Development of Knowledge Management System
(A Case Study: Komisi Akreditasi Rumah Sakit Indonesia)

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Abstract

The purpose of this paper are to analyze and design of knowledge management systems on Komisi Akreditasi Rumah Sakit (KARS) Indonesia - Indonesian Commission on Accreditation of Hospitals, especially for discussion forums and Content Management System, it will help to facilitate hospital accreditation in terms of accessing the necessary information and provide communication and learning for all parties involved in the accreditation. Analysis methodology that we use is the analysis and design of information systems, interviews, and literature review. The results achieved, the modules that we have are Discussion Forum and Content Management Systems (CMS). Forum is a means of media for discussion between KARS, hospital, surveyor and seminar speaker. While CMS allows KARS to provide learning materials and information about accreditation that can be downloaded by registered hospitals. In conclusion, expected by the knowledge management system can help KARS in managing information related to the accreditation of hospitals.

Keywords: knowledge management, analysis, design, accreditation

1. Introduction

According to the Regulation of the Minister of Health of the Republic of Indonesia No. 12 of 2012 on March 15th, 2012 Chapter 2 related The Accreditation Implementation, article 3, verse 1 "In an effort to improve the quality of care hospitals performed accreditation". And in article 3, verse 3 states that the hospitals must follow national accreditation [1].

Currently government attention on the need for hospital accreditation is quite large, it is proved by the passing of an independent agency tasked to perform accreditation for hospitals throughout Indonesia in 1995, named Komisi Akreditasi Rumah Sakit (KARS) - *Commission on Accreditation of Hospitals*.

KARS is an independent agency conduct an assessment of the hospital as well as providing recognition that will be given by the government on the management of the hospital, because it has met defined standards.

The purpose of accreditation is to improve the quality of health care, which is needed by the people of Indonesia are increasingly selective and deserve quality services. The accreditation process is designed to improve the safety culture and the culture of quality in the hospital, so the hospital will always strive to improve the quality and safety of services.

Siemens stated that, "*modern day learning occurs through network connections as individuals share their interests, knowledge, perspectives, expertise, and opinions in online or virtual learning environments*" [2].

Knowledge management concerned with knowledge capture and finding the ways to translate tacit knowledge to explicit (documentation) or creating expert directories to foster knowledge sharing through human collaboration [3]

In other words, today, advances in technology have made the Internet as a medium for the distribution of information quickly and easily accessible to anyone, anytime and anywhere. With the advancement of technology makes knowledge rapidly developed and distribution. Current knowledge is the main resource for the organization to be able to sustain. It is therefore important for an organization to manage knowledge well. Knowledge management system is one way to manage organizational knowledge to be better. Knowledge management system is also used as a medium of online learning for an organization. Currently, the knowledge management system is not just limited to the world of education, but has penetrated into various fields.

In the aspect of health in Indonesia, particularly in the KARS, Knowledge management system is intended to facilitate hospital to do the accreditation through KARS with utilizing the Internet, so it can help the hospital to prepare the required terms and conditions via online. In addition to the knowledge management system is expected to help the KARS in achieving its target to obtain the certification from the International Society for Quality in Healthcare (ISQUA).

In connection with this, we propose the development of Knowledge management system for KARS. Translation of the formulation of the problem as follows:

1. How to development online knowledge management system to support the activities of the practice in the field of hospital accreditation in Indonesia?
2. How to implementation of knowledge management system can be accessed by all relevant parties based internet / computer?
3. How to generate knowledge from the collected data and information, so it can be useful for the government, the public, hospital management and other business sectors?

2. Method

Writing method for this paper is qualitative. Primary data collection method used in this study is in-depth interviews. In-depth interviews were conducted to identify more deeply associated with the indicator variables used in this research. The interview will be conducted by: Chairman of KARS, KARS Surveyor, Head of Communication and Information KARS, and KARS IT staff.

3. Results and Discussion

KM is a management paradigm of information that comes from the idea that pure knowledge is actually embedded in the minds. Therefore it is necessary to build a mechanism for dissemination of information and experience of the existing human resource that an increase in knowledge for each actor in the activities in an organization.

Knowledge is not just data or information, but relate to both, and the difference between these terms is often material degrees. Knowledge management is the management of vital knowledge explicitly and systematically and associated processes in the formation, organization, diffusion, use and exploitation.

