**Presentation Notes: Client-Server Model**

1. What is a client?
   1. Where does it run?
   2. What does it do?
   3. List some examples of a client.
   * An app that runs on your phone or PC
   * The app provides the Interface
   * The app does not control the data
2. What is a server?
   1. Where does it run?
   2. What does it do?
   3. List some examples of a server.
   * Software that runs on hardware owned by   
     the app company
   * It sends and receives data between multiple clients  
     using internet connections
3. Explain why you need both a client and a server to complete an internet 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?
   2. Is it for human or computer use?
   3. Provide an example of a Domain Name.

* An ID for a service on the internet
* It is a human readable format
* It must be converted to an IP address  
  to be used by a computer
* **Note**: Clients do not have Domain Names

1. What is a IP Address?
   1. What does IP stand for?
   2. What is it used for?
   3. Is it for human or computer use?
   4. Provide an example of an IP Address.

* The id number of a client or server device   
  on the internet.
* It is composed of four numbers
* It is used to route messages and data   
  between computers (clients and servers)

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.?
2. 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

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

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

* Issues: Limited Speed & Limited Number of Connections
* 4 numbers, 64 bits (2^64 combinations)

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.