HoA#4: Installing a Physical Network

This class assignment will get you familiar with the components of building a physical network. This assignment will help you better understand real-world cabling systems to communicate knowledgably with cable installers.

Please answer the following questions about building a physical network. To do so, make a PPT. Please include a visual that summarizes the main idea of each section.

# Part 1: Structured Cabling on a Single Floor

1. What is structured cabling? What is the main idea?
2. What are some problems with having cables strung around an office and switches on the floor? Think of an example of your own about how this could be a problem.
3. What are the three essential ingredients of a successful basic structured cabling network? Describe these components and why they are important. Give a real-world example of these three ingredients.
4. What is solid core? What is stranded core? What are the differences? Which one is required by TIA/EIA. Why?
5. What is meant by the term *demarc*? What is an example in terms of a NIU?

# Part 2: Installing Structured Cabling

*Scenario*. You were hired into a medium sized company. Your company is looking to relocate into a new building. You have been assigned to work with the network and cabling firm to help install the structured cabling for the new building. Before you talk to the firm, you want to refresh what you know about installing structured cabling. So, in a PPT, you decided to provide an overview of the steps involved in installing a structured cable setup (e.g., getting a floor plan, mapping the runs, determining the location of the telecoms room, pulling cable, making connections, and testing the cable runs). You decide to have a slide for each of these steps and include images to help you prep for the meeting.

# Part 3: NICs

1. What are some things to consider when buying NICs?
2. What is a link light? What do link lights tell you?
3. What are activity lights? How can you tell when an activity light is working or not?

# Part 4: Diagnosing and Repair

*Scenario.* It’s June 2019. You were recently hired into a small company. Because you loved MIS 423 so much and can’t stop talking about how much you learned in the class, your colleagues call you “Network Master.” Knowing this, your boss calls you in a panic one day and screams, “THE NETWORK IS DOWN!!” You say, “Ok calm down. I am aware of what to do when this happens.”

Using what you know, describe to your boss the steps you can take in order to diagnose and repair a network. Use examples in your description. *Note*: *We may act this out during class.*

# Part 5: Designing the WWU Network in Packet Tracer

On Wednesday, we will be given a tour of WWU Networking. To prepare for this tour, complete a tutorial that mirrors the WWU network and how it is setup. Please see the Weebly Page for the Tutorial. Once you finish the tutorial, please write a paragraph below about what you did.