# WEB-BASED FTP SYSTEM USING OPEN SOURCE PLATFORM (WFSOSP)

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# WEB-BASED FTP SYSTEM USING OPEN SOURCE PLATFORM (WFSOSP)

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

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
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2008

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I hereby declare that this project report entitled
**WEB BASED FTP SYSTEM USING OPEN SOURCE PLATFORM (WFSOSP)**

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STUDENT : _____ Date: 19/11/08
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# DEDICATION

I dedicated this thesis to my beloved family. Without their patience, understanding, support and love, the completion of this work would not have been possible. I would also like to dedicate to the authors of hundreds of books and research journals and also to program expertise in online forum, without whom there would be nothing to support my words or code my program. I make no claims about the contents of this book originating from my research and findings. I must also dedicate this thesis to my supervisors who have inspired and assisted me throughout this research. Finally, I dedicate to all friends and to everyone who have directly or indirectly helped and support me.

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# ABSTRACT

The Web-Based FTP System using Open Source Platform is developed mainly for staffs in an organization where the needs to transfer file is highly needed. It is an online file exchange system which can be accessed via Windows or Linux based clients. All the staffs in an organization can retrieve information about the system but only the qualified staff can be register to use the system. The qualified staff is determined by administrator. Furthermore, the administrator can delete any staff's account in the system due to a sturdy reason, can upload file to a group of staff with specified file permission, view the newly registered staff to the system and assign their group and view the person that currently using the system. Staff that successfully registered to the system can upload file to their other staffs in the organization, retrieve file that are available for them and they also can save any changes in their user account. The methodology used in developing the system is Waterfall model. An analysis study has been done based on the current manual system and all the problem statements and requirements have been identified. Moreover, WFSOSP develop using open source and the interface has been designed according to the requirement and needs of the current market. Rather than that this Web-Based FTP System using Open Source platform will help to improve the performance of current situation and overcome the problems that arise nowadays.

# ABSTRAK

*Web-Based FTP System using Open Source Platform (WFSOSP)* telah dibangunkan khasnya untuk pekerja pejabat sesuatu organisasi dimana keperluan untuk pertukaran fail diperlukan. Sistem ini boleh dicapai melalui internet yang membolehkan pergabungan antara Linux dengan Window. Semua pekerja pejabat dalam organisasi tersebut dibenarkan untuk mandapatkan maklumat tentang sistem ini tetapi hanya pekerja pejabat yang terpilih sahaja boleh pendaftar untuk menggunakan sistem ini. Pekerja pejabat yang layak ditentukan oleh pentadbir. Selain itu, pentadbir juga boleh membatalkan akaun pekerja pejabat di sistem ini atas sebab-sebab yang tertentu, muat turun fail untuk sekumpulan pekerja pejabat dengan kebenaran fail yang ditentukan, menguruskan maklumat pekerja pejabat yang baru mendaftar di sistem ini dan sekali gus dapat melihat pekerja pejabat yang menggunakan sistem itu pada ketika itu. Bagi pekeja pejabat yang berjaya mendaftar ke sistem ini pula, mereka juga boleh muat turun fail ke rakan sekerja mereka, muat turun fail yang tersedia untuk mereka and juga simpan perubahan dalam akaun mereka. Model Air Terjun telah dipilih sebagai metodologi untuk WFSOSP. Satu analisis telah dijalankan terhadap sistem semasa untuk mengenalpasti keperluan and pernyataan masalahnya. Selain itu, WFSOSP dibanggunkan meggunakan sumber terbuka dan antaramukanya direka berdasarkan keperluan dan permintaan pasaran semasa. Sejajar dengan itu, sistem ini diharap dapat membantu dan menyokong dalam meningkatkan pretasi sistem semasa dan megatasi masalah yang wujud pada masa kini.

# TABLE OF CONTENTS

# LIST OF TABLES

# LIST OF FIGURES

# LIST OF ABBREVIATIONS

| | |
|---|---|
| WFSOSP | Web-Based FTP System using Open Source Platform |
| FTP | File Transfer Protocol |
| PHP | HyperText PreProcessor |
| IT | Information Technology |
| GUI | Graphical User Interface |
| TCO | Total Cost of Ownership |
| ASP | Active Server Pages |
| CGI | Common Gateway Interface |
| JSP | JavaServer Pages |
| HTTP | Hypertext Transfer Protocol |
| SMTP | Simple Mail Transfer Protocol |
| TCP/IP | Transmission Control Protocol/Internet Protocol |
| ASCII | American Standard Code for Information Interchange |
| OSS | Open Source Software |
| OSI | Open Source Initiative |
| HKUVPN | Hong Kong University Virtual Private Network |
| VPN | Virtual Private Network |
| SDLC | System Development Life Cycle |
| OOAD | Object-Oriented Analysis and Design |
| LAN | Local Area Network |
| DFD | Data Model Diagram |
| CSS | Cascading Style Sheet |
| HTML | HyperText Markup Language |
| DBMS | Database Management System |
| SDLC | Software Development Life Cycle |
| OOSDLC | Object Oriented System Development Life Cycle |

# LIST OF APPENDICES

# CHAPTER I

# INTRODUCTION

This chapter describes an overview of a system entitled Web-Based FTP System using Open Source Platform (WFSOSP). It starts with brief explanations of the project background followed by its problem statement, scope, project significance, expected output and conclusion for introduction chapter.

