APPLICATION OF KNOWLEDGE MANAGEMENT SYSTEM IN THE FIELD OF STUDENT SERVICES
SMA NEGERI 1 SOREANG

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ABSTRACT

Academic services currently running at SMA Negeri 1 Soreang involve working parts where each part will perform student services based working procedures (SOP) that apply in schools and assignment of responsibilities in accordance with the position in their respective fields of work. In the process of student services still found difficulties both from the application of SOP work, processing and long pengetahuanbaru form of experience or modules student services, is still the difficulty of sharing knowledge among staff of teachers and limited storage space.

Knowledge management system in the field of student services is the right solution to address the issue. With the features available in the teachers' staff are expected to facilitate the process of knowledge, making the SOP as a reference service and be a forum for sharing among staff of teachers. The advantages of this application is that staff can perform processing science teacher, student problem solving, sharing experiences and discussion.

Application knowledge management system in the field of student services at SMA Negeri 1 Soreang provides convenience in the field of student services in the management of knowledge in the form of working procedures (SOP), assignment of responsibilities and experience so that existing knowledge is easy to use, easy to store, easy to manage, easy to create, easy to update.

Application knowledge management system in the field of student services at SMA Negeri 1 Soreang help and make it easier to determine the best solution of the problem in academic services students by the teacher staff and student services staff.

Keywords: Knowledge Management System, KMS, service, student, SMA NEGERI 1 SOREANG

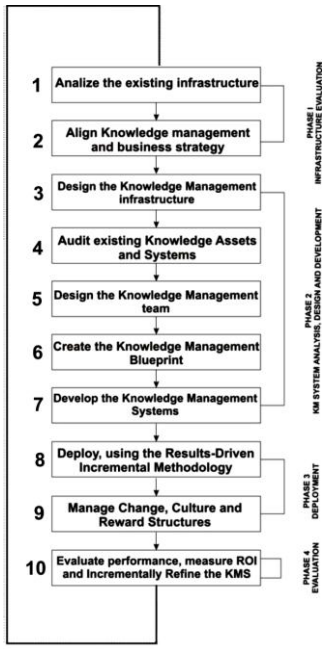
1. *INTRODUCTION*

Academic services currently running in SMA Negeri 1 Soreang involves working parts where each part will serve students based working procedures (SOP) applicable in the school and the assignment of responsibilities in accordance with the position in its respective field. Working procedures (SOP) contains two phases of work in accordance with the rules of the school, while the duties and responsibilities contains limitations or scope of duties of the student services appropriate actors respective areas of work. In the process of student services is sometimes found acts of service are not in accordance with the SOP that work experience is required as a form of knowledge that supports the success of the process of student services. In the sharing of knowledge has its own problems that is still difficult to share knowledge Atar BAUK field of student services in the SOP working knowledge, experience and student management solutions. In managing the knowledge that there are still found a problem that is still difficult to save the knowledge that there is a good knowledge of the student services and the experience of handling students' problems and solutions, needed a place to preserve existing knowledge to be in use for a long time both for staff of teachers old and new teacher, how to create knowledge relating to student support services, both in terms of the way services and how to obtain the solution of the problem, and how to update existing knowledge, or add new knowledge related to student services

1.1 Definition of Knowledge Management System

Knowledge Management can be defined as a technology to accelerate the growth of innovation knowledge, to facilitate staff of teachers, especially in the areas of student services, to gain the knowledge they need at the right time, accelerate the growth of tacit which can be interpreted means a knowledge that is difficult to be transferred to another person, not mean it can not be transferred, but it takes a long time to transfer this knowledge and explicit knowledge of knowledge that has been documented, that is to say, has been recorded, or stored in a database AI (artificial intelligence) is necessary to search for solutions and knowledge management, especially in the problems faced students, in this application using expert systems, expert systems are in use that case base reasoning (CBR). Case base reasoning (CBR) is used to determine the solution of the problems of students in the field of counseling and majors in order to

facilitate determining the solution of the problems being faced by the students.



