**Day 1 – Domain Names & IP Addresses**

**Warm-Up Activity**

1. Go to the web page: <https://centralops.net/co/>
2. Select the “NsLookup” tool and search for the following domains:
   1. [www.peelschools.org](http://www.peelschools.org)
   2. some of your favorite / popular domains
3. Try the “Traceroute” tool for the same domains
   1. What is the purpose of this tool?
4. Try the “Ping” tool for the same domains
   1. What is the purpose of this tool?
5. Try the “Whois” tool for [www.peelschools.org](http://www.peelschools.org)
   1. Who is the owner of this domain?
      1. Peel Schools
   2. Who is the registrar of this domain?
      1. Network Solutions, LLC
   3. When does the registration expire?
      1. 2023-10-21T13:43:56Z

**Presentation Notes: Client-Server Model**

1. What is a client?
   1. Where does it run?
      1. An app that runs on your phone or PC
   2. What does it do?
      1. The app provides the Interface
      2. The app does not control the data
   3. List some examples of a client.
      1. Web Browser
2. What is a server?
   1. Where does it run?
      1. Software that runs on hardware owned by   
         the app company
   2. What does it do?
      1. It sends and receives data between multiple clients  
         using internet connections
   3. List some examples of a server.
      1. Network
3. Explain why you need both a client and a server to complete an internet application?
   1. They work together to create the application.
   2. One is useless without the other part
   3. Examples: On-Line Games, Spotify, MLB At Bat, etc.

**Presentation Notes: Domain Names & IP Addresses**

1. What is a Domain Name?
   1. What is it used for?
   2. Is it for human or computer use?
      1. It is a human readable format
      2. It must be converted to an IP address

to be used by a computer

* 1. Provide an example of a Domain Name.
     1. www.peelschools.com

1. What is a IP Address?
   1. What does IP stand for?
      1. Internet Protocol
   2. What is it used for?
      1. An ID for a service on the internet
   3. Is it for human or computer use?
      1. An ID for a service on the internet
   4. Provide an example of an IP Address.
      1. 67.21.152.99
2. Who can register a domain name?
   1. Anyone
3. Who controls domain names for countries (i.e. .CA, .UK, etc.)?
   1. Government agencies
4. Who controls domain names like .COM, .ORG, etc.?
   1. Network Solutions
   2. myname.ca – CIRA (Canada)
   3. myname.uk – NOMINET (United Kingdom)
   4. com, org, etc. – Network Solutions (United States)
5. Who owns and controls IP Addresses?
   1. IP Addresses are owned by large Internet Companies
6. If you own a Domain Name does that mean you also own an IP Address?
   1. Nope
7. What services do *middleman* companies like GoDaddy.com provide?
   1. Companies like GoDaddy.com are *middlemen*  
      that arrange domain registrations and that   
      provide you with an IP Address
8. What are some issues and features related to IPv4?
   1. Issues: Limited Speed & Limited Number of Connections
9. What are some issues and features related to IPv6?
   1. Advantages: Higher Speed & Unlimited Number of Connections
10. What are some issues and features related to 5G Networks?
    1. Leverages IPv6 technology to provide extreme speeds
    2. Every device (e.g. doorbell) will have its own IP address

**Day 2 – Internet Services (Software)**

Questions t.b.d.