Knowledge is now increasingly seen as a commodity or intellectual asset for the organization, knowledge also has some characteristics of the paradox that is radically different from other precious commodities. Characteristics of knowledge include:

- The use of knowledge, it will not reduce (consume).
- Transfer of knowledge does not lead to loss of knowledge itself.
- A lot of valuable knowledge that are in the organization, walked out of the door at the end of the day.

Knowledge management (KM) was originally defined as a process of applying a systematic approach to capture, manage, and disseminate knowledge throughout the organization, so that the organization can work faster, reuse the best practices in the organization, and reducing the cost to redo the work (rework) from project to project [4].

Technology is used to facilitate primarily communication, collaboration, and content management for better knowledge capture, sharing, dissemination, and application [5].

The data analyzed can be used for decision-making process based on the objectives [6]. Knowledge portals provide an access to diverse enterprise content and expertise to internal and external services [7-8]. The design of knowledge management system at KARS included:

1.   KARS *Discussion Forum*

Discussion forum is a media for sharing information and knowledge about the accreditation of hospital, KARS Staff, KARS Members and Surveyors. The discussion at the forum will be monitored by the Commissioner of KARS and IT department as an administrator. Each user has a username and password that can be used to login to the forum. In addition, each user also has its own access rights governed by his job description.

2.   *Content Management Systems*

Content Management Systems (CMS) allows an administrator (in this case is IT department in KARS) to upload material from KARS (may include brochures seminar, seminar registration form, or seminar materials) that can be downloaded by users who have access rights (the material can be accessed by all users or only accessible by certain users, according to the needs).

We create the use case diagram to illustrate the functionality of the system, where each use case reflects the function of the system (Figure 1, 2, and 3). Use case diagrams are used to model the functionality of the system that describes the interaction between the systems with the actors. The purpose of the the use case diagram is used to portray the context of knowledge management systems in KARS.
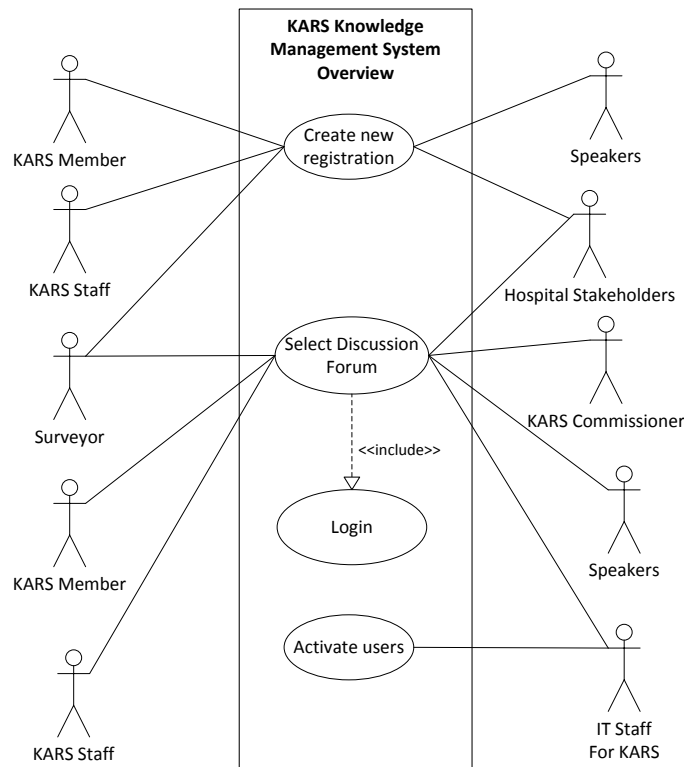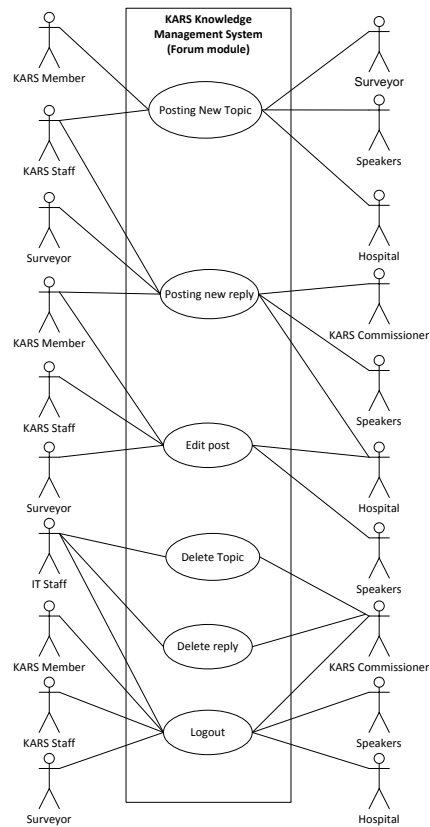

