

BORANG PENGESAHAN STATUS TESIS

JUDUL:

ENHANCEMENT OF E-FACULTY FTMK PC CONTROL SYSTEM

2006

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ENHANCEMENT OF E-FACULTY FTMK PC CONTROL SYSTEM

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This report is submitted in partial fulfillment of the requirements for the
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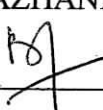
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DECLARATION

I hereby declare that this project report entitled
ENHANCEMENT OF E-FACULTY FTMK PC CONTROL SYSTEM
is written by me and is my own effort and that no part has been plagiarized
without citations.

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DEDICATION

Specially dedicated to
My beloved parents and family members
who have encouraged, supported, guided and inspired me throughout my journey of
education

ACKNOWLEDGEMENTS

First and foremost, I would like to show my deepest appreciation to my project supervisor Mrs. Robiah Yusof, for guiding me through out the process of completing this PSM project report. Gratitude is to be expressed to the PSM committee members for providing guidelines and workshop in the aid of producing a report with quality and standards.

I would also like to thank to all the people related to my PSM, who contributed to the development of my work. With all the learning and help that I have gain, I manage to produce this valuable report.

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ABSTRACT

E-Faculty FTMK Pc Control System is an enhancement project from the previous system. The previous current system was developed by an ex-student from this college. His output is a system that could be useful to the college community. Therefore, improving the existing system by adding some functions to the system might produces a complete control for overall computer in the FTMK laboratories. This system is build to be use in the FTMK lab. The user for this system is the administrator and the students itself. This system allows the administrator to view the pc event log in the local and client's pc. Plus, this system also has a function to view the student's event log. The administrator can also filter the event log records to view desired records. This system also allows the administrator to manage the student's account for login purpose. Lastly, this report is specially used to define and explain the overall process from the planning phase until the testing phase. The overall report explains in detail about the system development.

ABSTRAK

Projek 'E-Faculty FTMK Pc Control System' merupakan satu projek yang diperbaiki daripada sistem sebelumnya. Sistem yang telah sedia ada sebelum ini telah dihasilkan oleh bekas pelajar kolej ini. Hasil terakhirnya merupakan sebuah sistem yang akan menjadi sistem yang sangat berguna untuk komuniti kolej. Oleh itu, dengan memperbaiki sistem terdahulu melalui penambahan fungsi kepada sistem tersebut akan melengkapkan kawalan pada keseluruhan komputer di makmal FTMK. Sistem ini dibina untuk digunapakai di makmal FTMK. Pengguna sistem ini ialah pentadbir dan pelajar itu sendiri. Sistem ini membolehkan pentadbir melihat log acara komputer pada komputer setempat dan komputer pelanggan. Sebagai tambahan, sistem ini juga mempunyai fungsi untuk melihat log acara pelajar. Sebagai tambahan, sistem ini juga mempunyai fungsi untuk menapis rekod log acara untuk melihat rekod yang diinginkan. Sistem ini membolehkan pentadbir untuk menguruskan akaun pelajar untuk membolehkan pelajar akses ke sistem. Maka, laporan ini adalah dikhaskan untuk menerangkan keseluruhan proses daripada fasa perancangan sehinggalah kepada fasa pengujian. Keseluruhan laporan ini menerangkan secara terperinci mengenai pembangunan sistem ini.

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CHAPTER I

INTRODUCTION

1.1 Project Background

Kolej Universiti Teknikal Kebangsaan Malaysia (KUTKM) is the first technical university in Malaysia. There are five faculties at KUKTM; the main focus of the university is more to approach in technical field. There are Faculty of Electrical Engineering (FKE), Faculty of Electronics and Computer Engineering (FKEKK), Faculty of Mechanical Engineering (FKM), Faculty of Manufacturing Engineering (FKP) and Faculty of Information and Communication Technology (FTMK).

The FTMK provides computer laboratories to their students as to fulfill the student's needs. In addition, there is a system developed by a KUTKM's senior computer networking course student. The system is called as E-Faculty FTMK Pc Control System which is use to be as an administrator system. The system prepares to be used by FTMK laboratory. The concept of this system is similar to other cyber café system, where the administrator can manage and monitor every pc in the laboratory. The system is divided into two parts.

Part 1 involves the administrator control which is the server side, while the other part is the client-side or the student side. The administrator control allows the administrator to manage student's account by performing the registrations, deletes and

updates the student's account. In addition, this system will help the administrator to identify the pc usage and who is currently using the pc. The client side enables KUTKM student to login to the pc. Then, the date and time of the student's login would be sent to the server side.

The project that will be developed is an enhancement of the existing E-Faculty FTMK Pc Control System. The improvements of the existing system will cover three parts. The first part is to integrate the existing system with the new system. This enhancement is based on the concept of the existing system and adds another two useful functions to the existing system. The concept of the existing system is to control all pc in the FTMK laboratory. The control is meaning to record the student's login as long as their duration of pc usage. However, the control does not meaning anything if it cannot log and view every pc activities. Therefore, this enhancement is focused on to log the pc activities and maintains the basic functions of the existing system.