## 1.1 Project Background

File Transfer Protocol (FTP) is standard for Internet protocol, which is the simplest way to exchange file between computers on the Internet through a network. FTP is a common protocol that intended for transfer files over any TCP/IP based network to manipulate files on another computer on that network regardless of which operating system are involved. Generally FTP used to transfer web pages file from their programmers to other computers which operate as their server for end users. FTP servers proceed as a middle server between other physical server, for intends game servers, voice servers and internet hosts.

By default a FTP server listen on port 21 for incoming connections from FTP client. FTP services used to promote sharing of files, to encourage indirect or implicit

use of remote computers, to shield a user from variations in file storage systems among different hosts and to transfer data reliably and efficiently.

An FTP service is a build-in service that needs to use command line so that its functions can be implemented in real world. In these modern days, only few people are keen to spend their time to study how to apply these services in real world accept for those who are studding or working in IT field. They rather use an ordinary way that provided by windows to share files with another computer or used a traditional way like move from one computer to another computer to transfer files using storage device like pen drive, floppy and disc.

WFSOSP is a system that can helps user to implement FTP services for the purpose of file sharing among them and admin as a person that maintain this application by adding or deleting the qualified staff who can use this system. With WFSOSP the user does not need to know the command to upload or retrieve a certain file because this system provided a GUI based interface which enable user to click on the required button to enable those function to run.

In additional there will be no difficulties for user who wish to communicate with different operating systems. WFSOSP can be used in both windows and Linux platform because it developed using Macromedia Dreamweaver and PHP as its scripting language.

Initially WFSOSP divided into two interfaces that were user's interface and administrator's interface. User mainly include staff of an organization has the privilege to upload any file to FTP server according to the person who received it while administrator are the one who decide which staff can use the system and manage the system by adding and deleting users. WFSOSP develops based on GUI that assures the good level of user friendly.

## 1.2 Problem Statements

There are several problems that identified went implementing the FTP services for users without any IT based knowledge. Most of them have difficulty to implement that service especially those with Linux server. This situation happens went user needs to use command line which they are not familiar with and basically command line does not have user friendly features.

Furthermore, user who wishes to implement this service must have experience with command line or known the correct command to enable file transferring between different computers. WFSOSP act as a solution for those problems because it based on GUI where most user familiar with, user friendly and does not require a high level of English. They only have to select or click on the button provided in the interface of WFSOSP to upload files or to retrieve files without taking care of the correct command they need to know.

In addition of that, this is a system that developed using open source software. There are many benefits we can gain if developed a system using this unlicensed software such as a developer free to create, to develop new thing or modified it according to the requirements and unpaid software compare to licensed software where an organization must spent some amount of money to buy the license. Besides that, the developer becomes bounded to that software where no modification taken place according to their favor if they choose licensed software.

As a conclusion this system is developed to overcome the problem user faced with Linux server and FTP service. Another important thing that this system had is that it developed using open source software where the implementation and the enhancement can be done without any problem as the source code are available in internet. Other than that it also can reduce cost as it is not licensed software and can be afforded by any organization.

## 1.3 Objective

The objectives of the system are as follows: -

- To successfully implement the FTP services in server.
  - Implement the FTP service in server which uses Linux platform so that it can be ready to served the client according to the request. Try to put file in server or get file from server to ensure that the FTP service work perfectly in command line before using the WFSOSP.

- To develop the proposed system using open source platform.
  - The proposed system develops using open source platform such as PHP, apache server and Microsoft Dreamweaver where the source code is available free in the net.

- To put file in server and to get file from server using WFSOSP.
  - There will be interface which has the put file function and get file function. This function used to enable user to upload in and retrieve file from the server without any command line knowledge.

## 1.4 Scope

This system is a new system which allows user to use FTP service to help user to upload or download files from a FTP server in same LAN without using command lines. In other word, it also can be classified as a system that contains a collection of files where user can access the existing files or put their files so that the file can be retrieved by others.

The specific users for this system are administrators, IT staffs and office staffs. It also can be used by Computer Science students to gain the basic ideas how the FTP service works. These proposed system done in peer to peer environment and in client-server environment through switch as an intermediate device. There are two operating system involved which is windows XP platform for client computer and Ubuntu 8.0.4 platform for server computer.

The features that will include in the WFSOSP are:-

i) Authentication
   - Username and password function to access the system

ii) FTP service
   - Get file function and put file function.

iii) User guide features
   - Contact us function where it consists of the email address and contact number for any feedbacks.

## 1.5 Project Significance

This WFSOSP using Open Source Platform will ensure a better implementation of FTP services in real world. User does not need to afraid to use a Linux platform anymore or forced to have knowledge about command lines in Linux because the system provide a GUI based development which most user is easier to use. From this there will be no wastages of time to train user to use those services and makes things become easier.

Nowadays most organization places a high expectation on their staffs so the works can be done quickly and without any mistake. For a staff this can be achieved if they can get the resources such as files immediately. The proposed system gives effective solutions with good benefits because in one click only the request file can be