

**DEVELOP AND MONITOR CHATTING SYSTEM
FOR PKKT**

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DECLARATION

I hereby declare that this project report entitled
DEVELOP AND MONITOR CHATTING SYSTEM
FOR PKKT

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 Suleiman Abas and Fiah Muda who have encouraged, guided and inspired me throughout my journey of education

For my lecture and supervisor, En Mohd Zaki bin Mas'ud at Universiti Teknikal Malaysia Melaka (UTeM)

And lastly to my entire buddy who have encourage, guide and inspired me throughout my journey of education

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ABSTRACT

The project that will develop for the PSM is a chatting system for PKKT. The chatting system is for internal used only, only staff of PKKT that already registered for the system can access the chatting system. The chatting system was more secure to use and can avoid hacker from outsider because the system will ignore the user registration if the user ID is invalid. The functions provided by the chatting system included chatting and transfer file. The chatting system can support both Windows and Linux platform. The chatting system will be uploaded to the server. The server will act as the monitoring central to monitor and control the chatting system. The monitoring method of the chatting system will be proposed. This can help the administrator to manage the chatting system easier and make sure the chatting system is always under control.

ABSTRAK

Projek yang dibangunkan untuk PSM ialah *chatting system* untuk PKKT. *Chatting system* yang dibangunkan adalah untuk penggunaan PKKT sahaja, hanya staf PKKT yang telah mendaftar boleh menggunakan sistem ini. *Chatting system* ini adalah lebih selamat dipakai dan boleh mengelakkan serangan luaran berbanding dengan *chatting system* yang lain kerana sistem tersebut akan mengabaikan pendaftaran pengguna sekiranya ID yang digunakan untuk pendaftaran tidak sepadan dengan sistem maklumat ID yang disetkan dalam sistem. Fungsi yang disediakan oleh *chatting system* termasuk *chatting* dan penghantar file. *Chatting system* tersebut boleh menyokong Windows XP dan Linux. *Chatting system* tersebut akan dipaparkan dalam pelayan. Pelayan akan bertindak sebagai pusat pengawal untuk mengawal *chatting system* tersebut. Cara untuk mengawal *chatting system* tersebut akan diisukan. Ini untuk membantu pentadbir mengendalikan *chatting system* tersebut lebih mudah dan memastikan *chatting system* tersebut sentiasa dalam kawalan.

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LIST OF ABBREVIATIONS

BMP	Bit – Mapped Graphics
PKKT	Politeknik Kota Kuala Terengganu
GIF	Graphics Interchange Format
GUI	Graphical User Interface
HTML	Hypertext Markup Language
IP	Internet Protocol
JPEG	Joint Photographic Experts Group
MP3	MPEG Audio Layer 3
MPEG	Motion Pictures Experts Group
OS	Operating System
PSM	Projek Sarjana Muda
UTeM	Universiti Teknikal Malaysia Melaka
RAD	Rapid Application Development
TCP/IP	Transmission Control Protocol/Internet Protocol
UML	Unified Modeling Language
USDP	Unified Software Development Process
VB	Visual Basic
WMA	Windows Media Audio
WMV	Windows Media Video

CHAPTER I

INTRODUCTION

1.1 Project Background

The title for the Projek Sarjana Muda is develop and monitoring a chatting system.

The chatting system is develop for Politeknik Kota Kuala Terengganu (PKKT). Nowadays there are many different type of chatting system. But most of those chatting system was blocked by PKKT due to the security policy. This make the staff of PKKT difficult to make discussion and exchange idea. Thus, a new chatting system will be developed for the staff of PKKT. They can use this system for chatting and transfer file to make discussion and exchange idea within their local area network.

For the security purpose and to avoid hacker from the outsider, the chatting system will ignore the user registration if the user ID is invalid. The monitoring method of the chatting system will be proposed to make sure the chatting system is under control.

1.2 Problem Statements

These are the problems that bring forwards the project. Most of the chatting system was blocked by PKKT due to the security policy because the current chatting system open implement registration for all the users. The probability of the chatting system hacked by hacker was high. This make the chatting system were not secure to use. This made the staff of PKKT difficult to make discussion and exchange idea. At PKKT the research on the chatting system performance was lack.

1.3 Objective

The objectives of the project are:

- i. Develop a chatting system for PKKT.
- ii. Develop a chatting system that can transfer files.
- iii. Monitor the chatting system.

1.4 Scopes

- i. The chatting system is develop for the staff of PKKT only. The chatting system will ignore the user registration if the User ID is invalid.
- ii. Staff of PKKT can use this chatting system to chat and transfer file.
- iii. A way to monitor the chatting system will be proposed the monitor objective is to make sure the performance of the chatting system is under control.

1.5 Project Significance

This system develops for staff of PKKT. They can use this chatting system to chat, transfer file and make discussion or exchange idea. Only staff of PKKT can access this chatting system, this can avoid the chatting system hack by outsider.

1.6 Expected Output

Through PKKT chatting system, the expected output base on the operation of the chatting system. The chatting system can use for chatting and transfer file. The chatting system also can support Windows and Linux operating system. If the user ID registration is invalid, the system will ignore that registration. The admin can monitor the chatting system.

1.7 Conclusion

The chatting system is developed for the staff of PKKT to help them in make discussion and exchange idea. The chatting system functions include chatting and transfer file. The chatting system is for internal used only, so although other chatting systems blocked by PKKT, the staffs still have this system to make discussion and exchange idea within their local area network.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

These chapters discuss the process of searching, collecting, studying and analyzing sources from books, web pages and CD-ROMs. After collecting, studying and analyzing the sources, the next activity will be to define the project methodology as a guidance to complete the system, so that the objectives and scopes that have been mentioned are achieved.

