APPLICATION OF LEARNING MANAGEMENT SYSTEM AT SMK IGASAR PINDAD

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ABSTRAK

SMK Igasar PINDAD has education facilities those are complete enough appropriate for needs of teaching. There are obstacles in teaching and learning process in that school, especially outside the classroom. This school does not have the facility of learning in virtual world that exactly developing in the community. The lack of reference makes the students still have to look on google in order to get reference appropriate with technological development. Lack of effective monitoring of student learning progress by parents who only monitored through raport become weakness. The main obstacle in teaching and learning in that school is the lack of time and place of communication between teachers and students if there are still something that are not understood yet. Therefore, Learning Management System application is made as learning device in SMK Igasar PINDAD.

E-learning application is made using Learning Management System (LMS) method. This method is chosen to create an online school materials and manage learning activities and outcomes. LMS serves to store, manage, and distribute a variety of learning materials and exams that have been prepared. Analysis method of software used is structured analysis modeling. Modeling tools used are flowmap, E-R diagram, and DFD (Data Flow Diagram). The research methodology used in this research is descriptive analysis method.

Based on test results, system is considered good enough in assisting the learning process. These systems facilitate the monitoring of student progress, provide appropriate references to the needs and facilitate communication among users. This system is also easy to learn, easy to use, and it also has the attractive appearance that different from other sites generally.

Keywords : E-learning, Learning Management System.

1. INTRODUCTION

1.1 Background Problem

Current technological developments affect the learning process that required fast-paced because every second of information subject change. Distance and time factor of delivery material is often a constraint in the learning process, especially in schools.

SMK Igasar PINDAD located in Cisaranten Bandung Kulon has facilities and educational facilities are quite complete both theory and practice in accordance with the needs of teaching. However, This school does not have the facility of learning in virtual world that exactly developing in the community .

There are obstacles in teaching and learning process in that school, especially outside the classroom. lack of reference makes the students still have to look on google in order to get reference appropriate with technological development .While the references obtained from the internet sometimes does not match the syllabus are given and take a long time to sort them to match the syllabus. Lack of time and place of communication between teachers and students if there are still something that are not understood yet. Moreover, students are sometimes embarrassed to ask the teacher in the classroom about the material, Especially in practice subjects.

The development of student learning by parents who only monitored through a raport to make parents's difficulties to find out how

far the development of their children learning. Parents only know the final value of their children when the distribution of raport at the end of the semester. While many of the values in the value of raport are deliberately raised by the teachers so their students do not get too low value. This causes a lack of effective monitoring of students's learning progress.

Based on the problems faced, the required facilities that can handle problems without the constraints of time and place. Learning Management System (LMS) is a software system used to create and manage content online school learning activities and outcomes. LMS serves to store, manage and distribute a variety of training materials, examinations that have been prepared.

1.2 Tujuan Penelitian

The purpose of this study are as follows:

1. Provide references and modules in accordance with the syllabus and the latest learning learning technological developments.
2. Providing services for students and parents to monitor the progress of students's academic achievement. This service is displayed through a graph of the value obtained in the exam students.
3. Providing a means of communication between students and teachers can ask questions and share knowledge that can be accessed anywhere, anytime.

1.3 Problem Limitation

Making Learning Management System application has limitations the following issue :

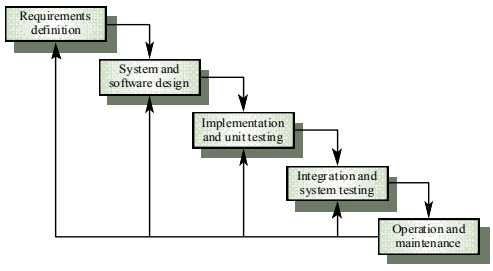
1. This system requires the data concerned with learning in Computer Engineering and Networks department at SMK Igasar PINDAD. Among the teacher data, student data, parent data, data subjects, data subject matter, class data, timetable, exam data, assignment data, etc.
2. These systems serve the process of student assignment, evaluation of learning for its students through examination services provided and the determination of test, and the provision of educational materials in the form of media such as the module text, images and audio video.
3. This system provides information on students's learning progress is displayed through charts test scores that have been implemented.
4. In this system students can be consulted through consultation with the forum admin or teacher concerned, to get the solution of the material that has not been understood. But this site does not serve the chat facility.
5. The parties involved in this system are students, teachers, parents students and vocational school executive ranks Igasar PINDAD as headmaster and his deputy.
6. Model analysis software used was structured modeling analysis. Modeling tool used was flowmap, ER diagram, and DFD (Data Flow Diagram).

