

**SMALL BUSINESS NETWORK DESIGN WITH SECURE E-COMMERCE
SERVER**

A COURSE PROJECT REPORT

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BONAFIDE CERTIFICATE

Certified that this mini project report "**Office Management System**" is the bonafide work of **Mukundaan.S(RA2011003011099),Adithya Dutt Kambhampati(RA2011003011072), Keerthi Kiriti Chakali(RA2011003011068)** who carried out the project work under my supervision.

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ABSTRACT

A network has to be designed for a small business organization which has 100 users. The organization hosts an e-commerce application on a server which is accessible to internet users using https and with a public IP address.

A network for the same was designed using Cisco Packet Tracer version 8.0.0. The requirements were emulated and tested for connectivity. A server was setup, which is accessible only on port 443 with HTTPS connectivity. Internally, department routers are interconnected for unfiltered access to the server.

The company router has NAT to translate public IP address to private device IP addresses. Switches are used to ensure optimal number of devices can be used with both the company network as well as the broadband network.

Pings were used to check the connectivity and the reachability of the systems from all the network.

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INTRODUCTION

The Office is the center of an organization. Commercial office acts as a central directing and coordinating agency of the various activities of any business. An office is understood to be a place where clerical work is performed and where all kinds of paper work (letters, correspondence, Files, records, etc.), is maintained and dealt with. It is a central place where all sorts of clerical work are done to coordinate and control the affairs of the whole organization. An organization cannot be carried on without an office, as a watch without the mainspring is useless. In this present age, the modern office organization has so much importance as the brain in a human body. Thus a commercial office can be called “a clearing house of all essential business information”. The office has to receive or collect all information of the business, process the collected information (analyses, arrange, and classify) and put them into understandable form on the one hand. On the other hand, the processed information has to be presented or communicated to the management of the business, whenever it is required i.e. efficient office management comprises of a number of vital functions, which include time management, organizing the paperwork and workspace, managing multiple projects simultaneously, and being in control of all your job responsibilities. Virtually all software used in enterprises today has the same goal which is supporting business processes. Some processes are entirely automated, relying solely on communication among applications, others probably rely on people to initiate the process. In either case, it's often possible to specify a discrete series of steps known as ‘workflow’ that describe the 2 activities of the people and software involved in the process. Once this workflow has been defined, an application can be built around that definition to support the business process. The need for a computerized office management system creates a new area for applying results, techniques and methodologies to carry out operations in the office environment. However, with the computerization of the office environment, solutions to a large number of difficult office tasks will be obtained and the workload reduced.

REQUIREMENTS

Requirement Analysis

REQUIREMENT SPECIFICATION: -

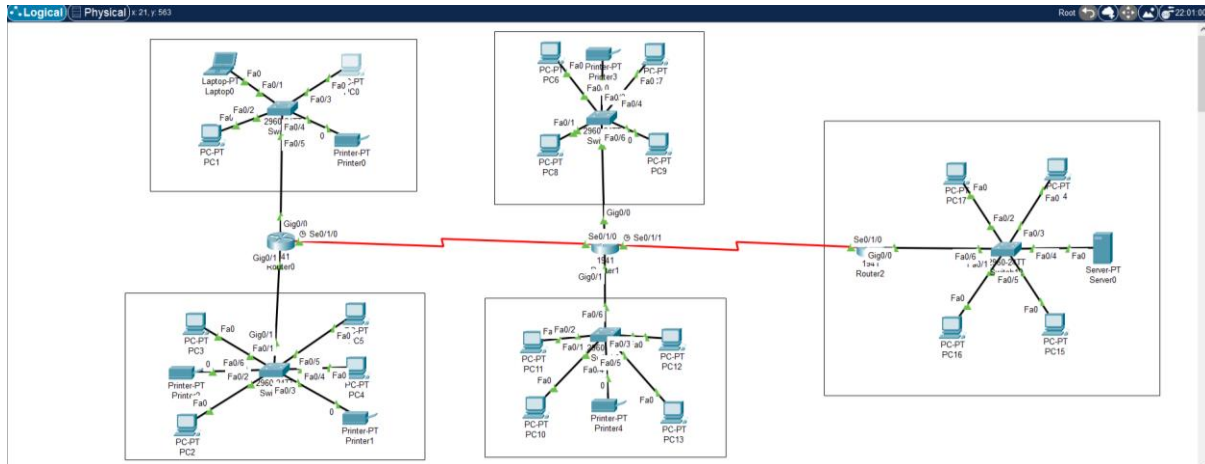
- ✓ server
- ✓ Router WRT-300N
- ✓ Switch
- ✓ Laptop

Software Requirement

1. Operating system: Windows
2. Platform: Cisco Packet Tracer
3. Back end: IOT server
4. Languages: HTML

ARCHITECTURE AND DESIGN

The network architecture is as follows:



DESIGN OF THE NEW SYSTEM

This section is concerned with how to provide an efficient and effective system that will be configured to meet the requirements of the office. This system is a completely automated system that computerizes the entire process of managing records in an office. It is an application software designed to manage all the records of every part that makes up the organization such as the record of the students, the staffs and that of the customer of the organization.

DATA COLLECTION METHOD

The data used in putting this study together was collected through the following medium.

1. This source was consulted at intervals as the research proceeded and the needed information's were gotten from some various "websites", "articles" and

“journals” on the internet.

2. E-books were downloaded, studied and analyzed to carefully pick the information's which are related to the research topic.
3. A brief interview was conducted with some staffs of the organization to find out about how they feel while using the manual method, and what they think about the new automated system.