The second part is to build a pc event log function which allows the administrator to view the pc activities. The event log is consists of application log, security log and system log. By using this event log, the administrator can simply enters the IP address of the client's pc and the client's event log will be shown.

The third part is to build a function which can view the student's activities. This function is quite similar to the pc event log function. However, the difference is this function able to view the student's event log. By allowing the student's to logins to use the pc, this function will then log all the student's activities.

Those enhancements will improve the existing system and provides more functions to the administrator. Therefore the administrator could manage every pc in the FTMK labs. The improvements made to this system will gives benefits to the college community.

1.2 Problem Statement(s)

The motivation of this project comes from some problems which are caused by the existing E-Faculty Pc Control System. This project will overcome the problems and weaknesses that could be solve which are:

1.2.1 Only Perform Basic Functions

The existing system only provides basic functions which are login, registration, edits, deletes, price calculation and pc usage. The existing system does not provide a function to facilitate the administrator to control all pc in the lab.

1.2.2 No Event Log For Client's Pc Activity

The existing system did not generate a log file which can be use to view the activity for client's pc in the FTMK lab. The existing system only provides a list of pc with its host name and IP address for the administrator to view. The system is then calculates the duration of the pc usage. However, a control system should 'knows' every activity in each pc in the lab. This will help the administrator to ensure all pc are in good condition which free from viruses, spy wares, ad wares and others. Therefore, a log file that generates an activity report for each pc is very important for pc control system.

1.2.3 No Event Log For Student's Activity

This problem occur form the second problem that is mentioned before. When there is no event log for the client's pc, the student's activity also cannot be trace and recorded. Therefore this system cannot be named as control system if it does not know what had happen to the client's pc as long as their user's activity. This function is

important as it can help the administrator to prevent the students from freely installing any software to the pc.

1.3 Objective

Essentially, the main objective of this project is to improve the existing E-Faculty Pc Control System. The improvements which leads to the objective that will be achieved throughout this project are:

1.3.1 To Integrate The Existing E-Faculty FTMK Pc Control System With The New System

The concept of the existing system is to control and manage all pc in the FTMK lab. This enhanced system maintains the concept of the existing system but improved it to a better definition. The new system focused to improve the control functions by adding two new functions which are the pc log file and student's log file.

The function in the existing system also includes the registration, updates and deletes administrator's account. The existing system also allows the administrator to manage the student's account so that the administrator can register student's account, edits and deletes them. Therefore, these functions should be maintained in the new enhanced system and should work properly as it build before

1.3.2 To Allow The Administrator To View Every Pc's Activities Through Event Log File

The new system will generate an event log file for every Pc in the lab. By inserting the client's IP address, the event log for that particular pc will be shown. This event log is divided into three log names which are the application, security and system.

After choosing the log names, all recorded events of the selected log names will be shown. The information that will be displayed are the event type, index, event ID, time and date written, source, category, user SID, computer and username.

This event log function also allows the administrator to filter in many ways. The filtering function will filter the event log data by date, by category, by event source, by event type, and by event ID.

This event log function also facilitates the administrator to view the details of the event log data. The details have the data and the description of that particular event log.

1.3.3 To Allow The Administrator To View Every Student's Activities Through A Log File

This new system will also generate a student's event log. This event log will show the student's activity. It is similar to the pc event log but focused on the source of the event occur. The source is the students itself. The information of the student's log file are the student's name, student's matrix number, event type, index, event ID, time and date written, source, category, user SID, computer and username.

1.4 Scopes

The project is focus on the development of the two functions. The two new functions are the pc event log file and student's event log. The main project scope is the system can only be use for Windows platform. The other scopes of this project are:

1.4.1 Pc Event Log

- a. This log file is a real time monitoring report that list out every pc activities in every pc in the lab
- b. The pc event log is divided into two main part:
 - i. Local Pc Event Log: This function will show all event log data for the local pc. The local pc is the server itself.
 - ii. Client Pc Event Log: This function will display all event log data for all clients that connected to the server. The administrator have to enter the IP address of the client's pc
- c. The log file will report the information below:
 - i. Event type: The type of event either it is information, warning, error, success audit or failure audit.
 - ii. Index: The number of event
 - iii. Event ID: The record number
 - iv. Time/Date Written: Time and date when the event is written
 - v. Source: The source of the event log
 - vi. Category: The category of the event type
 - vii. User SID: The user ID recognition
 - viii. Computer: The name of computer
 - ix. Username: The user who launch the event
 - x. The meaning of pc activities is the application, security and system that runs by the pc
- d. The administrator can filter all event log:
 - i. By Date: The administrator can choose the begin and end date so that the particular duration can be displayed with all the events occur
 - ii. By Event ID: By entering which event ID to be viewed, the event will be displayed
 - iii. By Event Type: The event log can be filtered to display chosen event type only. The event types are the warning, information, error, success audit and failure audit.