2. MODEL, ANALYSIS, DESIGN AND IMPLEMENTATION

2.1 Application Development Model

This application development using waterfall model. This model is done in a systematic and sequential approach starting from defining requirements, system design and software, implementation and unit testing, integration and system testing, to operation and maintenance. This model is a sequential model where the development process goes through several stages in theparticular order ,step by step through which must wait for completion of the previous stage and walk sequence.

These stages of waterfall model can be seen in the image below:

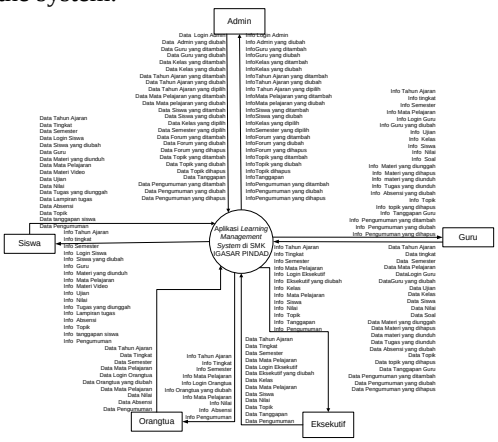


Gambar 2.1 *Waterfall model*

2.2 Analysis dan Modelling System

2.2.1 Context Diagram

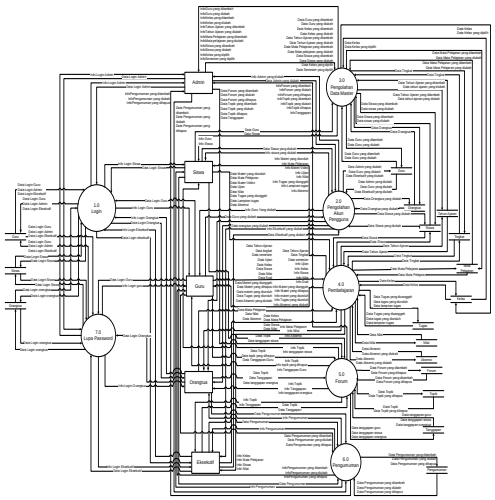
The system built largely described using context diagram. From this diagram can be seen generally in the flow process handled by the system.



Gambar 2.1 Context Diagram

2.2.2 Data Flow Diagram (DFD)

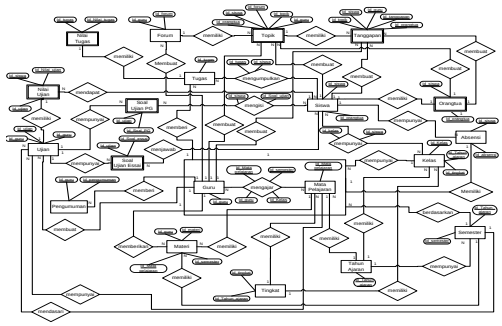
From the contect of the above diagram, the flow of data available on system described in more detail using the Data Flow Diagram.



