

BORANG PENGESAHAN STATUS TESIS[^]

JUDUL: FTMK LAB MANAGEMENT SYSTEM

2005/2006

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
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FTMK LAB MANAGEMENT SYSTEM

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KALSOM BINTI CHE'MAN

This report is submitted in partial fulfillment of the requirements for the
Bachelor of Computer Science (Database Management)


FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY KOLEJ
UNIVERSITI TEKNIKAL KEBANGSAAN MALAYSIA


2005

DECLARATION

I hereby declare that this project report entitled
FTMK LAB MANAGEMENT SYSTEM

is written by me and is my own effort and that no part has been plagiarized
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DEDICATION

To my Mother

Whose boundless love and support replenishes and enriches my soul

During the long hours of writing...

ACKNOWLEDGEMENT

One of the greatest pleasures is acknowledging the efforts of many people whose names may no appear in the cover, but whose hard work, cooperation, friendship, and understandings were crucial throughout the process of this thesis.

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ABSTRACT

The title of this thesis is “FTMK Lab Management System”. The main purpose of this system is to develop the system using Web base. This system will be replacing for the current system, which is a manual task. These system have 6 modules such as lab booking or rental request, software and hardware failure complain, software installation request, application server space allocation request, perform schedule, generate report and administrative task. The other function for this system is to add, delete, update and save the lab and software or hardware information in database. This thesis addresses these issues of authenticity, integrity and data redundancy when using this system for submission of form. This system also has the facility to check approval status. This report will explain the introduction of FTMK lab Management, its literature review, project methodology, analysis, design, testing and implementation. This system use Waterfall Model and Database Life Cycle (DBLC). Overall, this system is systematic and better than the manual tasks and its will be easier for the FTMK Lab management System to manage and record their business process in maintenance service.

ABSTRAK

Tesis yang bertajuk “Sistem Pengurusan Makmal FTMK” ini dibangunkan untuk penggunaan aplikasi laman web. Sistem ini akan menggantikan sistem secara manual kepada sistem berkomputer yang sedang diguna pakai. Sistem ini mempunyai 6 modul utama iaitu penempahan makmal, aduan kerosakan perkakasan dan perisian, peminjaman perisian, penggunaan ruang server, penjadualan luar waktu makmal, penghasilan report dan penyelenggaraan makmal dan peralatan. Selain itu juga terdapat fungsi lain dimana pentadbir juga boleh menambah, memadan, mengemaskini dan menyimpan maklumat mengenai makmal dan peralatan di dalam pangkalan data. Sistem ini juga menitik beratkan isu mengenai pertindihan data, kesahihan data dan pengesahan data. Sistem ini juga membolehkan pengguna menyemak status permohonan yang telah diluluskan. Sistem ini menggunakan *methodology Waterfall Model* dan *Database Life Cycle (DBLC)*. Secara keseluruhannya, sistem ini juga menerangkan mengenai latarbelakang projek, pengujian sistem, pelaksanaan sistem, analisa dan methodology yang digunakan. Sistem yang berasaskan computer adalah lebih teratur dan sistematik tentang pengurusan data.

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LIST OF ABBREVIATIONS

KUTKM	- Kolej Universiti Kebangsaan Malaysia
FTMK	- Faculty Teknologi Maklumat dan Komunikasi
P&P	- Teaching and Learning
DFD	- Data Flow Diagram
DBLC	- Database Life Cycle
SDLC	- System Development Life Cycle
ERD	- Entity Relationship Diagram
RDBMS	- Relational Database Management System.
IDE	- Integrated development Environment
ICT	- Information Communication Technologies
AUT	Application Under Testing

CHAPTER I

INTRODUCTION

1.1 Project Background

Nowadays, FTMK Lab management at Kolej Universiti Teknikal Kebangsaan Malaysia (KUTKM) is still using manual system (form). We know that, manual system have many weaknesses compared with computerized system. Computerized system will give benefits to lecturers, lab administrator, students and staffs of KUTKM. FTMK Lab Management System will be developed to serve Faculty of Information Technology (FTMK). This project will provide an online system whereby the users can access the system at any time. Beside that, FTMK Lab management System has six main modules such as lab booking or rental, software installation, application server space allocation, Software or Hardware failure complaint, perform schedule and generate report. Lab booking is only for use after regular lab session for example can be make booking for lab replacement, extra lab practical and seminar. Whereas, software installation, this system will list all the software available and in the lab for software or hardware failure reporting, user can fill the form via internet to complain the matter. User also can request and get the information about application server space allocation. This system also can print-out the current lab schedule, software installation request list, and reservation schedule.

