Windows Networking System Tools

To complete this lab, you will need access to a command prompt. One way to start the command prompt is to select Start Menu | All Programs | Accessories | command prompt.

**ipconfig**

*ipconfig* is a system tool (the “tool” in this case is a *computer program*) that shows the network settings for *IP address*, *Subnet Mask* and *Default Gateway* on a Windows computer. Run *ipconfig* on your computer by typing *ipconfig* in the command prompt and record your settings here:

IP Address: _____________________________________________
Subnet Mask: _____________________________________________
Default Gateway: ___________________________________________

**ipconfig /all**

*ipconfig /all* shows even more detail about Windows networking settings. Run *ipconfig /all* and record these additional settings.

Physical Address (also called the MAC address):
_____________________________________________
DHCP enabled: _____________________________________
DHCP Server: ___________________________________________
DNS Servers: _____________________________________________

___________________________________________
___________________________________________

**ping**

*ping* is a system tool that tests connectivity. *ping google.com* to test if your computer is connected to the internet. Write the time it took to receive the first reply here:

time = _________________________ ms

**ipconfig /release**
ipconfig /release releases the DHCP lease. Run ipconfig /release and record the new network settings here:

IP Address: ________________________________________________

Subnet Mask: ________________________________________________

Default Gateway: _____________________________________________

Can you still ping google.com? _______________________________

ipconfig /renew

ipconfig /renew renews the DHCP lease. Run ipconfig /renew and record the new network settings here:

IP Address: ________________________________________________

Subnet Mask: ________________________________________________

Default Gateway: _____________________________________________

Can you ping google.com now? _______________________________

Using Google's DNS server

Using Google's DNS server is a good security practice when using an unfamiliar network. Hackers can trick you into using a fake version of a website using a technique called “DNS spoofing.”

To configure your computer to use Google's DNS server, go to Control Panel | Network and Internet and select View network status and tasks. Then, click Change adapter settings, and right click on Local area network and click on Properties Select Internet Protocol Version 4(TCP/IPv4) and click on Properties again. Select Use the following DNS server addresses and enter 8.8.8.8 and 8.8.4.4 for the DNS server addresses. Then click on OK.

nslookup
	nslookup contacts the DNS server to find the IP address of a domain. Type nslookup google.com to find what IP addresses google uses for its domain and enter one of them below. The addresses will be listed below "Non-authoritative answer."

Address: ________________________________________________

Now, open a browser. Type the address you wrote in the URL bar of a browser. Write the website the address took you to below:

website: ________________________________________________
To restore your computer's network configuration go back to Control Panel | Network and Internet and select View network status and tasks. Then, click Change adapter settings, and right click on Local area network and click on Properties. The, select Internet Protocol Version 4(TCP/IPv4) and click on Properties again. Select Obtain DNS server address automatically and then click on OK.