

# Lecturer Committee Management System

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## ABSTRACT

Teaching is the main task of the lecturer besides research, consultancy and holding administrative post. Administrative post consist of post that need to be held for either two (2) years or 1 year depending on the job scope. Currently, there are difficulties in assign post to lecturer. Beside, it is time consuming to trace the current post of lecturer. In order to solve the current process, a system known as Lecturer Committee Management System (LCMS) is proposed. LCMS can be used to propose and assign post to lecturer and to track lecturer involvement history in committee. The method use in the development of LCMS is Rapid Application Development (RAD) model. Once the development process completed, expert evaluation and user evaluation have been conducted. For the expert there are a few question that have been asked in order to improve the usability and functionality of the LCMS. For the user, there are six construct provided in order to evaluate LCMS. The result show that respondents agree LCMS is easy to use with the highest mean is 4 (SD=0.41). Lastly, as for the future enhancement new features such as lecturer can get the notification about post assigned via phone.

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## 1. Introduction

Tracking is the ability to track the important data from other data regarding a name of persons [1]. Tracking are the easiest way to know the involvement of person in any department [2]. By tracking the employee involvement, it will give an advantage to the head of departments to know what the involvement of their employee[4]. In addition, the employee will know what involvement they are in.

The committee member or memberships are the persons that involved in their organization[3]. They are the group of people who meet to involve in any department in their organization[2]. The question of who serves on what committees is thus the important one. This study asks about how mixed the position given in manually affects the way committee positions in the organization.

Based on the research of UiTM Terengganu (Dungun) organization in faculty, there are many redundancy of appointing a lecturer to hold a position. In this case, coordinator faculty just constitutes a lecturer indecisively. Sometime they do not know whether a lecturer already have many position to be carry on. In addition, the appointed lecturer whose are better in their work will always be their target.

As to solve this problem, the system have been developed which is Lecturer committee management system (LCMS). This system will trace the lecturer's post based on the category provided. LCMS system can easily track the involvement of lecturer in a meantime. The report that request by user also can be generated.

## 2. Methodology

In the development process of LCMS, RAD model have been used. RAD is a methodology for compressing the analysis, design, build, and test phases into an iterative

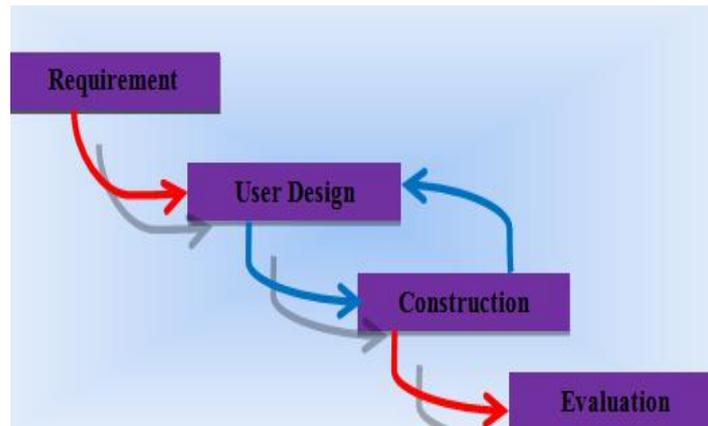
development cycles. This has a number of distinct advantages over the traditional sequential development model. It's allows the effectiveness and self-correction. User requirements and system requirements need to be gathered in order to get clear picture regarding features of the system. Table 1 shows the user and system requirements.

The system requirement is implemented in order to solve the current problem. Table 1 shows the relation between user requirement and system requirement. There are four user that involve in LCMS which are Head of unit, KPP, KF and lecturer. Each of the user requirement there have their role in the system

