LECTURER'S WORKLOAD (TEACHING) MANAGEMENT SYSTEM

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BORANG PENGESAHAN STATUS TESIS

Judul : Lecturer Workload (Teaching) Management System

Sesi Pengajian : 2008/2009

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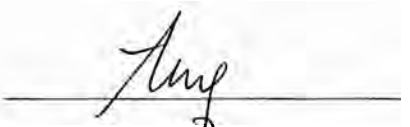

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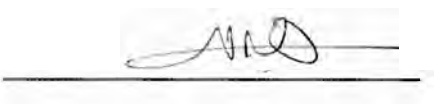

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Bachelor of Computer Science (Software Development)

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2009

DECLARATION

I hereby declare that this project report entitled

LECTURER'S WORKLOAD (TEACHING) MANAGEMET SYSTEM

is written by me and is my own effort and that no part has been plagiarized without citations.

STUDENT : _____ Date : 13 July 2009

(MOHD ANUAR B. MOHD SAID)

SUPERVISOR : _____ Date : 15 JULAI 2009

(DR. HIDAYAH BT. RAHMALAN)

DEDICATION

To my beloved parents..

ACKNOWLEDGEMENTS

First of all, thank to Allah Almighty because of His blessing I'm able to develop "Projek Sarjana Muda 1" and completed my report. I would like to express my gratitude to all those who gave me the possibility to complete this thesis. I want to give my special thank to my beloved parents, Azizah bt. Abdul Aziz and Mohd Said bin Layot for giving me support and motivation throughout my project, and always pray for my success. I am deeply indebted to my supervisor, Dr. Hidayah bt. Rahmalan whose help, stimulating suggestions and encouragement helped me in all the time of research for and writing of this thesis and develops the system.

I want to thank the Faculty of Information Technology and Communication, especially Department of Software Engineering for giving me permission to commence this thesis in the first instance, to do the necessary research work and to use departmental data.

My former colleagues from the BITS student supported me in my research work. I want to thank them for all their help, support, interest and valuable hints. Especially I am obliged to Noor Azad bin Ahmad Othman, Shaiful Bakhtiar bin Rodzman and my best friend, Siti Nur Liyana bt. Alias for all their assistance on developing the system and the great help in difficult times..

ABSTRACT

Generally, lecturer workload at university includes three major categories which are teaching, research and services. However, the workload depends on the university itself. In Universiti Teknikal Malaysia Melaka (UTeM), there are other workload terms such as supervising, publishing and consultation.

This project focuses on the teaching workload among of the FTMK's lecturers. All teaching activities such as material preparation and actual teaching can be defined as teaching workload. Currently, the teaching workload management was done manually in UTeM. Hence, Lecturer Workload (Teaching) Management System was developed in order to automate the processes in teaching workload management.

This thesis will explain the processes of developing the Lecturer Workload (Teaching) Management System which includes introduction of the system, literature review and project methodology, system analysis and design, and system implementation.

ABSTRAK

Kebiasaannya, beban tugas/kerja pensyarah di universiti meliputi tiga kategori penting iaitu mengajar, kajian dan servis. Walau bagaimanapun, beban tugas pensyarah bergantung pada setiap universiti itu sendiri. Di Universiti Teknikal Malaysia Melaka (UTeM), terdapat lain-lain kategori beban tugas seperti pengawasan, penerbitan dan khidmat nasihat.

Tesis ini menfokuskan pada beban tugas pembelajaran oleh pensyarah-pensyarah FTMK. Kesemua aktiviti pengkuliahan/pengajaran seperti penyediaan bahan dan pengajaran boleh didefinasikan sebagai beban tugas pembelajaran. Dalam situasi sekarang, aktiviti pengurusan beban tugas pembelajaran dilakukan secara manual di UTeM. Jesteru itu, "*Lecturer's Workload (Teaching) Management System*" dibangunkan bagi menjadikan proses pengurusas beban tugas pembelajaran dapat di automasikan.

Tesis ini akan menerangkan proses-proses yang terlibat dalam membangunkan "*Lecturer's Workload (Teaching) Management System*" yang meliputi perkara-perkara seperti pengenalan kepada system, pengulasan sistem dan metodologi sistem, rekabentuk dan analisa sistem, dan perlaksaan pembagunan sistem.