Gambar 1. 10 step Amri tiwana

1.1 Case Base Reasoning (CBR)

Case-based reasoning, there are four phases: retrieval, reuse, revise and retrain.

1. Retrieval (search)

Retrieval used in this research is to trace back an old case that most closely resembles or is relevant to the new case. Matching is done by selecting the problems by checking the checkbox to the questions that matter in accordance with the conditions of students. If the answer to the case of matching the value of the same or nearly the same as the base case, it will be the stage of calculating the similarity reuse ie the most likely result would be the type of problems and suggested solutions for the settlement of a solution of new cases. Similarity search of new cases with old cases that exist in the base case using a nearest neighbor algorithm. The assumption in this search is a similar case will have a similar solution.

2. Reuse

At this stage, the calculation of similarity similarity each case the highest previously been made to match the most relevant of new cases into the case long, so from the calculation of the value of equation (similarity) obtained the proposed solution of the cases that have been there where it may be necessary to solve issue new cases or in other words, re-use old solution to handle the case of the new cases were similar. Similarity value of each case was obtained from the total value of elected Similar problems multiplied with the weight and divided by the total weight of the symptoms in the old case files.

3. Revise

Stages revise a stage where the solution of cases on the advice of completion of diagnosis repaired. In this validation process will revise the system, which through a consideration which is owned by the teachers and the solution of cases on the advice of completion of the diagnostic results will be processed in the system to do retain. The system will produce a solution which has been developed and stored into the system to serve new knowledge.

4. Retain

In the process retain the improved solution will be stored as data of students' problems. If experts said the new case as the case is valid then the new cases can be updated to case basis.

1.3 Similarity Search

Similarity calculation using nearest neighbor search algorithm used in the retrieving process because it allows the program to search for old cases that are most similar to the case at hand now. The basic formula used this program are:

$$\text{Similarity}(T,S)=\frac{\sum_{i=1}^{n} f(Ti,Si)x\ wi}{Wi}$$

Q: The new cases
S: The case is in storage
n: number of attributes in each case
i: Individual Attributes between 1 s / d n
f: Function i attribute similarity between the case and case T S
w: Weight given to attribute to i

1. RESEARCH

Applications are made to search for solutions and problems of students either already tersimapan or not stored, data processing SOP, Module, Forum, and Infrastructure. Search solutions are being used to find the solution of the problems faced by the students for the data processing section to upload and download archives student services

2.1 Analysis Application Design

The system will be built in the form of a web-based application that has a groove as follows

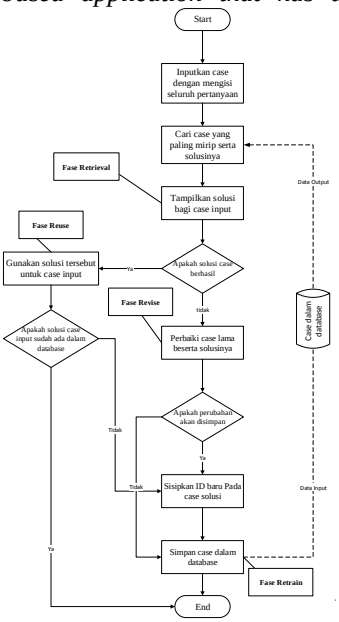


Image 2 ***Case base reasoning alur***

Information:

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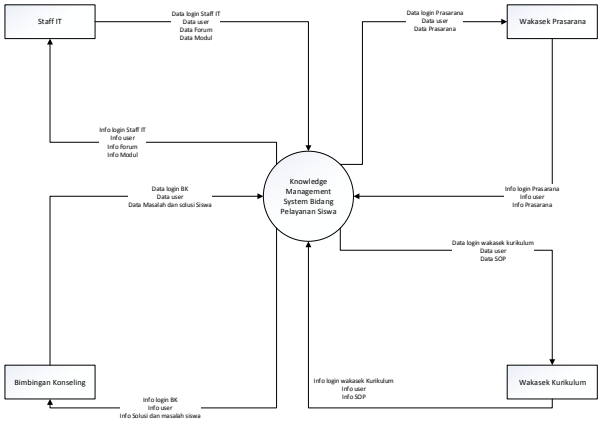
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1.2 Data Analysis

