

## BORANG PENGESAHAN STATUS TESIS<sup>^</sup>

JUDUL: FILE SHARING WITH ACCESS CONTROL LIST

SESI PENGAJIAN: 2005/06

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<sup>^</sup> Tesis dimaksudkan sebagai Laporan Projek Sarjana Muda (PSM)

**FILE SHARING WITH ACCESS CONTROL LIST**

**NOOR FADILLAH BT. MASURI**


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


**FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY  
KOLEJ UNIVERSITI TERNIKAL KEBANGSAAN MALAYSIA  
2006**

## DECLARATION

I hereby declare that this project report entitled  
**FILE SHARING WITH ACCESS CONTROL LIST**

is written by me and is my own effort and that no part has been plagiarized without  
citations.

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## DEDICATION

To my beloved family especially my mother and father, Puan Salumah Bt Mohamed and Encik Masuri B Ramli. I thank my parents for performing this difficult task, and the journey does not end here.

To my supervisor, Puan Wahidah Bt Md. Shah for being receptive and critical, and challenging me to be a better student.

To my friends, for your sacrifices, encouragement, and support towards project accomplishment.

## ACKNOWLEDGEMENTS

First of all, very thank to my project supervisor Puan Wahidah Bt. Md. Shah for giving some respond and guidance in completing my project.

I am very much grateful to my friends and my family for their presence in my every step, every decision and every dream. I am also grateful to all those smiley faces in my dream and in my surroundings.

I always dream to be a highly eligible IT professional. I always dream to be a perfectionist. I want to touch the sky and I know I can do it pretty fine. Last but not least, I would like to acknowledge all the Projek Sarjana Muda committee that give an introduction of the requirement to all of the students. Thank You.



## ABSTRACT

The *Projek Sarjana Muda* is a compulsory subject for KUTKM students in partial fulfillment of the requirements for the Bachelor of Compute Science (Computer Networking). The project name is File Sharing with Access Control List (FSACL) which dedicated to group of people who always connect with each other to share their file. File Sharing with Access Control List (FSACL) system is a web-based file sharing system. The FSACL provide five main modules to user consists of main, message, file list, file upload and logs activity. The FSACL provide user-side and administrator-side. Each module is provided into all user-side except logs activity. Logs activity just provided to administrator –side only. In message module, its contain send and inbox message to make all user communicate with each other in different location. User can user this module to request some new file from other user. File list will list out all file that contain in server and will list out on each user page base on their ACL type privileges. File upload module allow user to upload file into the server and determine their ACL type privileges. There are four types of ACL consist of read-only, read-write, admin-access and block-all. Admin-access is special for administrator only. Block-all is just for the owner file only and the file not list out on other user file list except the file owner. Read-only and read-write are for all users in system. With read-only, user just can view the file content. With read-write, user can view and download the file from the system. Logs activity just provided into administrator-side. It is use for administrator to obverse the user activity when they view, download, update and upload file in system.

## ABSTRAK

Projek Sarjana Muda ialah subjek wajib bagi pelajar KUTKM bagi memenuhi keperluan untuk melahirkan graduan dalam bidang Ijazah Sarjana Muda (Rangkaian Komputer). Nama projek yang telah dibangunkan ialah *File Sharing with Access Control List (FSACL)* dimana ianya ditujukan kepada sekumpulan pengguna yang sentiasa berkomunikasi antara satu dengan yang lain untuk berkongsi fail masing-masing. Sistem *File Sharing with Access Control List (FSACL)* merupakan sistem pengkongsian fail berasaskan web. FSACL mengandungi lima modul kepada pengguna yang terdiri daripada *main*, *message*, *file list*, *file upload* dan *logs activity*. FSACL sistem menyediakan bahagian pengguna dan bahagian pengurus system. Setiap modul adalah untuk kesemua pengguna kecuali aktiviti log. Aktiviti log hanya disediakan untuk bahagian pengurus sistem sahaja. Di dalam modul mesej, ianya mengandungi penghantaran mesej dan *inbox* mesej untuk memberi peluang kepada kesemua pengguna berkomunikasi diantara satu sama lain di lokasi yang berbeza. Pengguna juga boleh menggunakan modul ini untuk membuat permintaan fail baru daripada pengguna lain. *File list* merupakan senarai kesemua fail yang terdapat di dalam server berdasarkan keistimewaan jenis ACL masing-masing. Terdapat empat jenis ACL iaitu *read-only*, *read-write*, *admin-access* dan *block-all*. *Admin-access* dikhaskan kepada pengurus sistem sahaja. *Block-all* pula dikhaskan kepada pemilik fail yang asal dan tidak akan disenaraikan pada *file list* pengguna lain kecuali pemilik fail tersebut. *Read-only* dan *read-write* disediakan untuk kesemua pengguna sistem. Dengan *read-only*, pengguna hanya boleh memaparkan isi kandungan fail tersebut. Dengan *read-write* pula, pengguna boleh memaparkan dan memuat-turun fail tersebut dari sistem. Modul *File upload* membenarkan pengguna untuk memasukkan fail ke dalam server dan menetapkan jenis ACL bagi fail mereka. Aktiviti log adalah dikhaskan kepada pengurus sistem sahaja. Ianya adalah untuk pengurus sistem membuat pemantauan kepada aktiviti pengguna semasa mereka sedang memaparkan, memuat-turun, mengemaskini dan memasukkan fail ke dalam sistem.

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# CHAPTER I

## INTRODUCTION

### 1.1 Project Background

File Sharing with Access Control List (FSACL) is about generic file sharing uses ACL method to grant access rights to documents on a per-user basis through network connection. These data could be either file, for example document, image, or web pages. ACL method includes several permissions such as read-write, read-only, block access and admin access only. The user must have user account to access to this system. The password of each user will be encrypted when it stored in database.

