TEJ4M – Assignment - Designing a network

Able Athletics Inc is a sportswear company in Scarborough. It has three divisions - HR, Sales, and Accounting – all in the same building in three different rooms. Each room has six computers, and they are planning to buy two more computers for each division. All the PCs have Ethernet or LAN cards and none of them has wireless cards. There is no plan to go wireless. For connecting to Internet, they have a cable modem. And the company wants that all PCs should have access to Internet. Each room has LAN drops on the wall.

Instead of making one network with 24 computers, it is a good idea to make 3 networks so that the data traffic in one division remains within that division. Imagine having one telephone office for whole of Toronto. Traffic will be too high, and cabling will also be expensive.

What you need to do as a network designer?

1. Identify hardware items needed to set up the network. Find out their price on internet e.g. BestBuy, Staples, CanadaComputers etc.
2. You need to design three networks; one for each division; that is, calculate the IP address, subnet mask, gateway address (IP address of the routers) for each PC.
3. One page write-up of your design document, explaining your decisions. This document should have all technical details about the network. Diagrams will be a good idea! There are online tools to draw network diagrams with symbols for devices. Use standard symbols.
4. Excel spreadsheet that gives the price of components, consultation fees, and labour cost for setting up the network. Remember to add taxes (13% HST). Able Athletics will pay you this amount! This is an invoice that you provide to the customer. It should look professional. There are online tools that generate professional looking invoices. Feel free to use them.
5. All your documents should be presentable.

Marking criterion:

1.	Identification of hardware:	/10
2.	Network design:	/10
3.	Design document:	/10
4.	Invoice or Spreadsheet:	/10
5.	Presentation:	/10

References: You can refer to the following sites for your work:

- http://learn-networking.com/network-design/how-to-subnet-a-network
- http://en.wikipedia.org/wiki/Subnetwork
- http://www.subnet-calculator.com/