**Table 1** User requirement and system requirement

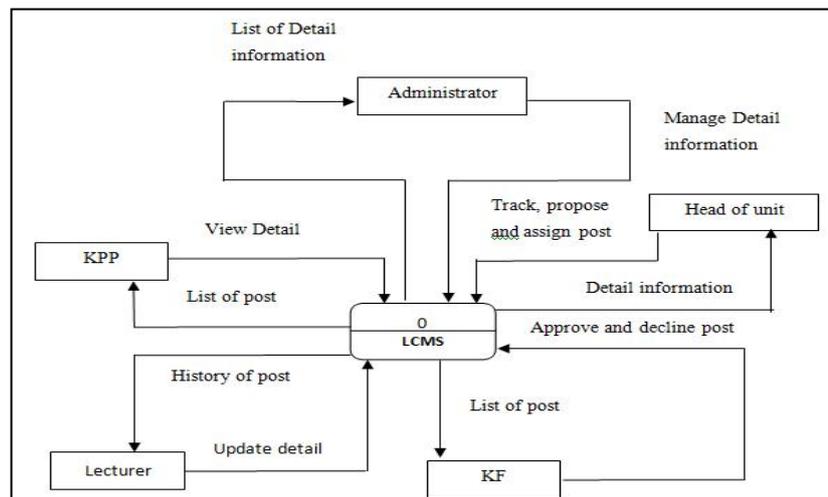
User requirement	System Requirement
Head of Unit	Head of unit will track the history of lecturer involvement in committee. Then, the available lecturer will be assigned with post provided.
KPP	KPP will track all of the involvement in committee.
KF	KF will approve the assigned post by Head of Unit
Lecturer	Lecturer will look through their involvement in committee in each unit.

Figure 1 shows the adaption from RAD model. There are four phase involve in the development process. The first phase is a requirement planning. In this phase all the information has been collected to identify the problems that exist in the manual system of tracking position of lecturer. The design process is about the designing of the Context Diagram, Process flow diagram, Functional Hierarchy Diagram, Entity Relationship Diagram (ERD), and also functional hierarchy. When the design phase is completed, the system will be developed. After the development is completed, the system will be will be test by developer. The testing is done because developer will know whether the system can perform in right function or not. Then the evaluation from an expert will be gathering



**Figure 1** Adaption from RAD model

Figure 2 shows the context diagram in develop LCMS that shows the relationship of the system with the other external entity. The context flow diagram shows the boundary of the system which is the high level the structure of the system. It was created for system analysis and design. KPP will view the information detail about the KF and Lecturer. Lecturer will view their position information. KF will assign the position to each lecturer.



**Figure 2** Context Diagram of LCMS

In ERD design there are six entities in ERD which are Admin, Lecturer, *Ketua Pusat Pengajian* (KPP), *Koordinator Fakultas* (KF), Position and department. Each of the entities has their attributes itself. Admin will check the status of Lecturer, *Ketua Pusat Pengajian* (KPP) and *Koordinator Fakultas* (KF). *Ketua Pusat Pengajian* (KPP) will track and view the position of *Koordinator Fakultas* (KF) and Lecturers. Each Lecturer has involved in many position. Each department has many type of position. Figure 2 shows the ERD in LCMS development. Figure 3 shows the ERD

