Networking & Telecommunications

**Directions:** Answer the following questions thoroughly. This assignment will cover installing basic network hardware components and the installation of a cable modem. Two useful websites that cover general information about cable modems are www.howstuffworks.com and www.roadrunner.com.

**Case Overview:** Your neighbors, Mike and Mary Phillips, have learned that you are taking a course in networking, and have asked that you assist them with the physical tasks of networking their home (for a nominal fee of course). The Phillips invite you over to discuss this. Mike and Mary have recently purchased three new computers, a new laser printer, and a high-speed Internet access package from a local provider. Mike tells you the primary reasons for wanting to network the home:

* “ Mary and I need to share files between our computers.”
* “We want to be able to watch *World News* on our cable TV while downloading files from the Internet on any of the three computers.”
* “We want to be able to share the laser printer among the three computers.”

Mary has already installed the three Windows 2000 computers and each has already been configured for networking at the factory, so each includes Networking Software and Network Interface Adapters. The first two computers are located in the recreation room. The third computer is located in Mary’s office just a short distance down the hallway.

Mike brings in a box of supplies that he recently purchased for this project. You peek inside the box and see the following items:

* One cable modem with Ethernet/USB ports and shielded coaxial cable
* 200 feet of what appears to be thin network cabling, along with a box of RJ-45 connectors
* One “network ready” laser printer
* 200 feet of a very thick type of shielded cable
* One Router

At this point, you begin to visualize how you will connect the computers to one another, as well as how you will connect the cable modem and laser printer.

**< CONTINUED ON THE NEXT PAGE >**

**Deliverables:** For this exercise, focus on the physical (hardware) connectivity of the network instead of the logical (software) aspects. Answer each of the following questions in a Word document.

1. Before you begin the installation of this network, what additional information would it be nice to know?
2. Regarding the connection of the computers and printer to the network, what type of cabling would work best for this situation and why?
3. What would be the most appropriate network topology to use on this network?
4. Using a graphics application, such as Microsoft PowerPoint, Microsoft Paint, Visio, etc., draw a simple network diagram. Be sure to show how the computers are connected to one another (cabling) and what topology is used, how the cable modem is attached to the network, and how the printer is connected to the network. When the diagram is complete, copy and paste it into your Word document as an image. Note: The IS315 online course contains graphics that you may use in your network diagram. The file is located under the Student Downls are able to communicate with one another once the network installation is completed
5. **Electronic Submission:** Create a .zip file containing your Word dhat all device document.