|  |  |
| --- | --- |
| **Assessment Details and Submission Guidelines** | |
| **Unit Code** | BN202 |
| **Unit Title** | Internetworking Technologies |
| **Assessment Type** | Assignment 1 |
| **Assessment Title** | - Network requirement analysis and plan |
| **Purpose of assignment** | Main objective of this assignment is to enable student to understand networking devices, gather requirements for a given business case study and plan a network design.  After successful completion of this assignment, students should be able to:  b) Explain human factors in achieving business and technical goals through planning and design.  c) Develop architectural internetworking design for the business and application domains |
| **Weight** | 15% |
| **Total Marks** | 50 |
| **Word limit** | 500 |
| **Due Date** | Lab class week 6 on 3rd May 2018 |
| **Submission Guidelines** | * The assignment must be in MS Word format, 1.5 spacing, 11-pt Calibri (Body) font and 2.5 cm margins on all four sides of your page with appropriate section headings. * Reference sources must be cited in the text of the report, and listed appropriately at the end in a reference list using APA or **IEEE referencing style.** |

**Assignment Description**:-

**Business case study: Network design proposal for a hotel**

**Description**

The project aims to design a network for a hotel. The hotel has 5 floors including the ground floor. The ground floor has a lobby area. Each floor also has a lobby area. There are 40 rooms in each floor, each of which has a network point to which the guest PC is connected. The hotel network has two servers which are used by the staff. A high speed internet connection is available which is to be shared by the guest and staff network. There is a total of 25 staff in the hotel based at the ground floor.

(You will need to demonstrate your assignment during laboratory class).

Write a report with the following contents

• Project Scope

• Project hardware requirements

- Name of the network device with manufacturer’s name, series, model and ports

- Type of the cables

- Name of the server, PC with specification such as operating system, RAM, hard disk etc.

• Network Design in Netsim (You should not use packet tracer)

• Network device configurations

a. Switch configuration:

- set hostname as your name

- set system clock to 25th April 2018 5:45pm

- display the name of the file and version of IOS

- display the name of the interfaces

- display 6 IOS modes

b. Router configuration

- set hostname as your family name

- set system clock to 20th May 2018 14:45pm

- display the name of the file and version of IOS

- display the name of the interfaces

- display 6 IOS modes

**Marking Guide:-**

Example of marking criteria is shown in following table. Marks are allocated as follows:

|  |  |  |
| --- | --- | --- |
| **Section to be included in the report** | **Description of the section** | **Marks** |
| Project scope | Outline of the report ( in 3-4 sentences) | 3 |
| Project hardware requirements | a. Name of the network device with manufacturer’s name, series, model and ports b. Type of the cables c. Name of the server, PC with specification such as operating system, RAM, hard disk etc. | 8 |
| Network Design in Netsim | a. You should not use packet tracer b. Write justification of the network design | 6 |
| Network device configurations - Switch configuration | a. set hostname as your name b. set system clock to 25th April 2018 5:45pm c. display the name of the file and version of IOS d. display the name of the interfaces e. display 6 IOS modes | 10 |
| Network device configurations - Router configuration | a. set hostname as your family name  b. set system clock to 20th May 2018 14:45pm c. display the name of the file and version of IOS d. display the name of the interfaces e. display 6 IOS modes | 10 |
| Demonstration | - Demonstrate switch and router configuration in week 7 laboratory class | 8 |
| Reference style | Follow IEEE reference style | 5 |
|  | Total | 50 |