	Lab. Assistant Code	Assistant Name	Action
1	xxx	xxx	Choose
2	yyy	yyy	Choose
3	zzz	zzz	Choose

Home		Assessing			
Lab. Assistant Code	xxx				
Assistant Name	yyy				
Performance					
Question A	Very Good	Good	Medum	Not Good	Bad
	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Question B	Very Good	Good	Medum	Not Good	Bad
	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Question C	Very Good	Good	Medum	Not Good	Bad
	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Question D	Very Good	Good	Medum	Not Good	Bad
	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 13 The lecturer assesing the lab assistant

Home		Laboratory Assistant	
No	Lab. Assistant Code	Assistant Name	Action
1	xxx	xxx	Choose
2	yyy	yyy	Choose
3	zzz	zzz	Choose
Performance			
Question A	100%		
Question B	97,5%		
Question C	100%		
Question D	100%		
Total	99,4%		

Figure 14. Ka. Prodi see result of lab. Assistant assessing

Information from the results of the test system that has been done can be concluded that the application performance assessment assistant lab that has been made can be used by the Faculty of Computer Science to assess the performance of the assistant lab.

No	Name of Actor	Activities	Information
1	Head of Lab	Content lab performance assistant system	All the content in this system is running well and every link is running well.
2	Ka. ProDi	Content lab performance assistant system	All the content in this system is running well and every link is running well.
3	Lecturer	Content lab performance assistant system	All the content in this system is running well and every link is running well.

IV. CONCLUSIONS

The conclusions derived from this system are as follows:

- a. This lab assistant performance appraisal app is designed on a web-based based, thus the results of this web-based system will be effective and efficient in terms of usage.
- b. The way in which this web-based system becomes effective is by the interaction of all actors
- c. With the existence of this system the benefits that are received by the institution or institution are as a means of quality development

Suggestions gained from the design of this system are as follows:

No	Year	Planning
1	2019	Model Performance Appraisal Model for Lecturer and Lab Assistant.
2	2020	Created Application Performance Appraisal For Lecturers and Lab Assistants.

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