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JUDUL: **KUTKM LAB MONITORING APPLICATION (USING RealVNC)**

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KUTKM LAB MONITORING APPLICATION (USING RealVNC)

NORHAKMILAR BINTI ISHAK

This report is submitted in partial fulfillment of the requirements for the
Bachelor of Information and Communications Technology (Software Engineering)

FACULTY OF INFORMATION AND COMMUNICATIONS TECHNOLOGY
KOLEJ UNIVERSITI TEKNIKAL KEBANGSAAN MALAYSIA
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Projek Sarjana Muda (PSM) is a one of the module that must be taken by KUTKM Information Technology student before they are being awarded the degree. Students were given the opportunity to develop their own project using their knowledge and skill that gain since first semester and also Industrial Training which more contribute knowledge and skill.

First of all I would like to express my heartfelt gratitude to my beloved mother and my family for giving their support during my project implementation period. So that I can stand with my own to completed this task (*PSM II*) successfully.

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ABSTRACT

This system is developed for Kolej Universiti Teknikal Kebangsaan Malaysia Computer Lab Management. The system manages the monitoring task of all the computers at the computer lab. Therefore one computer is able to control all of the computers using this application. Besides the application can view the desktop and send messages to the computer that monitored. Then, observations it was discovered that there is wasting time for technician to check all the computers one by one. It is hoped that's this system will be able to help the technician to manage the monitoring task and reduce the misuse of the computer by student at Kolej Universiti Teknikal Kebangsaan Malaysia computer lab.

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ABSTRAK

Sistem yang dibangunkan ini adalah untuk kegunaan juruteknik yang bertugas untuk memantau keadaan komputer di setiap makmal komputer. Pemantauan akan lebih mudah dilakukan dengan menggunakan aplikasi ini di mana hanya sebuah komputer sahaja diperlukan untuk mengawal semua komputer di dalam makmal. Sistem ini berupaya memaparkan desktop dan menghantar mesej kepada komputer yang sedang di pantau oleh komputer pemantau tersebut. Setelah membuat pemerhatian terdapat beberapa masalah yang telah dikenal pasti. Antara masalah tersebut ialah pembaziran masa yang berlaku jika pemeriksaan dijalankan ke setiap komputer kerana juruteknik perlu memeriksa dari satu komputer ke komputer yang lain. Adalah diharap sistem ini dapat membantu mempercepatkan proses pemantauan aktiviti di setiap komputer pelajar disamping dapat mengurangkan masalah penyalahgunaan komputer oleh pelajar semasa di makmal komputer Kolej Universiti Teknikal Kebangsaan Malaysia

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LIST OF ABBREVIATIONS

ABBREVIATION	DESCRIPTION
KUTKM	Kolej Universiti Teknikal Kebangsaan Malaysia
PSM	Projek Sarjana Muda
LMA	Lab Monitoring Application
UML	Unified Modeling Language
SQL	Structure Query Language
LAN	Local Area Network
FTMK	Fakulti Teknologi Maklumat dan Komunikasi
OOAD	Object Oriented and Design
SDLC	System Development Life Cycle
SSADM	Structured Systems Analysis and Design Method
PC	Personal Computer
PMP	Performance Monitoring Protocol
HTML	HyperText Markup Language
GUI	Graphical User Interface
MTS	Microsoft Transaction Server

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CHAPTER I

INTRODUCTION

KUTKM Lab Monitoring Application is software that can be used to monitor or view the activities a group of computers for example in the lab. Using this application, lab technician can monitor the activities and trace if any illegal activity was running such as chatting, surf internet, play game or else.

The main purpose of developing this application is to introduce the monitoring module which is able to view other computers in the same network. There is computer allow to control the system and monitor all the computers that granted. Technician can view the desktop of other computer using RealVNC by tracking the ip address. Technician will track the illegal activity at the student computer by viewing the desktop. In the same time technician can take over the keyboard and mouse of the computer which is monitored. But the student who is using the same computer still can operate the computer.

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KUTKM Lab Monitoring Application also able to send and message to the students' computer. It is like warning message but technician has to type manually what he/she wants to warn the student. This warning message is important to make the student aware that their activity has been watching.

This application will trace student profile by the metric number that student entered while log in to the computer in the lab. So that if the student doing something illegal while using the computer, technician will record their profile with their offence manually.

1.1 Project Background

Lab Monitoring Application that will be developed is able to monitor a group of computer via LAN connection. So that, monitoring can be done through controller pc, which is the main computer that can view and control the activities of other computers.

In the current system, they are using an established international product, NetOp School which is developed by Danware Data A/S. User have to purchase this product first before it can be used for monitoring. But this is expensive software with high budget for maintenance. Usually, every product that purchasing using internet has expired date and user must paid for certain cost to renew this product again.

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This application proposes new approach that is system will trace if any illegal activities was running by viewing other computers desktop. So that technician will stop the illegal activity that running at student computers by sending message, close application or log off the computer.

Meanwhile students have to log in while they wanted to use computer in the lab using their metric number. In the sometime the metric number was send to Kutkm Lab Monitoring Application at the controller pc. Therefore technician will trace the student profile with the LMA system by the metric number. Then technician will take note about the student who was doing illegal activity such as chatting or surf internet for recorded.

1.2 Problem Statement

In a recent system of monitoring lab that used at KUTKM FTMK computer lab was enabling technician to view all the computer activity. The system is called NetOp School and it was functioned to make sure that all the users in the lab are doing their work and not play around for example surfing internet or trying to delete some important file in the computer. Lab technician is responsible to take care of the lab that currently in use.