IMPLEMENTATION

SYSTEM IMPLEMENTATION

This is aimed at putting the new system to use and testing its capability to see if it meets up to the expectation which the developer had in mind. The system implementation is going to be done on both hardware and software platform. Below, are the list of hardware's and software's required for the proposed system to effectively run.

HOW THE NEW SYSTEM WORKS

When the user loads the application on a computer system a splash screen window is first displayed telling the user that the application is loading, when the application has finished loading an administrative log in window is displayed requiring the user to input username and password, this window secures the application; so that unauthorized users can not have access to the application. After the user has successfully logged in to the application the main menu window is displayed, this window outlines the various tasks that the user can perform with the 19 application. In this main menu window there are two main sections: the 'Enter New Record' and the 'Open Existing Records'. The 'Enter New Record' section contains three buttons; student log, staff log and customer log; the user can click either of the buttons to enter a new record. The 'Open New Section' section also contains three buttons; student record, staff record, and customer record, the user can click on either of the buttons to view the existing records, carry out updates, and print if necessary. Beneath the two sections is an 'About' button that the user can click to know more about the application

SYSTEM MAINTENANCE GUIDES

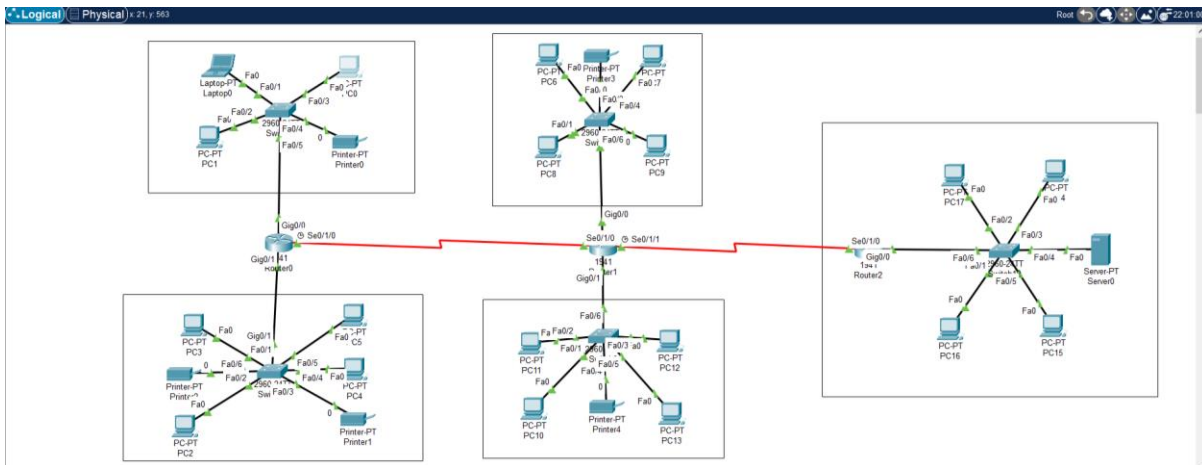
Every system needs to be properly maintained to ensure maximum efficiency. Below are the maintenance guides for the new system:

- The user should always ensure that any computer system that the application will be installed on should meet both the hardware and software requirements specified for the new system so that the system can run effectively.
- The user should always ensure that there is an up to date anti-virus installed on the computer system.
- The computer system should be kept in a properly ventilated environment.
- The user should always ensure to exit the application properly after carrying out operations.
- The user should ensure that the username and password of the system is kept confidential so that unauthorized users won't have access to the system.

LIMITATION OF THE NEW SYSTEM

1. The system that is designed from this research work is a computer based system and therefore cannot be used without a computers system and the user also has to be a computer literate for efficient use
2. This system is customized application software and therefore cannot be used by every organization because it was designed to meet the need of the organization that was used as the case study precisely.

RESULTS AND DISCUSSION



This project has got many advantages. The user will find it very easy to search for particular record or a purchase that was done according to data because there is no paper required and everything is computerized. Storing of data in computer is more compact and retrieving is also easy and much efficient compared to paper representation of data.

CONCLUSION AND FUTURE ENHANCEMENT

SUMMARY

An office is a place where all sort of clerical work is performed and where all kinds of records are collected, kept and processed to control and coordinate the affairs of the entire organization. Office management entails keeping and managing the records of an organization. Computerized office management is designed to replace the manual way of collecting, storing, processing, retrieving, and dissemination of data/information in an office to make it more effective, efficient, accurate, faster, safer, and also for easy access and retrieval. Furthermore, this system is a window based application that was designed with Visual Basic .Net and Microsoft Office Access Database Management System, therefore this application software can be installed and used on any desktop and laptop computer that are running on windows operating system platform.

CONCLUSION

In conclusion the design and implementation of computerized Office Management System will go a long way to reduce the work load in an office by computerizing the process of collecting, storing, processing and retrieval of records in an office and thereby bring about an increase in its productivity. Computerized office management will prevent information security accidents/problems and also to eliminate any form of error that normally occur while handling information management in the office. 22 This system is designed to result in the collection, storing, retrieval, communication and use of data for the purpose of efficient management of operating in the office.

REFERENCES

- Anigbogu, S.O, (2003). Introduction to computer science and programming languages. Benue: Christon International Company Ltd.
- Behrouz, A, & Sophia, C, F, (2004). Data communication and Networking. New York. McGraw – Hill.
- Carlson, B., Paul, B, & Crilly, J, C, (2002). Communication systems 4th Edition. New York. McGraw – Hill
- Coalition, G. (2012). Office Management and Automation, Published by Micheal Woods
- Gupta S K (2005), Office Management, 5th Edition, Published by Vishal Prakashan Mandir.
- James A O'Brien (2012), Management Information Systems, 6th Edition, Published by Tata McGraw Hill Companies, New York.