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E-LEARNING AND TEACHING MANAGEMENT SYSTEM

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This report is submitted in partial fulfillment of the requirements for the Bachelor of Computer Sciences (Software Development)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
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I would also like thank KUTKM especially the PSM committee for giving information about PSM and also for giving me the opportunity to work on the PSM. I would like to see this project as a challenge to me and also as a test based on what I had learned in the previous semester.

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ABSTRACT

This project is triggers from the awareness of the importance of the lecturer's role in teaching. This is because they are the one who will educate the youth of today in order to produce a productive and competent individual which is vital for the future of these countries. The main reason of developing this system is to lift some of the burden that the lecturers carry and let a system to handle it. This will surely make the task of the lecturers easier and also give them more time to do more research besides having more free time. Besides that this system could replace some of the manual system that relies more to paper as its medium. This makes the process faster and easier without having to go through a lot of process and bureaucracy.

For Project Sarjana Muda there are four scopes of teaching that I want to focus on that is syllabus making, teaching planner, and assessment and students performance analysis The main objectives of this system is as to be a helping tool for the lecturer in doing planning and also preparing them for teaching in classes.

This system is a web based system. This is because a web based system is more flexible and could be access easily. Macromedia Cold fusion is use to develop this system. For the database My SQL is use. The methodology use is the object oriented methodology which focused on object development. Hence diagram such as activity diagram, use case diagram, sequence diagram, class diagram and deployment diagram is used to show the flow of the system and the interaction of the system with the outside world and also the interaction of the object of the system.

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ABSTRAK

Projek ini dibangunkan berdasarkan kesedaran tentang kepentingan pensyarah dala proses pembelajaran. Ini adalah kerana mereka adalah golongan yang akan mendidik anak-anak muda zaman sekarang untuk menjadi manusia yang berguna dan dapat berbakti pada negara suatu masa nanti. Sebab utama projek ini dibangunkan adalah untuk mengurangkan beban kerja yang ditanggung oleh pensyarah. Ini adalah kerana system ini diharapkj\an dapat mengantikan serba sedikit tugas yang perlu dilakukan oleh pensyarah. Oleh itu pensyarah mempunyai lebih masa untuk membuat kajian dan kerja lain.

Untuk Projek Sarjana Muda (PSM) ini empat skop utama akan ditekankan iaitu penghasilan silibus, perancangan mengajar, kuiz dan analisa pencapaian pelajar. Objektif utama system ini adalah untuk menjadi sebagai bantuan kepada pensyarah untuk membuat perancangan dalam mengajar.

Sistem ini merupakan system berasaskan web. Ini adalah kerana ia lebih mudah untuk digunakan. Untuk membangunkan system ini perisian Macromedia Coldfusion digunakan. Manakala pangkalan dat pula menggunakan perisian MS SQL Server 2000. Metodologi yang digunakan adalah metodologi berasaskan objek. Jadi rajah seperti rajah aktiviti, rajah use case, rajah kelas, rajah struktur digunakan untuk menunjukkan struktur system secara umum dan khusus.

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CHAPTER I

INTRODUCTION

1.1.1 Project Background

The task of a lecturer is a very important one because they are the one who will educate the youth of today in order to produce a productive and competent individual which is vital for the future of these countries. So it is very important that the lecturer come to class well prepared and full of confident of what they are going to teach. But today most of the lecturers are burden with other task then teaching. They have their time occupied with a lot other side work. Besides teaching, among the lecturers task are outlining syllabus manually, teaching planning, getting ready quizzes question, examination questions, grading students and a lot more. Among the side works are handling a course or event and many more.

So what if some of the burden could be lifted of the lecturers shoulder so that they could have more free time to do research and be more ready for their lessons. This is the reason that triggers me to start this project. The topic of this project is "E-Teaching and Learning – Management of Teaching Syllabus and Teaching Planner with Assessment and Student Performance Analysis". This system can be used by

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any lecturer of any subject in KUTKM. Why not take some of the lecturer's responsibilities and let a program to handle it and all the lecturers have to do is monitor the program.

In this project among the task chosen is creating syllabus, teaching planning, assessment or quizzes and analysis of student's performance. This is the main part of the project. The reason I include creating syllabus into the system is because before, the lecturer construct the syllabus manually and there are no system that manage and store the teaching syllabus, which is a very important part of teaching. With a system that manage this syllabus, the syllabus making process is more organize and coordinative which will benefited the lecturers.

Besides that the lecturer could also keep track of their teaching progress using this system. They could plan the timing for each topic and with that they could see whether they are on progress or lagging behind schedule. With good planning the lecturer could finish the syllabus on time or earlier that gives them time to do revision with their students in order to ensure the understanding of the students on each topic that has been covered before.

The project is a web based system. It is in a form of a portal which is the most suitable because the lecturer could easily access and monitor the system. It is also easier for the lecturer to hold a quiz because the students could answer it at the designated time anywhere and the system will calculate and save the marks for each student. So the lecturer's job is only to review the performance of the students and try to focus on improving the weakness of the students. So hopefully the task of the lecturers will be lessened so that they have more time for other activities that could improve their productivity.