Figure 1. Use Case Diagram KM System (Overview)
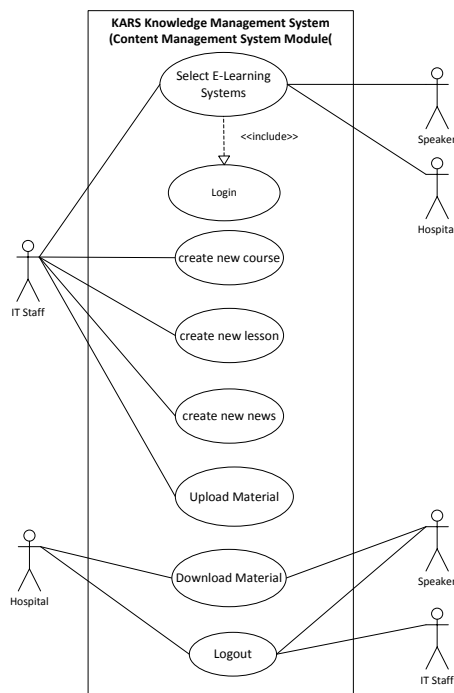
Figure 2. Use Case Diagram for Forum

Figure 3. Use Case Diagram for Content Management System

Updated Design Class Diagram below shows update data in the Design Class Diagram by