**University of North Carolina Wilmington**

**MIS 323 – Business Telecommunications**

**Network Design Project**

The purpose of the design project is to provide the opportunity for you to design a simple network. You are to design a network for Wilmington Software Developers (See description below). A list of possible equipment that can be used in the design as well as the cost of each piece of equipment is included in the appendix.

Your report should include:

1) a **network diagram** identifying all key parts of the network (e.g., hubs, switches, routers, cables, etc.) 2) a **spreadsheet listing the items** you have decided to purchase and their cost

3) a **brief explanation of the network design**.

The project will be graded on both the **quality** and **cost effectiveness** of the network. The report should be submitted via Entropy as a .zip file.

**Wilmington Software Developers Inc.**

Wilmington Software Developers develops banking software to help loan officers track and process loans. They have over 250 employees with the need for 375 wired connections for desktops, printers and other network enabled devices. Employees who don’t have a dedicated desktop will be using their own laptop to connect the company network so you will need to have additional WAPs throughout the buildings. The company is located in three adjacent buildings in an office park, with 125 wired connections in each building. Each building is approximately 90 feet long by 50 feet wide. They are set about 200 feet apart.

**The current network is poorly designed for the company’s current needs and must be completely replaced.** Describe the network you would recommend and how it would be configured with the goal of building a new network that will support the company’s needs for the next 3 years with few additional investments.

In addition to the location described above, they will also need to have a connection to their offices in Charlotte and Raleigh. Currently, most traffic occurs between Wilmington and Raleigh.

You will need to make some assumptions, so be sure to document your assumptions and explain why you have designed the network in this way. Also, if you have any further questions, please see me to clarify anything not described in the case above.

**Network Diagram**

Insert an image of your network diagram below. You may also choose to use Visio which can be submitted through Entropy as a .zip file.

**Spreadsheet of Equipment and Costs**

|  |  |  |  |
| --- | --- | --- | --- |
| **Description** | **Unit cost** | **Number used** | **Cost** |
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**Total Cost: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Brief Explanation of Network Design:**

Provide a brief explanation of the network you designed. Be sure to include any assumption made while designing this network.