With the new systematic web based system, all processes will be easier. User can retrieve the form via the internet; the forms are available 24 hours 7 days a week. Form can be submitted straight away after user complete filling the form. They also can check the lab availability from the information provided. Responsible staff can view pending request and approve it. Users such as lecturer, staff KUTKM and students can view the status of approval.

By using the FTMK Lab Management System problems such as data losses, data redundancies, unsystematic management, and late approval can be avoided. This system will ensure more systematic and efficient management for the FTMK labs.

1.2 Problem statement(s)

The problems identified are:

1.2.1. The system does not exist yet.

FTMK Lab Management System at KUTKM does not exist yet. Currently, lab management is done manually by using manual forms. This system will be developed with a web-based system approach.

1.2.2 Data Redundancy

Manual system will cause data redundancy; for example, records may be written twice. When we use a computerized system, it will reduce the probability of repeating the same record.

1.2.3. Data Losses

Possibilities of data losses while in the process of booking a lab are high. As we are all human, we sometimes make mistakes without realizing; many unwanted things can happen, for example, data misplacement or damage. Besides that, in the lab booking process, information will be recorded on a piece of paper, and the probability of missing the records list is high.

1.2.4 Data Integrity

Data integrity is also one of the problems that occur when using the manual system. Every person has their own style of handwriting; sometimes the handwriting is not clear and leads to misunderstanding.

1.3 Objective

- i. To provide an online system which enables user to access the system at any time.
- ii. To deliver essential services to lab manager of FTMK, technicians, faculty administrators, lecturers, students and faculty staff via the web to apply and make book the form such as lab booking or rental form, software installation form and application server space allocation form and software or hardware failure report or complaint.
- iii. To enable users to view and print the lab schedule, reservation schedule, available software and software installation request list use for management task.

1.4 Scope

This system will develop to FTMK Lab Management and provide their users with better service online system. System also focuses on submission process such as process of form filling, form submission and form approval. Fourth type of forms included only in system, there are lab booking or rental form, software installation form, software or hardware failure form and application server space allocation. For administrative task, administrator can manage and perform add, delete, update and save the equipment information such as software info, hardware info, server info and software and hardware failure info.

The users of this application are consisting of the staff KUTKM, Lab Manager, technician, student, faculty administrators and lectures. User can access all the available form, fill in the form and send the form. Each user has one user ID and password to log in the application. User is able to view their own status of application whether it is

approved or not. This system currently uses Window XP Professional. Below is the scope of the system:

1.4.1 Lab booking or rental.

This module is enables lecturers and student to book the lab though internet. Lab booking is only for use after regular lab session for example can be make booking for lab replacement, extra lab practical and seminar.

1.4.2 Software installation.

This module is enable lectures and student request the software for Teaching and Learning P&P and Research. This module also provides and supplies the software and also produces the current list major software packages follow by course.

1.4.3 Software/Hardware failure

This module is used for user lab to inform and report any damage and crash software and hardware.

1.4.4 Application Server Space Allocation

This module is enable users to request the size of server space only for Teaching and Learning (P&P), research, faculty committee, student workshop and bachelor project (PSM).

1.5 Project significance

The system will be benefit to FTMK lab management in many ways particularly to time saving, reduce data loses, faster access and retrieval of data. Each module will be developed to overcome the problems that occurred in the manual system.

It is more efficient and makes the process of application become easier because once the user apply; it will send the form directly to administration officer. After that, the form will sent to the user and the user can know the status of the application whether is approved or not. The user does not do anything such as ask administration to know the status of application but just wait until he receives the status of application.

Users can apply the form no matter anywhere as long as they have computer and have connected their computer to intranet. A user doesn't need to go to faculty to take application form. User can apply the form directly from home or work place. Besides that, form application is used in a paperless environment. It means we do not need to use any paper for application. It will reduce the usage of papers.

In addition, the system is able to establish a good lab management for user. It will benefit for user in many ways, mainly in giving the best booking lab in FTMK, providing lab schedule and other relevant information.

1.5 Conclusion

This chapter is an overview of the project that will be developed. The objective of the project has been stated as well as problem statement and scopes. The next chapter consists of literature review and project methodology.