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INTERNET CAFE MANAGEMENT SYSTEM

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DECLARATION

“I declare that the work submitted in this thesis entitled Internet Café Management System is my own, except for works that I have been clearly cited in the references”.

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Special to my parents, supervisor, lecturer and friends..

ABSTRACT

The purpose of this project is to develop administration monitoring software for internet café. Although there are many internet cafes in Malaysia but nowadays we are still lacking of good software to control and manage the network system. Most of available software at the market is developed by foreign programmer. Therefore, there is a bit difference in term of its application for example, the difference between Ringgit Malaysia and Dollar. This software was developed using Microsoft Visual Basic 6. Some programming techniques are introduced to find the solution on controlling the client computers through a network. Besides that, Microsoft Excel workbook is used to record all the data in the system such as charge and time. At the end of this project, the internet café system is perfectly as expected together with a complete recording system.

ABSTRAK

Projek ini bertujuan untuk membangunkan perisian bagi kegunaan pentadbir sistem siber kafe di Malaysia. Secara puratanya, kebanyakan pentadbir ini tidak memiliki perisian yang berkesan untuk sistem siber kafe mereka. Perisian yang terdapat di pasaran kebanyakannya dibuat oleh pembangun dari negara lain. Ini tentunya wujud perbezaan dalam sistem yang dibangunkan itu seperti penggunaan istilah Ringgit Malaysia dan Dollar. Menyedari akan kelemahan yang ada, saya membangunkan perisian ini dengan tujuan untuk menyesuaikan penggunaan perisian tersebut di negara ini. Untuk tujuan itu, saya telah menggunakan Microsoft Visual Basic 6 untuk membangunkan perisian. Bagi mengawal komputer dalam sesebuah rangkaian, banyak aturcara telah digunakan. Seterusnya untuk menyimpan maklumat seperti masa dan bayaran penggunaan komputer, Microsoft Excel workbook dipilih sebagai pengkalan data. Di akhir projek ini, saya telah berjaya mendapatkan beberapa keputusan yang telah disasarkan.

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CHAPTER I

INTRODUCTION

1.1 INTRODUCTION

The main function of the software is to control the computers in a network and manage the billing system for internet cafe. The development of this software will be divided into two parts which are functionality and stability. The main market of this software is for internet cafe administrators around Malaysia. Basically, most of them do not have any specific software used to manage and maintain their network system including the billing system. Although there are a lot of software in the market, but usually they are not freeware. Thus, this freeware version becomes an alternative. Among the related software available, this version will provide better performance and reliability to the customer. The first part of the project to discover and test all the functionality available in Microsoft Windows related to network maintenance. There are a lot of functions to control the computers in a network, but the important one to analyze the functions before integrating into the software. Some of the functions can be performed in a network but in this case, it is not related to internet cafe network system. The second part of the project is to test the stability. Nowadays, Windows XP becomes the dominant operating system in Malaysia. Therefore it's to ensure that the software can be run on the operating systems.

1.2 OBJECTIVE OF PROJECT

Basically, there are three primary objectives of this project. Firstly, the software is developed as an alternative to users. From the survey, many of internet café administrators in Malaysia have no specific software which is used to control their network computers and manage the billing system. Thus, with this fact, the objective of the software development will be focus on how to discover the best solution for the problems.

Secondly, the software is used to control the computers in the internet cafe network. Normally it uses a dedicated computer for administrative purpose. With many computers in a network, it is practical to take control all the computers through an administrator computer. For example, the administrator does not need to go from one computer to another in order to lock the computer. This task can be performed from the administrator computer remotely through the Local Area Network.

The other objective of this software development is to provide a management system which is cover billing and database system. Normally, billing is about the cost calculations when users use the computer for a specific of time. All the activities must be recorded for future reference.

1.3 SCOPE OF WORKS

The scope of this software development is divided into two parts; the software functions and management system. The software functions refer to the function which is used to control the computers in a network like log off and shutdown while the management system consists of another two parts that are billing and database system. Both of these scopes will be performed gradually based on the priority. Basically it is important to focus on the software functions to control the computers rather than management system development. This is because the functions are quite difficult in this project which is related to the Microsoft Visual Basic 6 programming.

In order to control the computers within a network, there are several function need to be used in the software such as lock / unlock the computers, restart and shutdown. Each function is all about the Microsoft Visual Basic 6 technique related to the Windows operating system.

In this project, the management system development refers to the system which is designed to manage the system of the internet café. Thus, it is divided into two – billing and database system. The purposes of billing system are to manage the time system and perform the cost calculation after user uses the computer. All the information and activities are very important and have to keep record. So, that is the importance of the database development in this project.

