INTERNATIONAL ADVANCED DIPLOMA IN COMPUTER STUDIES

MODULE:
INTERNET SYSTEMS ADMINISTRATION

ASSIGNMENT TITLE:
INTERNET SYSTEMS ADMINISTRATION

DECEMBER 2009

Important Notes:

- Please refer to the Assignment Presentation Requirements for advice on how to set out your assignment. These can be found on the NCC Education *Campus*. Scroll down the left hand side of the screen until you reach Personal Support. Click on this, and then on Policies and Advice. You will find the Assignment Presentation Requirements under the Advice section.
- You must familiarise yourself with the NCC Education Academic Dishonesty and Plagiarism Policy and ensure that you acknowledge all the sources which you use in your work. The policy is available on *Campus*. Follow the instructions above, but click on Policies rather than Advice.
- You must complete the **'Statement and Confirmation of Own Work'**. The form is available on the Policies section of *Campus*. Scroll down the left hand side until you reach Personal Support. Click on this and then click on Policies and Advice.
- Please make a note of the recommended word count. You could lose marks if you write 10% more or less than this.
- You must submit a paper copy and digital copy (on disk or similarly acceptable medium). Media containing viruses, or media which cannot be run directly, will result in a fail grade being awarded for this module.
- All electronic media will be checked for plagiarism.

Marker's comments:		
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Mark:	**Moderated Mark:**	**Final Mark:**

Introduction

Internet Systems Administration is a vast and developing subject. Its components can comprise diverse topics, such as *system administration*, *network administration* and *implementation and management of internet protocols*. There are FOUR tasks in this assignment, focusing on some very important aspects of system administration. The first task is designed to offer opportunities for candidates to demonstrate their knowledge of internet and web technologies. The second task concerns the installation and management of web related software. In the third task, candidates will deal with TCP/IP network technologies. The final task is about the configuration and use of web browsers.

Aims

- To encourage candidates to broaden their knowledge about various aspects of Internet System Administration.
- To develop skills in analysing problems, identification of administration problems and evaluation of alternative solutions.
- To give hands-on experience to students in performing some important administration tasks.

Task 1a – 18 Marks

Write brief comparison reports (no more than 100 words each) about the following technologies:

1. Compare and contrast HTTP with XML
2. Highlight the differences between desktop publishing and web publishing
3. Compare the client/server architecture and the peer-to-peer architecture
4. Describe how a caching proxy server differs from a web server
5. Highlight the differences between hosting a site and hosting a server
6. Describe the main features that differentiate IPv6 from IPv4

Task 1b – 20 Marks

You have been asked to arrange the web hosting for a medium sized estate agent who has five branches in your region. Their site will provide information about the facilities and quality of life in the area such as schools, community, public transport, roads, airports and weather. It will also describe the company's offerings on property sales, home financing, legal aid etc. Sellers and buyers will be able to register with the site and request information. Prepare a feasibility report (approximately 700 words) on the most appropriate approach for hosting the site. It should discuss the following options:

1. Setting up your own Web Server
2. Dedicated hosting
3. Collocated hosting
4. Virtual (shared) hosting
5. Free hosting

Highlight the distinguishing features in relation to customer appeal, technical appropriateness and cost effectiveness. The report should also bring to focus the situations in which each of the above options is useful as well as discussing any shortcomings, constraints and drawbacks they may have. Based on this information, make your recommendations and give reasons for your choices

Task 2 – 21 Marks

Installing IIS and Apache servers simultaneously

Centres should install either IIS or Apache on the machines designated for the projects. Candidates are then required to install the other type of web server.

At the completion of this Task, compile a report (approximately 800 words) on your experience, including any assumptions and any decisions made during the project. Moreover, the report should contain screen images and print outputs as evidence of having performed the activities.

a) Install the server.

b) Perform the following activities with one of the servers while the other server is in a stop state and then again when it is in a start state. Repeat the activity by switching the servers:
   1. Stop
   2. Restart
   3. Ping your server to check that your server is live.
   4. Test that your server(s) is running correctly by using the appropriate URL.

c) Create a simple web page on both servers.

d) Configure the server for appropriate logging.

e) What is the need to have common-log-file formats and what are the most common formats?

f) How can you achieve the following objectives by logging the web server activity?
   1. Find out who has visited your site.
   2. Find out what was viewed.
   3. Find out when the information was last viewed.
   4. Monitor attempts to access your sites, virtual folders or files.
   5. Determine whether attempts were made to read or write to your files.

g) Download and install an appropriate tool for analysing logs (for example, IIS Log Parser**).** Run the parser to demonstrate its usage.

Task 3 – 21 Marks

TCP/IP protocols

Compile a report (approximately 1,500 words) on TCP/IP networking. At the very least it should cover the following topics:

a) Definition/elucidation of a “network protocol suite”.

b) Definition/elucidation of the TCP/IP protocol system.

c) Desirability of TCP/IP standards.

d) Explain how the TCP/IP suite addresses the following:
   1) Logical addressing
   2) Routing
   3) Name service
   4) Error control and flow control
   5) Application support

Task 4 – 20 Marks

Browser Settings

Compile a report (approximately 500 words) containing screen images and print outputs as an evidence of having performed the following activities:

a) Using Internet Explorer, perform the following activities related to cookies.
   1) View cookie settings if there are any.
   2) Remove all the cookies using an appropriate tab at the browser and check the appropriate file to view the cookies if any are stored on your hard drive.
   3) Visit the sites http://www.translink.co.uk/, msn.com and http://www.bonzi.com/. When prompted, allow cookie setting.
   4) Check cookie setting in the browser and view cookies.

b) Use Netscape browser's cookie manager for performing all the activities described in a) above,

c) In Internet Explorer, view history of the sites visited. Delete all the history and visit new sites and then view history to see new history being built. Perform the same activities with the Netscape browser.

d) Find cookies and the history files on the hard drive and print samples giving as much explanation as you can.

e) Define privacy and discuss privacy implications of different settings for cookies and history.

f) Both for Internet Explorer and the Netscape browser, explain various options available for managing digital certificates, giving practical examples.

g) Explain various options available under the advanced options in both the browsers. In the Internet Explorer this option can be found in Internet options under the tools tab, and in the Netscape browser it can be found in preferences under the tab Edit. To support your argument you need to give brief descriptions of the concerned technologies.

Guidance

It is vitally important that candidates use their tutors as support and as a resource throughout the assignment. The assignment Tasks require a considerable amount of theoretical background knowledge as well as product specific knowledge. Candidates can enrich their knowledge by searching the Web and making use of any reference library before embarking upon the practical aspects of the assignment. Candidates should fully complete a Task and consult with their tutor for guidance before starting the next Task.

Submission Requirements

A single word-processed document containing all documentation i.e. explanations, output reports and page images of graphic tools etc. pertaining to the four tasks.
In particular it should include the following:

- The four reports from Tasks 1- 4.
- All information / data that can be used to test various aspects of your work on an appropriate medium (zip disk, CD-ROM etc.).
- Output of testing and experimentation on an appropriate medium (zip disk, CD-ROM etc.) in a form, which can be run DIRECTLY from the supplied media.
- Screen dumps should be produced in support of your explanations where possible.
- The document should be signed and dated by your tutor.
- The document should be submitted both in paper form and digital form on a disk.

Warning: All media must be virus free!
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