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

**Presentation Notes: Client-Server Model**

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

- An app that runs on your phone or PC

* 1. What does it do?

- The app provides the Interface

* 1. List some examples of a client.

- Google Chrome

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

- Software that runs on hardware owned by the app company

* 1. What does it do?

- It sends and receives data between multiple clients using internet connections

* 1. List some examples of a server.

- Cloud Server

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

- They work together to give you the complete application.

- One is useless without the other part

- 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?

- An ID for a service on the internet

* 1. Is it for human or computer use?

- It is a human readable format

- It must be converted to an IP address  
to be used by a computer

* 1. Provide an example of a Domain Name.

- Clients do not have Domain Names

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

- Internet Protocol

* 1. What is it used for?

- It is used to route messages and data   
between computers (clients and servers)

* 1. Is it for human or computer use?

- Computer Use and its composed of 4 numbers

* 1. Provide an example of an IP Address.

- **67.21.152.99**

1. Who can register a domain name?

- Domain names can be registered by companies and individuals

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

- Government Agencies Control the Registration of Names

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

- myname.ca – CIRA (Canada)

- myname.uk – NOMINET (United Kingdom)

- com, org, etc. – Network Solutions (United States)

1. Who owns and controls IP Addresses?

- IP Addresses are owned by large Internet Companies

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

- IP Addresses are "rented out" to Domain Names for a fee

- With IPv4 there are a limited number of IP Addresses

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

- Companies like GoDaddy.com are *middlemen* that arrange domain registrations and that   
provide you with an IP Address

- Network Solutions is the company that *controls* and *authorizes registrations* for .com domains

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

- 4 numbers, 64 bits (2^64 combinations)

- Issues: Limited Speed & Limited Number of Connections

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

- 8 alpha –numerics, 128 bits (2^128 combinations)

- Advantages: Higher Speed & Unlimited Number of Connections

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

- Leverages IPv6 technology to provide extreme speeds

- Every device (e.g. doorbell) will have its own IP address

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

Questions t.b.d.