Gambar 2.2 DFD Level 1

2.2.4 *Entity Relationship Diagram (ERD)*

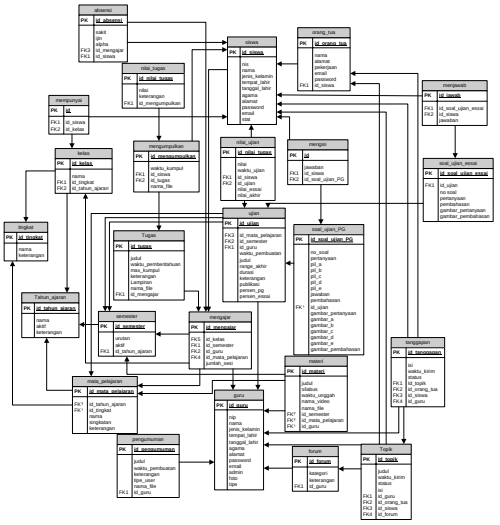
ERD is used to systematically describe the various entities and components of the present system of data and relationships between each entity. To see the connectedness between each entity. To see the connectedness between the exiting entities will be described as an:



Gambar 2.3 *ERD*

2.7 Relationship Diagram

Relationship diagram are used to determine the tables relate to each other to determine the data to be searched, for more details can be viewed as the image below:



Gambar 2.4 Relationship Diagram

2.3 Design and Implementation Diagram

2.3.1 Hardware Implementation

Hardware required by a member either in terms of visitors and administrators are relative depending on the specifications that

are owned and will be used, but as an illustration the following minimum system that can be used:

Tabel 2.1 Hardware Implementation

No.	Perangkat Keras	Spesifikasi
1.	Processor	Intel Pentium IV atau setara dengan kecepatan 1.4 GHz
2.	RAM	128 MB - 1Gb
3.	Harddisk	40 Gb
4	Monitor	1024 x 768 *pxels*

2.3.2 Software Implementation

The specification is a minimum that can be used to build and run e-commerce website applications are:

Tabel 2.1 Software Implementation

No.	Perangkat Lunak	Keterangan
1.	Sistem Operasi	Windows XP
2.	Web Browser	Mozilla firefox 3.0, Google Chrome 5 dan Opera 10
3.	Bahasa Pemrograman	PHP
4.	DBMS	MySQL 5.0
5.	Code Editor	Adobe Dreamweaver CS4
6.	DFD Modeler	Microsoft Visio 2007
7.	Web Server	WAMP

3. RESULTS AND DISCUSSION

3.1 Alpha Testing

Testing applications online ordering system uses black box testing method. The conclusions of the alpha test is:

1. Secara Fungsional sistem sudah menghasilkan *output* yang diharapkan
2. Secara fungsional, aplikasi sudah dapat berjalan dengan baik pada *browser-browser* keluaran, Netscape (Firefox 3.0.1+), dan opera, namun masih ada perbedaan, terutama pada tampilan antara ketiga browser tersebut (masalah ukuran form dalam satuan *pixel*) menjadi perbedaan antara ketiga *browser* tersebut.

3.2 Betha Testing

Beta testing is testing where the testing is done objectively directly to the respondents to make a questionnaire about user satisfaction with the content of user friendly point requirement for further asked directly to the 10 people who became users of this application, but this dijurnal will be given a few examples, with use the following calculation:

Y=P/Q*100%

Description:
P = number of respondents answer each question
Q = number of respondents
Y = percentage value

Conclusion of beta test are:

From the test betha above then it can be deduced, that this application is quite easy to understand because it looks user friendly, in giving any information deemed complete enough, assist in teaching and learning, facilitate communication among its users, also help monitor the progress of student learning.

4. CONCLUSIONS AND RECOMMENDATIONS

1.1 Conclusions

After doing the analysis, design, and testing, we can conclude the following:

1. 1. This system has provided references and modules in accordance with the syllabus and learning the latest technological developments.
2. It has been the availability of services for teachers and parents to monitor the progress of students' academic achievement in this system.
3. This system has been providing communications services between students and teachers who can be a means of sharing knowledge and can be accessed anywhere and anytime.

4.2 Recomendations

For the development of Learning Management System application, there are a few suggestions that can be done:

1. Adding a chat facility so that learning can also be done either directly interact through the Internet or intranet network.Untuk penyajian materi pelajaran sebaiknya memiliki standar *e-learning*.
2. Adding facilities for processing RSS feeds, so users can display feeds from sites that they want.

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