Analysis of the data used in this application is the data problem student, forum data, the data sop, infrastructure data and user data oengguna this application

2.1 Diagram Konteks



Flow above is the flow of data in and data used in this application

2.2 Functional Needs Analysis

Analysis of the functional requirements can be defined as a depiction, planning and making sketches or arrangement of several separate elements into a unified whole and functioning. This stage involves configuring of software components and hardware of a system so that after installation of the system will be completely satisfactory from the design that has been set in the late stage of system analysis. Tools used to describe the system in general that will be built is the Context Diagram and Data Flow Diagram.

2.3 Data flow diagram

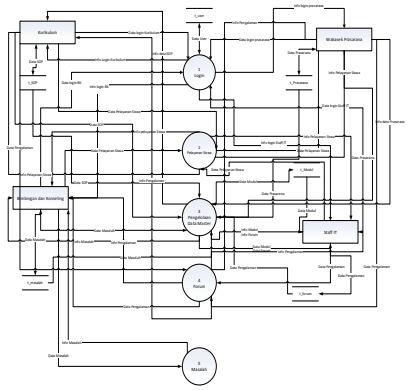


Image 4 D*ata Flow Diagram*

a. Table Relation

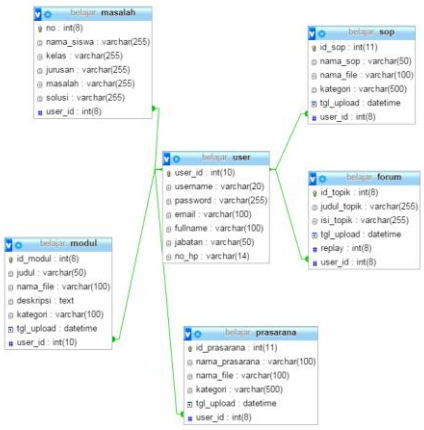


Image 5 *Table Relation* KMS

2.4 Design Interface

Design created in the form of a desktop-based application that is easy to use by the user, as well as the application of information generated can be understood by users. Interface design aims to provide an overview of the application.

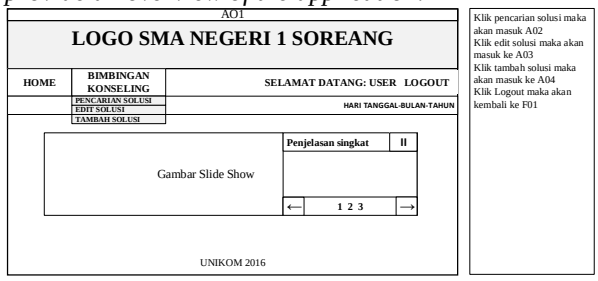


Image 8 Interface design KMS

2.5 Implementation Interface

At this stage, the application interface design results into applications built using software that has been described in section software implementation, listed in the figure below and to the interface can then be viewed on:



Image 9 Tampilan Antarmuka Menu Utama

3. CLOSING

Based on the results obtained in the manufacture of this thesis, it can be concluded as follows:

1. Application knowledge management system in the field of student services at SMA Negeri 1 Soreang This facilitates the student services in the field of knowledge management in the form of working procedures (SOP), the assignment of responsibilities and experience so that existing knowledge is easy to use, easy to store, easy to manage , easy to create, easy to update.

2. Application of knowledge management system in the field of student services at SMA Negeri 1 Soreang This makes it easy to determine the best solution of the problem in the student academic services by the staff of teachers and student services staff.

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