**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?
   2. Who is the registrar of this domain?
   3. When does the registration expire?

**Presentation Notes: Client-Server Model**

1. What is a client?
   1. Where does it run?

On a device such as a PC, Phone, or even a Console

* 1. What does it do?

Creates an interface using data from the server, limited access to writing or editing data.

* 1. List some examples of a client.

Search engines, online games, writing programs. All information is stored in a server and produces data, which is then used for the interface.

1. What is a server?
   1. Where does it run?

It works on hardware created via the company.

* 1. What does it do?

Writes and edits data on the company's hardware to be displayed on the interface

* 1. List some examples of a server.

Server PCs (usually ran on linux)

1. Explain why you need both a client and a server to complete an internet application?

The client produces the display and screen data needed for a user to actually be able to input and utilise a website, program or game, meanwhile the server works as a data storage system, and uses inputs and data from the client, which then lets the server write and edit the current running program, game or website

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

1. What is a Domain Name?
   1. What is it used for?

The readable data of an online location

* 1. Is it for human or computer use?

Human use is usually where it is used

* 1. Provide an example of a Domain Name.

google.com, thiswebsiteisanexample.ca

1. What is a IP Address?
   1. What does IP stand for?

The readable data used for a computer to recognize it’s online location

* 1. What is it used for?

Used for computers to read and learn their location on the internet

* 1. Is it for human or computer use?

Computers (for the most part)

* 1. Provide an example of an IP Address.

google.com: 172.217.12.228

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1. Who can register a domain name?

Any group, company, or person can register for a domain name.

1. Who controls domain names for countries (i.e. .CA, .UK, etc.)?

The government of each location’s registry setup are able to control domain names

1. Who controls domain names like .COM, .ORG, etc.?

Network Solutions is able to produce .COM and .ORG domain names due to them being in control

1. Who owns and controls IP Addresses?

The IP addresses are owned by large companies which control large parts of the internet

1. If you own a Domain Name does that mean you also own an IP Address?

No, instead you must either meet a middleman, or produce your own servers

1. What services do *middleman* companies like GoDaddy.com provide?

Middlemen produce hosting and IPs for individuals or companies who choose to use a middleman instead of their own servers

1. What are some issues and features related to IPv4?

Limited Speed + Limited Amount of Connections

1. What are some issues and features related to IPv6?

Quicker Speed + Practically Unlimited Amount of Connections

1. What are some issues and features related to 5G Networks?

May allow every device within your house to have an internet connection

Creates insane internet speed with IPv6 Technology

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

Questions t.b.d. OMEGALUL