1.4 PROBLEM STATEMENT

- a. To create, design and testing programming techniques for computer control to suit with this project.
- b. To design a reliable system that included with time, usage charge and database managements for the internet café in context Malaysian environment.

1.5 THESIS STRUCTURE

Basically, this thesis is divided into five chapters to describe the whole project development and analysis. In this chapter, overall it is about the introduction, objective of this project and the problem statements. In the next chapter, I have done some background study on some available software at the market. The main focus in the chapter is about the features, advantages and disadvantages each of them.

In chapter III, there are descriptions about methodology that has been introduced in this project. This chapter will describe four steps involved during developing the software. It is also gives some information about general requirement for the project. The most important parts in this thesis is chapter IV. The detail discussion on result and analysis will be there. In this part, there are a lot of discussions about the whole project achievements. We will take a look how does the software is working and how far it is meet the objective of this project. At the last chapter, I have put some discussion about security issues related to this project. Some suggestion that I have considered to be useful and important in order to continue this project idea to be more innovative and reliable for the market are also stated in this chapter.

CHAPTER II

BACKGROUND STUDY

2.1 THE MARKET

Nowadays, internet café has become a part of public requirement in Malaysia. We can prove the fact with do some observation in our own town. Almost every place in this country has internet café. In fact, some of the internet café administrators have good software used to manage their system but, almost of them have no specific solution for the management purpose. Therefore, I take the chance to develop the Internet Café Management System for the administrators.

2.2 SOFTWARE AT THE MARKET

Some of the software's available at the market are MOLCC, WinCC, Antamedia and Easy Café. In the following description we will take in detail features and the other specification each of them.

2.2.1 MOLCC

Table 2.1: MOLCC Specifications

Features	Client Control	Cost Management	Database Management
Client monitor	Restart	Post prepaid	Daily collection
Product manager	Shutdown	Prepaid	Monthly report
Membership manager	Send message	Block hour	Monthly summary
			Using Microsoft Access database

User must buy a prepaid from the internet café administrator in order to use the computer. There are three types of prepaid available which are post prepaid, prepaid and block hour. The prepaid value will be deducted through a certain rate according to the total hours have been used by the user. This rule is look very troublesome to the user because the user has to register as a MOLCC member before he can buy the prepaid. This is included in the membership manager in the software. Besides that, the prepaid has an expiry date. It means that with certain prepaid value, the user is restricted to use the computer within an interval of time. In order to avoid this, the user needs to top up the prepaid.

The good feature in the client monitor is that it is graphically approach. If there is no user use the computer, the graphic is represented with red color otherwise, it is represented with green color. The administrator easy to monitor the client IP, status connection and it is also has right-click menu to restart, shutdown and send message to the client.

The other feature in MOLCC is product manager. It is used to list all the products information which is sold in the internet café. Some of them are name of product, price per unit and the quantity. It is more to the database management for the product. In this software, it uses Microsoft Access as the database medium. Basically MOLCC has three types of database applications. They are daily report,

monthly report and monthly summary. The database application is very interesting and quiet simple to manage.



Figure 2.1: MOLCC Server Interface

2.2.2 WinCC

Table 2.2: WinCC Specifications

Features	Client Control	Cost Management	Database Management
Client monitor	Restart	Charge rate per hour	Daily report
Point of Sale	Shutdown		Weekly report
Membership	Logoff		Monthly report
PC Configuration	Lock / unlock		Yearly report
	Force		Using *.rpt fail format and Microsoft Access database

In WinCC, it is more flexible in term of membership. If user becomes a member, the administrator will give some discount for charge per hour when the user uses the computer. The administrator can monitor the client computer through a graphical interface. Some of control function which included in the system is restart, shutdown, logoff, lock / unlock and force the client computer. Force the client computer is executed when the computer is hanging. There is also product management in WinCC. It is called point of sale and uses Microsoft Access to store information. Compare with MOLCC, point of sale can record name of user with the product cost information into the product database.

Besides that, WinCC have the other database specific for client computers in order to keep record how long a user used a computer and it charge. There are three types of the database. They are daily report, weekly report, monthly report and yearly report. They use the other file format known as *.rpt to represent the database report.

The other feature in this software is PC configuration. The administrator needs to set each of computers IP for the clients. The advantage of this feature is that the administrator also can use the auto detect to determine the computer IP automatically. It means that even each of client computers have the different IP

format, the server still can perform the administration monitoring. The connection status of client computers also can be observed within this section.