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INTRODUCTION

1.1 Project Background

Generally, lecturer workload at university includes three major categories which are teaching, research and services. All teaching activities such as material preparation and actual teaching can be defined as teaching workload. Research workload includes all activities that related to lecturer research such as conference presentation, administration of research project, publication of professional report and developing research output. Service workload includes the services offered by the lecturer to the university, university associations, the community or larger society. However, this workloads are depends on the university itself. For example, in Universiti Teknikal Malaysia Melaka (UTeM), there are other workload terms such as supervising, publishing and consultation.

In UTeM, lecturer workload is still managed manually by the staff. There are some procedures in UTeM to assign a lecturer to his or her teaching workload. At the end of each semester, the lecturers need to fill a form to choose two subjects that he

or she wants to teach at the next semester. Then, Head of Department will approve the form after conducting a meeting. In the meeting, Head of Department will make the decision based on some factors such as the priority and lecturer's expertise.

Lecturer Workload Management System: Teaching (LWMS) is developed to automate all the process includes in 1 of the categories of lecturer workload which is teaching workload. This system will make the management of lecturer workload is more ease, well organized and systematic.

Some processes in teaching workload management such as propose to teach available subject for the next semester, assign the lecturer to the subject he or she will be teaches for the next semester, and approve lecturer workload will be automated in LWMS. In addition, LWMS also provides additional functions likes calculate total lecturer teaching workload and generate report based on the teaching workload.

1.2 Problem Statement

Currently, Lecturer workload management process is done manually. Manual system is not so efficient and not well-organized because it acquires long duration of times to assign lecturer workload and use un-computerized database system. When using manual system, there are chances that human mistake will occur such as miscalculation of total hours of the teaching workload and error in writing the data or information. Not only that, the current system is not an online system so it is difficult to use by the staffs because of some external factors such as time constraint.

In order to overcome these problems, an automation system called LWMS is developed to make the management process is more systematic.

1.3 Objective

1.3.1 List available teaching subject according to semester (excluding "Semester Khas").

1.3.2 To manage subject information.

1.3.3 To select potential teaching subject by lecturer.

1.3.4 To help the Head of Department or Dean on approving the subject that the lecturer propose to teach for the next semester.

1.3.5 To help the Head of Department or Dean on assigning the subjects that will be teach by the lecturer. The assign process happens if the Head of Department or Dean does not approve the proposed subject by the lecturers.

1.3.6 To calculate the total lecturer's workload on teaching subject.

1.3.7 Generate report based on the previous or current teaching workload.

1.4 Scope

The function of LWMS is to organize management process of lecturer workload in order to make it more systematic. LWMS also developed to ease the task of Head of Department or Dean on assigning and approving lecturer workload. Not only have that, LWMS also provided additional functions which are calculate the lecturer workload and generated teaching workload report. However, the system is limited for Software Engineering Department only and only teaching workload will be automated in this system. Other workload such as supervising and publishing workload are not included in this system.

1.5 Project Significant

1.5.1 Lecturer

Can fill in form to propose the subject that they want to teach for the next semester using on-line method. Hence, they can save their times and make the process more ease because it can be done at any place and any time as long as they have Internet connection.

1.5.2 Head of Department or Dean

- The system will help the Head of Department or Dean to do the processes that related to lecturer teaching workload. For example, assign and approval process will be more ease after it is automated in the system.

  The Head of Department also can easily manage the database after it is computerized. In this situation, computerized database is more effective rather than using manual file system because there are many data need to manage. Computerized database is also more secure than manual file system.

  LWMS also help the Head of Department or Dean because the system can generate the teaching workload report. So, it can help them to make some decision based on the report.

1.6 Expected Output

LWMS is expected can be implemented by Software Engineering Department for teaching workload management purposes. LWMS is also expected can ease all the processes that related to the lecturer workload and make the management system is well-organized. Not only that, LWMS is expected to have the opportunities to be enhanced for other type of workload and can be used by all departments in UTeM.

1.7 Conclusion

This chapter explained about the introduction of Lecturer Workload Management: Teaching (LWMS). LWMS is developing to automate the all process of lecturer workload such as assign and approve lecturer workload that currently done manually. The development of LWMS are also to overcome all the problems that occur in the current system and enhance some extra function such as calculate the total lecturer workload. However, there are limitation of this system where as it is develop for the using of Software Engineering Department and only cover the teaching workload management process. This system is expected can be implemented in Software Engineering Department and enhanced to all type of lecturer workloads. For the future, LWMS hopefully can be used by other departments in UTeM.