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Using NetOp School there must be high cost maintenance because this product was developed by establish international company, Danware Data A/S. so that if user wanted to used this system, he/she must learn and study how to use this system on their own. But if they got some problem or misunderstanding, they should solve themselves or else contact the developer which is costing high budget. This is same situation if there have problems with the software such as conflict data or wrong installation. It is because only the programmer or developer will understand their system. NetOp School is a international product so that user have to contact the developer to solve all the problems.

As a solution to avoid all the problems, I come out with the idea to develop Kutkm Lab Monitoring Application. As we all know that our prime minister encouragement to support local product. Using local product will increase the maintenance cost more than international product. This is also encourage our local developer to provide more IT product so that users have more choices while buying.

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1.3 Objective

The objectives of this KUTKM Lab Monitoring Application are: -

i. This application will allow lab technician to view all activities of other computers that are monitored using LAN connection.
ii. By viewing students' computer, technician able to take any action if there are illegal activity running such as close windows, log off the computer or else.
iii. System will able to send message to the student's computers which is control by technician.
iv. System also can search student record using metric number that student log in once they want to use the computer.

1.4 Scope

The scopes of KUTKM Lab Monitoring Application are: -

i. This Lab Monitoring Application project will deliver an application that controller pc can view desktop of other computers.
ii. System able to take over of students' computer mouse and keyboard.
iii. This application copes to send message to the students' computer to warn them.
iv. System able to search student record using metric number.

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1.5 Project Significant

This Lab Monitoring Application that will be developed is useful for KUTKM lab technician to monitor the activities of other computers. There is a controller pc that can control this system and view the activities. Besides, controller pc is able to receive message from other computers and vice versa. Once illegal activity is running, for example a student try to download song, technician able to stop the activity from controller pc or send a message to the

This approach proposed to upgrade the current system that only can view the activities of other computers. Using this new monitoring system, technician should not have to check every computer manually which is technically waste his/her time.

Lab Monitoring Application is able to search student profile using the metric number that they enter once they want to use the computer. If the student is discover doing something illegal, then the student will be put in quarantine record and if the student doing the same mistake for several time, an action will be taken. By this approach, technician may monitor all the students' computer from one computer (controller pc).

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1.6 Expected Output

The expected output of this Lab Monitoring Application is: -

i. System can view the activities of others computer and click to the selected computer and check what was user of that computer done.
ii. System will allow technician to send message to the student computer as a warning once their illegal activity was traced.
iii. The illegal activities will be stop or lock by technician from controller pc.
iv. System will display the record of the student that searched by technician.

1.7 Conclusion

The purpose of this chapter is to explain and briefly about the Lab Monitoring Application. The ideas of developing this application emerge because of problem that our KUTKM computer lab faces. Students are freely to use the lab facilities. Sometimes they do not aware if they are using the facilities in a proper way. This to-be system is expected to monitor their activities and at the same time teach them to avoid illegal one. Some of them eager to play around with the computer such as chatting, change the setting, downloading or else. Hopefully all the problems will be solving using this system.

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CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

This chapter will be discussing on literature review and project methodology of Lab Monitoring Application. Basically literature review is proposing to convey reader the knowledge and ideas and what their strengths and weaknesses are. It is also must be define by a guiding concept for example objectives and the problems or issue that are discussing. Project methodology is an elaboration of selected approach for example SSADM, SDLC or OOAD.

The first section of this chapter is fact and finding that will discuss about approach that has state and related or passed research, references, case study and other finding that related to the project and support the approach with statement to justify the fact findings sound. The next section is project methodology, which is an explanation of the selected approach and the activities in every stage. Followed by the project requirement section that includes software requirement and hardware requirement which are required to develop the project. This section also including project schedule and milestones that explain the entire actions plan prior to the end of the project.

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2.2 Fact and finding

In this fact and finding session students have to state the approach and related or passed research, references, case study and other finding that related to project title. Students have to tag the source if they refer the approach from published materials and support the approach with statements to justify fact findings sound.

2.2.1 Activity Monitor 3.8

Activity Monitor is a monitoring software system for real time employee monitoring and continuous tracking of user's activities on networked computers. Designed for monitoring employees, workers, students, tracking the usage of public computers in libraries or spying on individual network attached PC. Activity Monitor is used to track employee's activities in organizations that have from two to hundreds networked computers. All monitoring options are configured remotely from a single PC. This employee monitoring software can record activity on all computers in LAN for future advanced analysis with excellent report generation capabilities. Using our PC monitoring software you will increase the productivity of working staff in your company. *http://www.softactivity.com/employee-monitoring.asp*
[11 April 2005]

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2.2.2 Performance Monitoring Protocol Admin (PMP) - Remote Server Performance Monitor

i. Description

PMP is a performance monitor for remote/multiple servers. You can monitor the real-time CPU, memory and disk usage status from the several networked remote servers and can be notified for the specific server status. PMP provides email notification and automatic/manual remote command execution. PMP also provides HTML reporting and you can share it with your staff.

ii. Benefits

a. Find performance overload and problems of remote server immediately.
b. Stay in accurate remote server performance data all the time.
c. Automatically/manually execute a command at the remote server.
d. Improve your server maintenance level.

iii. Configuration

a. PMP can be configured with one PMP admin PC and several PMP agent servers that is connected via LAN or Internet (TCP/IP network) each other.
b. PMP admin can be installed to Windows 95, 98, ME, NT4, 2000, XP and PMP agent can be installed to Windows NT4, 2000, XP.
c. After the installation, PMP admin can monitor the real-time CPU, memory and disk usage status of your remote servers.

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