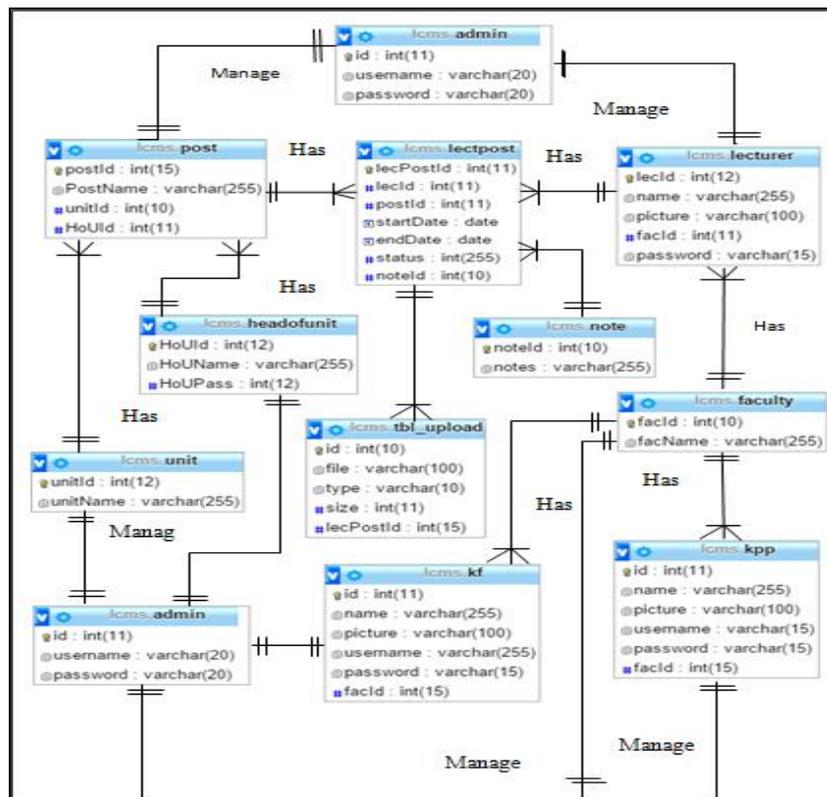


Figure 3 ERD of LCMS

### 3. Results and Discussions

The result and discussion based on development of system that has been completed. The flow of the system will be explained in this chapter. It show the process that required in the Lecturer Committee Management System (LCMS) based on user module. Besides, system testing also discussed, test plan has been provided by a developer. Then it test the functionality of the system with the tester.

Besides, the evaluation from expert and user also discussed. Expert that come from various experience and level of education has evaluate the system. They also give comments and suggestion in order to improve the usability and functionality of LCMS. As for user evaluation, set of questionnaire has been distributed to evaluate the system. There are about 30 respondent that has evaluate LCMS. Table 2 shows the comment and suggestion from experts.

Table 2 Comment and suggestion from experts

Construct	Features	Expert	Comment	Suggestion
User interface	-The user interface professional since it for UiTM organization?	1&2	satisfactory	-Consider standard font and spacing
	-The colour and font are suitable with standardize of UiTM?	1&2	satisfactory	-Clean and more easy to see
Efficiency	-Easy to find what is needed?	1&3	-	-Filter lecturer's post
	-The functionality of LCMS well integrated	1	-	-Notification and status.
Ease of use	-The interaction between user and system are understandable?	1&2	-	-provide instruction clearly
	-Easy to use system without user manual	1&2	-	-Provide guideline to user.
Usefulness	-Regarding LCMS, can accomplish more task while use it?	1	-	-Naming convention for each post must be cleared
Satisfaction	-Satisfied with LCMS?	1&3	-	-
	-Any intention to use LCMS in UiTM portal?	3	-	-System has high potential to reduce workload

User evaluation that was conducted in the system involved the set of questionnaire that has been made and. A set of 30 respondents was selected among the possible users to evaluate the system. There are two sections in user evaluation which are demographic profile and the six constructs include the ease of use, satisfaction, usability, efficiency, and interface and user experience [5,6,7].

A set of questionnaire contains of six construct; ease of use[3], satisfaction, usability, efficiency, interface and user experience that contributed to 30 potential users of Lecturer Committee Management System (LCMS. Of the 30 participants, 16.67% aged between 18 – 20, 63.33% aged between 21 – 23 and 20% aged between 24 – 26; 33.33% of them were male and 66.67% were female; 36.67% were in diploma level, 60% were in degree level; 3.33% were in Master level; 23.33% of them use any Lecturer Committee Management System (LCMS) before and 76.67 never used. Table 3 shows the Respondent Profile in details.

**Table 3** Respondent Profile

Demographic	Percentage %	
Age	18-20	16.67
	21-23	63.33
	24-26	20
	27 and above	0
Gender	Male	33.33
	Female	66.67
Level of education	Diploma	36.67
	Bachelor's Degree	60
	Master	3.33
	PhD	0
Ever use automated Lecturer committee management system?	Yes	23.33
	No	76.67

The result on the Figure 4 shows the highest mean and mode. For ease of use; mean=4.11 SD=0.59, efficiency; mean = 4.22, SD=0.58, interface; mean=4.33, SD=0.57; usability; mean = 4.24, SD=0.59, user experience; mean = 4.24, SD= 0.59 and satisfaction; mean = 4.27, SD=0.56.



Figure 4 Summary of result

#### 4. Conclusion

As a conclusion, problem with the current process in managing committee member in UiTM Terengganu has been highlighted and management system is proposed to be developed. The online system (known as LCMS) is develop using RAD model. Once the development process is completed, experts and users evaluation were conducted. Result shows that experts gave good comments and suggestion on how to improve the system. Users evaluation shows that all of respondents agrees on the constructs used in evaluation. Although there have some limitation in the system, suggestions and comments form on experts can be implemented if the system is to be used by UiTM Terengganu, in managing their committee member proposed, approve and tracking process.

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