**Case Study for weeks 1-5**

**Case Project 1**

Computer crimes involving networking seem to happen frequently. Research and see what examples you can find – minimum two. Try and obtain the most recent examples possible. Summarize these and state what you think about the outcome.

**Case Project 2**

Your boss wants to know if DHCP is appropriate for both client-server and peer-to-peer environments. Provide her with your opinion and be sure to include some discussion on how DHCP works, why a lack of DHCP could be a problem and some alternatives to using DHCP.

I believe DHCP is more appropriate for a client-server environment. Since DHCP is a protocol that strictly uses a client-server architecture. The reason for this is that peer-to-peer environments have no central server, so each computer on the network will share the work files with each other hence the name “peer-to-peer”. A DHCP is technically a “server” that automatically assigns specific IP addresses to each computer. This gives the client access to the network that the DHCP server hosts. This method is good for large businesses since it makes networks easily manageable but also, provides better security since users will not have to share files across the network.

**Case Project 3**

Compare and contrast **port scanning** and **ping sweeps**. Give examples of each. Who would want to perform these and why? Research programs that perform these tasks and include their names and overall functionality in your report.

**Case Project 4**

A developer in you company is building a new application and has asked you if it should use TCP or UDP-based communications. Provide her some information about the advantages and disadvantages of each protocol. Be sure to frame your explanation using the OSI model and be sure to make it thorough yet easy to understand for a non-network person.

**Case Project 5**

Describe the three-way handshake process used to initiate TCP connections. Discuss some ways it can be hacked.