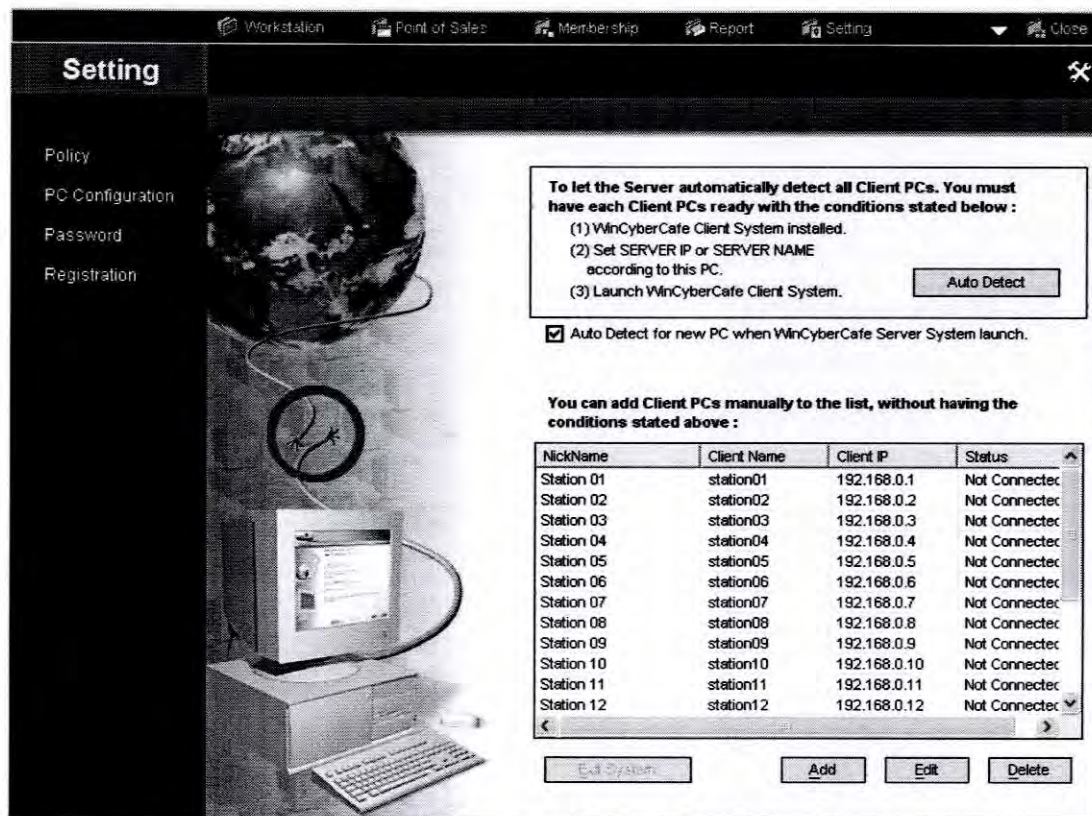


Figure 2.2: WinCC Server Interface

2.2.3 Antamedia Internet Caffe

Table 2.3: Antamedia Specifications

Features	Client Control	Cost Management	Database Management
Control Panel	Restart	Block hour prepaid	Daily report
Point of Sale	Shutdown	Charge rate per hour	Monthly report
Statistic	Lock / unlock		Yearly report
Membership			Database is encoded and protected from unauthorized modifications
Others: - Bandwidth monitoring - compatible with any Windows OS	Chatting		Data can be exported into *CSV and *.XLS format and *.TXT

Compare with the other internet café software before, Antamedia is very powerful software available at the market. But certain features are not suitable if it is used in Malaysia environment. Some for example is food and drinks are already fixed in the list. It can not add or remove from the list. Besides that, almost the listed foods are European and nothing related to our Malaysian foods.

Antamedia somehow apply very high security level like restrict access to Ctrl+Alt+Del and other system keys, local drives, Internet Explorer settings and Control Panel. When inactive, the client computer is locked with a protection screen. The administrator has wider administration option such as lock and unlock, reboot, shutdown client computers or take a look at their desktops. Users at the client computer is customizing with shortcuts which can give access only to specified applications and protect the computers of potentially destructive software that the users may run. Every employee has his own account (username and password)

which is used for Server login. His activity is also logged with the time and type of action he performed. Client computer has additional passwords which are used for their administration.

Activity log in Antamedia stores many information including charged items or services, time when Server is started (or closed), exact time of login attempts on Server, employee actions and many more. Bandwidth Monitoring shows how much network traffic is generated by each customer. Amount is displayed in kilobytes. There are plenty of options for limiting and charging per data transferred. In messages features, administrator and user can chat using short messages. User can ask for help or order a drink without leaving the computer.