The system development methodology is a formal system development process to define a set of methods, activities and automated tools to develop and maintain system. There have been many methodologies created to reduce the risk associated with error. The suitable methodology is an important aspect to ensure the project meets the goals and developed a successful system. Methodology can ensure the project requirements are completely meet and help to control the development the project execution. This section will explain the suitable type of methodology to apply to the project.

After defining the project methodology, the next section explain the project requirement in term of software requirement, hardware requirement and other requirement if it applicable.

In addition the project schedule and milestone is drawn to ensure the project can be completed on time. The schedule and milestones are delivered in the form of Gantt chart.

2.2 Literature Review

This section will explain the existing chatting system, the programming language comparison and the network monitoring tools used to collect the network data.

2.2.1 Existing Chatting System

“According to Murray Turoff (1971), we considered the ‘chat’ function as the minor accomplishment compared to what else we were doing. Today, in terms of usage it is probably the most popular group communication mode on the net.”

There are many different type of chatting system. The chatting systems that will be used as comparison are MSN Messenger, Yahoo Messenger and ICQ.

2.2.1.1 MSN Messenger

MSN Instant Messenger is a proprietary instant messaging network by Microsoft. It was released in July 1999 and is either the first or the last instant messaging network. The MSN Instant Messenger protocol is the language used in communication between the client and the server.

MSN Messenger includes a mechanism to allow one client to invite another into an out-of-band session. Invitation is one of the methods that support this part. Microsoft chose to make the file transfer mechanism subtly incompatible with all other invitation type. Microsoft uses the gateway.messenger, hotmail.com, port 80, as their

dispatch server for HTTP (Hyper Text Transfer Protocol) connections. HTTP is most often used for transferring HTML documents.

2.2.1.2 Yahoo Messenger

The yahoo messenger connects to the yahoo server on port 5050. The most difficult part to figure out in the messenger protocol is the login encryption. The earlier version of the yahoo protocol used the MD5 CRYPT function to do the encryption. This was a pretty weak encryption considering that the encrypted data being sent back to the server was always constant. With version 10 of their protocol yahoo has tried to make the login process more secure.

2.2.1.3 ICQ

ICQ is a way of getting in touch with people and friends. ICQ is an instant messaging computer program owned by Time Warner's America Online subsidiary. The first version of the program was released in November 1996.

The ICQ instant messaging, enabling users to send a message that immediately pops up on an online contact's screen. With the ICQ Instant Messenger, users can use the video/audio chat, send email, SMS and wireless-pager messages, as well as transfer files and URLs. If users are away from their personal computer, users can still chat with friends and contacts, even where the ICQ client is not installed, by using the web-based ICQ2Go that works from any computer. The port number support ICQ is port 5190.

2.2.1.4 Existing Chatting System Comparison

Table 2.1: Existing Chatting System Comparison

	MSN Messenger	Yahoo Messenger	ICQ
Supported OS	Windows	Windows and Linux	Windows
Port Number	80	5050	5190
Security Features	Supports HTTP proxy but does not support HTTP proxy authentication.	Supports HTTP proxy but does not support HTTP proxy authentication.	Supports HTTP proxy but does not support HTTP proxy authentication.
Login server Name	gateway.messenger.hotmail.com	login.icq.com and http.proxy.icq.com	msg.edit.yahoo.com

2.2.2 Programming Language

The programming language that will be used as comparison included JavaScript, Visual Basic and C++.

2.2.2.1 JavaScript Programming Language

JavaScript is a compact, object-based scripting language for developing client and server Internet applications. JavaScript operations are usually performed instantaneously. In fact, JavaScript is often used to perform operations that would otherwise encumber the server. This distribution of work to the relatively quick client-side service speeds up the process.

JavaScript's basic purpose is to pick up on the actions of the user and react to them. This is referred to as "interactivity" and JavaScript is a powerful tool to make the web pages interactive. JavaScript does this through a series of events, functions, and objects.

“According to H.M.Deitel *et al* (2005), JavaScript unlike languages that do not have built-in multithreading capabilities (such as C and C++) and must therefore make nonportable calls to operating system, Java includes multithreading primitives as part of the language itself and as part of its libraries. “

“According to H.M.Deitel *et al* (2005), Java provides a number of built-in networking capabilities that make it easy to develop Internet-based and Web-based applications. Java’s fundamental networking capabilities are declared by classes and interface of package `java.net`, through which `java` offers stream-based communications that enable applications to view networking as streams of data.”

2.2.2.2 Visual Basic

Visual Basic (VB) is an even driven programming language and associated development environment prototyped by Alan Cooper as Project Ruby, then bought and vastly improved upon by Microsoft. It is derived heavily from Basic and enables rapid application development (RAD) of graphical user interface (GUI) applications, access to database using DAO, RDO or ADO, and creation of ActiveX controls and objects.

VBScript have the strong integration with the Windows operating system. VBScript is the default language for Active Server Pages and can be used in Windows scripting and client-side web page scripting.

Visual Basic application can consist of one or more windows, or a single window that contains MDI child windows, as provided by the operating system. Alternatively, a Visual Basic component can have no user interface, and instead provide ActiveX objects to other programs via Component Object Model (COM). This allows for server-side processing or an add-in module.