Chapter 2 which is Literature Review and Project Methodology will explain the details of project methodology likes facts and finding, project methodology, project requirements, and project schedule and milestones of the project.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHADOLOGY

2.1 Introduction

This chapter will discuss on literature review and project methodology. In literature review, facts and findings on existing system will be studied. In project methodology, the approach used in this project will be explained. As for project requirements, software, hardware and other requirements will be stated. Not only that, project schedule and milestone will be planned in order to guide the project is always on the road.

2.2 Facts and Finding

2.2.1 Domain

The LWMS that will be developed is related to one of the software engineering specialization which is Business Intelligence and Data Mining. Nowadays, Information System (IS) needs to align with the business or organization objectives. IS is not only a system but it also need to contribute some value to the business perspective. LWMS is the example of IS that can help the organization to reach its objectives. It helps by make the management process more ease. Hence, efficient and systematic management contribute some values to the organization to reach its objectives.

LWMS also related to data mining. In this system, data mining is one its main function. Data mining is critical in this system because all the data need to be safe, well-organized and accurate.

2.2.2 Existing System

ICTs for University Administration, is a system use in University of the West of England which is previously known as Bristol Polytechnic (1968-2002). This system is like a jigsaw puzzle that combines other systems that already use by the university. This system is based on software technology discipline and can be specialized as business intelligence and data mining.

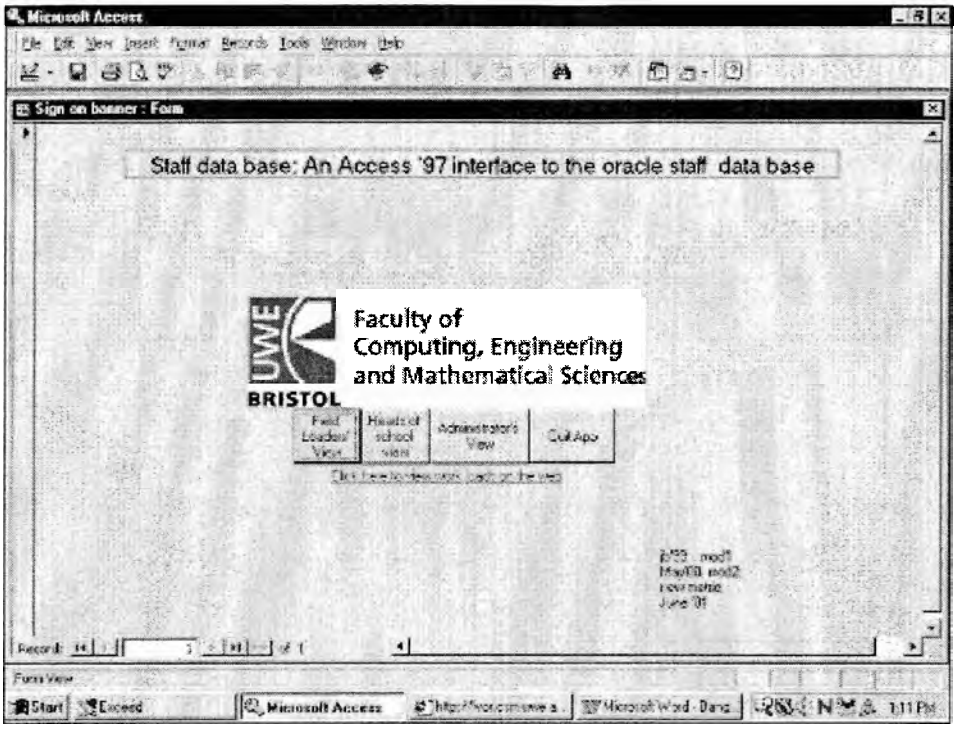

Figure 1.1: The main menu or Switchboard

There are eight requirements of this system. Some of the requirements are to allocate work to tutors and at the same time allocate resources to tasks, to identify tasks with inadequate resources, to identify tutors who are under/over hours and to produce reports showing individual workloads and school workloads.

The system based on the structure of University faculties. Faculties contains Schools while academic is a part of a School. The curriculum for each Course is delivered mainly through the medium of qualified modules. The modules are owned by Fields. Schools have Heads while Fields have their Field Leaders. This establishes a situation that Field Leader request staff time and Heads of School responds by giving information about their members' time to the field leaders.

The main inputs to the system are field data, school data, tutor data, task data and allocation of tutors to tasks. Tutor workload allocation, overtime report, task under located/over located report, visiting lecturer report, list of school membership and school report detailing the workload of all members; are the main outputs of the system. The main tables of the system are field table, school table, task table, allocation table and tutor table. Figure 2 below shows the ER Diagram for the system.