Antamedia using two types of pricing which are charge rate per hour and block hour prepaid. Using charge rate per hour, the charge is updated at each minute. Block hour prepaid uses fixed charge for time interval (like \$1 for 15 minutes). This system becomes more flexible when the users can change computers and their time and bill will be transferred on new computer.

There three file format which can be chosen by the administrator in order to save the entire database. There are text file (*.txt), Excel Comma Separated Values (*.csv) and Excel file (*.xls).

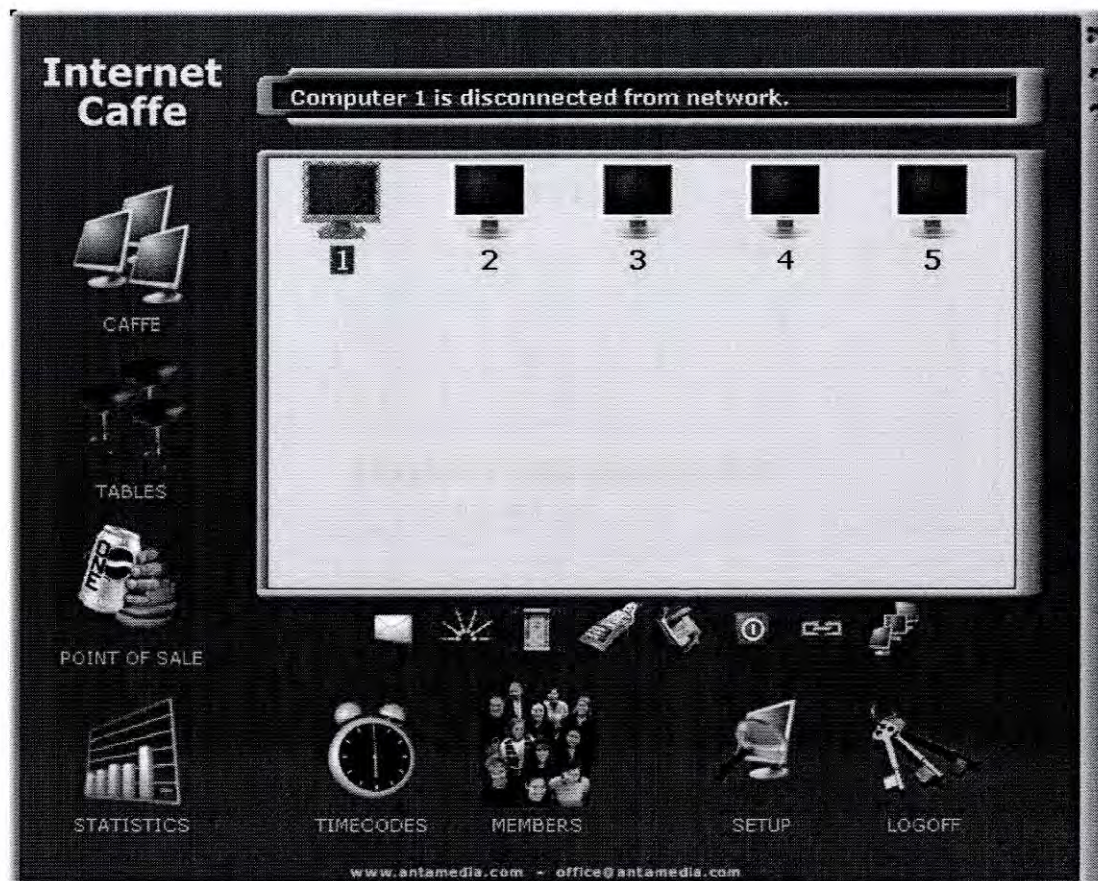


Figure 2.3: Antamedia Server Interface

CHAPTER III

PROJECT METHODOLOGY

3.1 DEVELOPMENT PROCESS

Before the software is developed, there are four items which have to be considered which are identify the software requirement, testing control functions, develop database and finalizing process. Each of them is described in detail as the following description.

3.1.1 IDENTIFY THE SOFTWARE REQUIREMENT

The software requirement is all about to have a good functionality to control each computer. All the needed functions have to be studied and analyzed. The software also must have a billing system for the internet café use. Basically these two things are the core of this software but the most important one is about functionality. Thus, for the first step, study case must be done to gather information. Based on this, we will see whether or not the basic functions of the software can be performed. It is also shows the difficulty level to develop the software