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1.2 Problem Statements

Among the problem face is the syllabus making is done manually. Usually the syllabus is written down or type in using word processor. The problem with this is the syllabus is hard to manage because it is scattered and not centralized. The probability that the lecturers lost the files is also high. This is maybe caused by technical failure or human carelessness. As we move on forwards of this millennium almost every company is focusing on paperless management. The problem with using paper is that it could be easily lost and also it is not very practical. Besides that the syllabus is not manage properly and systematically. It will be better if there is a system that let the lecturers to input the syllabus and it will save it in a database. If the syllabus management is centralized it will help the lecturers to construct a better and quality syllabus.

The problem with planning is sometime the lecturer could not fulfill their teaching progress as what they have planned before. To plan is an easier job than to keep up with what has been plan. Usually there are some lecturers who have fallen way behind from what they have been plan. This might affect the students because they do not have time to completely understand certain topics. This happen probably because the lecturers are in rush to finish the syllabus. This problem usually occurs during the end of the semester especially when the final exams is around the corner. So the lecturers need a system that could let them not only plan their teaching but to keep track of their teaching so that they would not fall behind from what they have plan and could have more time to do revision for the students.

Before this, lecturers have to do extra work such as to gather question for quiz in order to test their students. Usually quizzes are done manually that is by using paper or electronically by using computer that is doing the quizzes online. The

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weakness of using paper is it is easily disposable and lost. If the quizzes are lost it is hard for the lecturers to know students understanding of each topic. Besides that if paper is used the lecturers have to check the quizzes one by one and the probability of making mistake is high. It is also hard for the lecturer to analyze student's performance analysis because they have to look through every pile of paper to come up with a statistic of their student's performance. It is surely impractical and will not benefit the lecturers. Besides that if the quizzes are done using paper the students may not take it seriously and some may deliberately be unprepared.

This leads us to doing quizzes electronically or online. This is a much better way to do quizzes and the students do gave good cooperation. But there are some problem that must be look upon because it does affected the integrity of doing quizzes. The biggest challenge for doing online quizzes is the act of copying or cheating by the students. This happens because online quizzes let the students to answer it anywhere they want without the supervision of their lecturers. This gave them freedom to copy from one another or referring to text books when doing the quizzes. This really against the real reason that quizzes done in the first place that is to test and challenge students understanding on certain topic. So the lecturers could not measure the real understanding of the students on the topics that they have taught.

Besides that the questions appear on the quizzes are repeatable and predictable. So the students that do the quizzes later could guess what the answer by observing their friends who did the quiz earlier. The other problem is the time constraint on doing the quizzes. Before, the online quizzes done are not strict with the time limit which the students need to complete the online quizzes. So the students could still do the quizzes even after exceeding the time limit given. So the question of the quizzes should come out randomly, different for each student so that the students could not copy one another. The system also needed to let the lecturers to specify the

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date, time and duration in order to hold the quizzes so that the quizzes only could be done on that time and duration only.

1.3 Objectives

a) To be a helping tool for the lecturer in doing planning and also preparing them for teaching in classes.

b) To provide a platform and an interface for the lecturer to create and construct the teaching syllabus so that the teaching syllabus will be well manage and could benefited everybody.

c) To make lecturers work easier and to give them more time for doing research.

d) To monitor the lecturer's progress of teaching according to the teaching schedule made so that the lecturer would not fall way behind from what they have plan during earlier part of the semester.

e) To make it easier for lecturer to track students performance and understanding on each topic so that they could gave emphasize on the topic that the students are weak.

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1.4 Scope

1.4.1 Authentication

Authentication is a very important part for any system made nowadays. This especially applied to a web base system. Without authentication, just about anybody could access it and the security of the content is questionable. So with authentication the system will be secure and safe. So the data integrity will be kept.

1.4.2 Construct Teaching Syllabus

1.4.2.1 Create the Syllabus

This is where the lecturer could create and construct their syllabus. This is done usually before the start for each semester. In this system a dynamic interface is provided for the lecturers to just fill in the syllabus for their subject. The syllabus that has already been made will be save in a database for safe keeping and also for easy access for the syllabus whenever the lecturers wanted to refer to the syllabus.

1.4.2.2 Manage the Syllabus

Whenever the lecturers wanted to edit or modified the syllabus the system provide the function for them to edit or modified the syllabus that the lecturers have done earlier. After the lecturers finish modifying and saving the modified syllabus, the system will

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then automatically update the syllabus in the database so the updated syllabus is kept in the database.

1.4.2.3 Approval of Syllabus

The system will allow the head of department to verify the syllabus made by the lecturers without actually having to look at a hard copy of the syllabus. This is because there is function in this system that could notify the head of department automatically online. So the head of department could give respond faster because everything is done online. The process will be faster and without having through a lot of process to do it.

1.4.3 Planning teaching schedule

1.4.3.1 Plan Teaching schedule

This function is for scheduling the teaching timeline for the lecturers. The lecturer could specify the time span for each topic according to the syllabus created before. The lecturer could save the teaching plan for further reference.

1.4.2.2 Edit Teaching Schedule

The system allow the lecturers to edit the teaching schedule if any error is done when planning the schedule or if any changes comes up in the lecturers teaching plan. So this makes it flexible for the lecturers to plan their teaching properly.

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