adding a class to the View and Data Access Layer. The class diagram is a static diagram. It represents the static view of KM application for KARS.
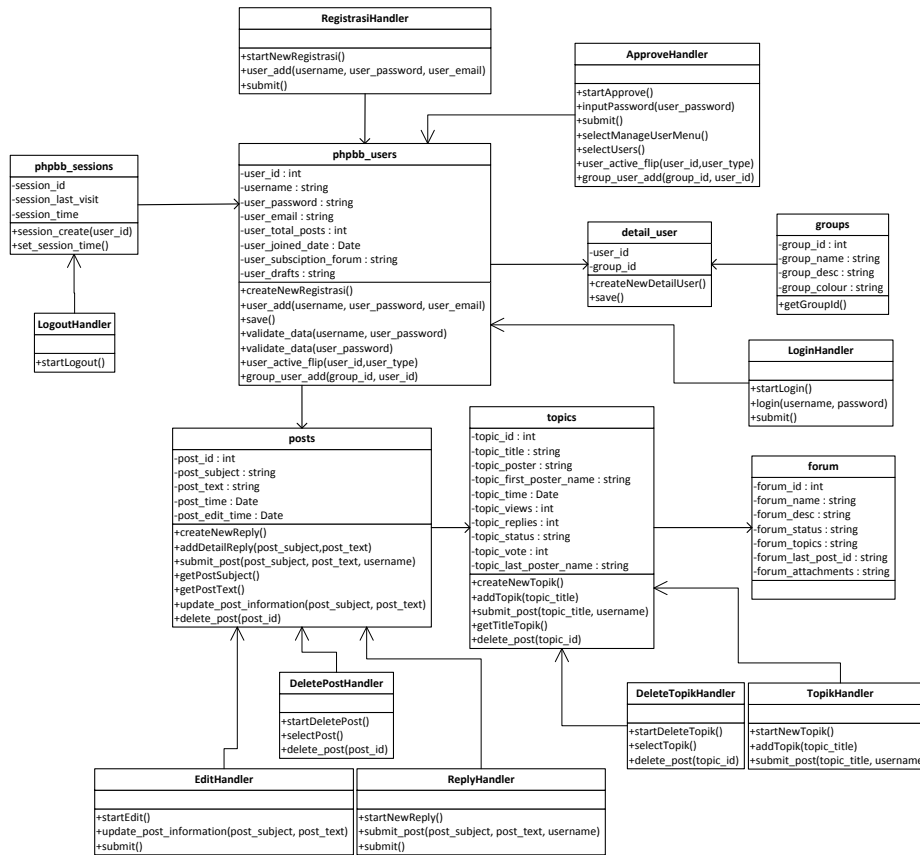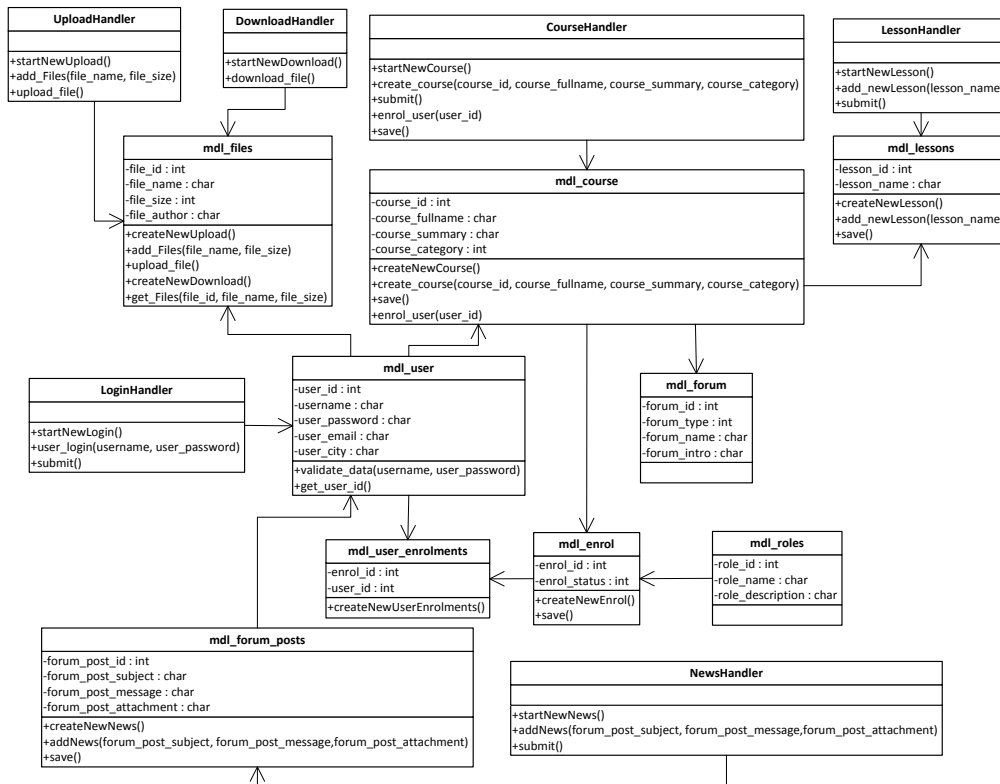
Figure 4. Updated Class Diagram for Forum