This system includes admin-area and user-area. Admin-area will use ACL method when admin needs to determine which user can view or download the data. User-area use ACL method when user uploads their data and they must determine the ACL method for that data. ACL method is used to make sure the data is protected from entrusted person. The person who is granted to access to data can view or download it. All data will be placed at file server.

A sending messages tool is an attache to allow some communication between users to request the data. User also can use this tool as a communication tool to send personal messages like e-mail. The communication tool is important when two users live at different location. So, they can communicate by sending message to each other. This application is a web-based application by using Personal Homepage (PHP) programming language. This application uses PHP to provide with an interface to a

MySQL server that allows user to store and retrieve documents and to share those documents between users. Log activity also provided to show the download activity details, for example file name and download time.

## 1.2 Problem Statements

Most of file sharing service that provided by operating system is not included ACL method to granted access of data. For example, Windows also provide the Sharing File service and Access Control List method on its environment but in a different part. Below are problems that occur during current system:

- **Data can be edit easily**

Based on Sharing File service, when users shared folder on network and on the same time other user can read. Then make some editing on that data. So, the data and document is simply can be duplicate and edited by other person.

- **Data confidential can be upload and download by anybody**

Based on the simple file upload software, user just easily uploads and downloads the data without care about the data confidential in public access.

- **No communication between user in sharing their file**

User needs to communicate to each other to negotiate about the requested data from other user. Without communication, no requirement or request will be fulfilling.



### 1.3 Objective

The objectives of File Sharing with Access Control List (FSACL) proposal are:

- **To protect data confidential**  
To avoid the data not accessing by entrusted person which user will determine the ACL method for their data.
- **To user can send message to other user**  
User can send message to other user by using email concept in difference location to communicate with each other.
- **To data access can be controlled**  
The data accessing of other person can be controlled by determine the ACL method for each data. It also to avoid lose data from the server.
- **To data more manageable**  
Data and documentation management be more manageable and safety. User can search any keyword that related to data.

### 1.4 Scopes

The scopes of File Sharing with Access Control List (FSACL) are focusing several major which:

- **ACL method as security method**  
It will be manage by administrator that controls all ACL method for each data and also user access account. User must determine the type of ACL for their data before upload it into the system. ACL method is use as a security method through network which administrator or user can determine the ACL method for their data.

- **Provide upload and download file**

The file sharing program is designed to upload and manage files. The files are stored in a predefined folder. Activity log will be used to determine the details of download activities that have download the data.

- **Focus on Windows XP environment**

This system focuses more on Window XP environment. It is because this platform support for Window Server domains and targeted at power users or business clients.

- **Provide sending message**

Sending messages between two users by using email concept as a network communication tools. User can communicate with each other in different distance to request any data or as personal messages.

## 1.5 Project Significance

The project a contribution of the system is it will be developed as a web based system. The web based approach is more suitable because it is easy to develop the system and easy to understand. Besides, this approach also can achieve from anywhere through the Internet. The end user will get more benefit from this system to sharing their file or document. Actually, most user can use this system are staff in organization, people in education environment and business field. File Sharing allows for seamless sharing of files between two or more computers on a network. These computers could be in the same room, or they could be hundreds of miles away. One computer, a client, will connect to another, a server. To the client, it appears that all the files are on the local computer. In reality, files are transferred over the network in real time as they are requested.

Some of benefit of this system is with the usage of File Sharing with Access Control List (FSACL), user can make sure their data is save from entrusted person to

duplicate the data. It is because user will determine the ACL type of data before they upload it into the system. Other user cannot easily edit the data and make that data as a commercial product. With ACL method, the data confidential is saving.

Secondly, user in a different distance can send message by to each other neither as personal message or requesting some data. It also can provide time manageable and network communication. In message function, user just choose user ID and type the message. It will avoid data request pending or miscommunication with each other user.

Lastly, file sharing with ACL method is more manageable and safety. Users do not need to go from one room to another to copy a needed file. They can share and work on files using different computers on the network. They just have made a request and other person will upload the data into the system. User also can make data request on message board which all user can add view the comments on that page. The file sharing is similar like documentation management. The different is this project manage file with ACL type for the uploaded file.

## 1.6 Expected Output

The expected output is expected outcome of the execution of the test case in the system development:

- **User access account**

Administrator must add user account into the system before user allowed to access into the system. The system provides user account page that will use by administrator. Administrator will give temporary password to user. Then when user logs in into the system, they will change their temporary password. If username and password does not match, the log in page will clear the wrong username and password.



- **On-line application**

This system provides an on-line application of organization. The registered user can make an application through the Internet from anywhere. All the application information will store in the database of the system. Other user from different distant can communicate to request data.
- **Display information**

This system also allowed the registered user to view the listed files name, type and the owner of that data in system. They also can view message board, which contains other user conversation with community.
- **ACL type status on data**

The system will list out the data according to its ACL type. Each user has different list of data because it depends on what ACL type that have determine by the owner.
- **Administrator can control everything**

This system also can view the status of application for the registered employers. So, the registered employers can view their status via this system through the Internet. If the application is approved, they need to go to the immigration department and bring the related documents. After that, they can get the pass or visas of foreign workers or maids.
- **System activity logs**

Every activity that occurs on the system will be note as a system activity logs. The logs page will list the system activity logs according to its time, location, action, size and user who make an action. The system activity logs just can view by administrator.
- **Updating the information**

These systems also allowed the user to upload new files into the system by determine the ACL type of data. User also can choose which other user can access to its data.