Figure 5. Updated Class Diagram for Content Management System

Package Diagram below describes the relationship between classes. Package diagram consists of three layers, the View Layer, Domain Layer, and Data Access Layer**.**
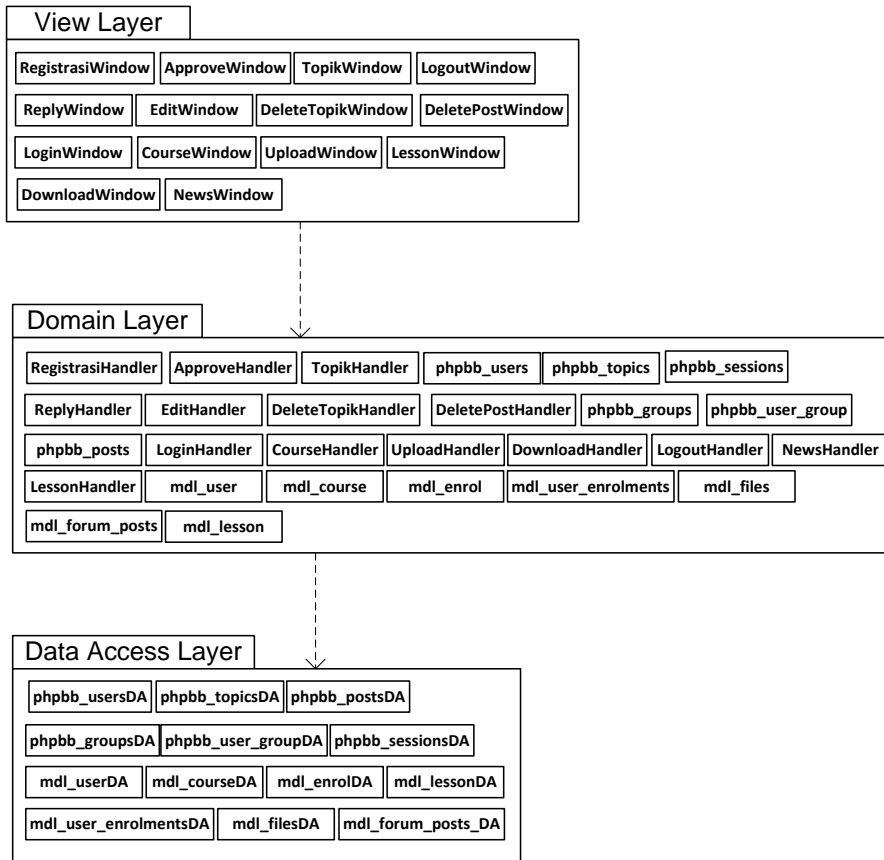
Figure 6. Package Diagram for Forum and Content Management System

The User Interface below is a part of information systems that require user interaction to make the input and output (Figure 7 until 10)**.**
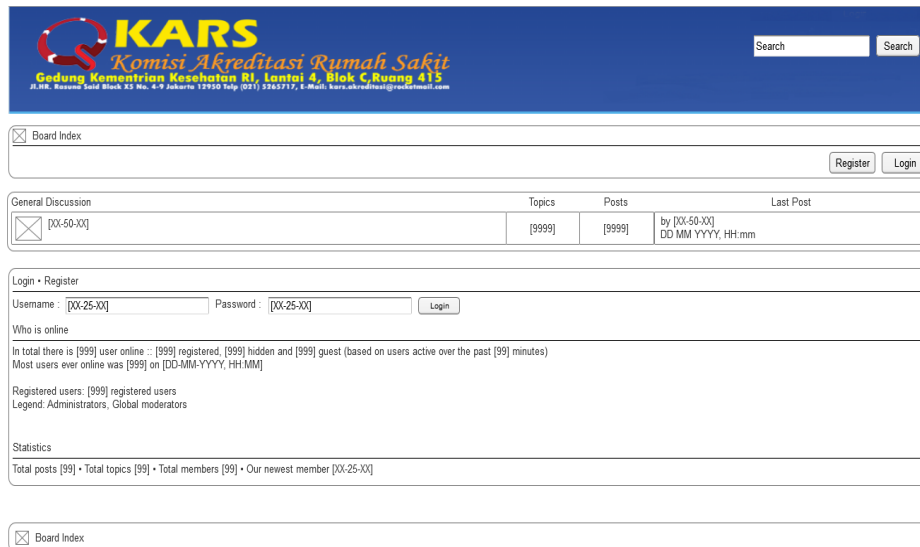
Figure 7. User Interface Forum - Home

Figure 8. User Interface Forum for Create New Registration

Figure 9. User Interface CMS for Create New Course

Figure 10. User Interface CMS for Create New Lesson

KARS knowledge management systems use a multitier architecture in which multiple computers are connected into a network to support information processing, rather multicomputer architecture that is a collection of computers that share the process through specialization function. KARS systems use a distributed architecture that is an architecture that develops computer resources in various locations and that are connected to the computer network. KARS systems use a LAN (Local Area Network) that can connect all the computers in a single building.

4. Conclusion

Based on the discussion in the previous chapters, the conclusion can be drawn regarding the results of the analysis and design of information systems development of knowledge management at the Commission on Accreditation of Hospitals as follows:

- KARS knowledge management systems that consist of discussion forums and Content Management Systems into an effective communication medium between KARS staff, surveyor, hospital, speaker, and ,embers of KARS moderated by the commissioner.
- Using the web-based applications, knowledge management systems of KARS becomes more accessible to anyone, anytime and anywhere.

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