ITP 125 Notes

08/30/16 – History of Hacking

Lab#2

Saving Python file:

* Save the code as salkdjaslk.py
* Type “ls” to see everything in your desktop
* cd = open
* cp = copy
* ~ = home
* . = current database

09/06/16 – Networking Technologies

5 Network Topologies

1. Point-to-Point
2. Star
3. Ring
4. Bus
5. Mesh

Ethernet – most common LAN technology

* Best way to connect one computer to another
* No two computer connected by one copper wire/fiber wire can send signals at the same time to each other – jam
  + Use of Carrier Sense Multiple Access with Collision Detection (CSMA/CD)
    - If clear, start transmission. If used, wait until clear. If collision occurs, stop transmission and wait for random time before sending again

WAN Technologies (Wide Area Network)

* Interconnect two or more Las
* 4 Types:
  1. Dedicated Lease Line – kinda okay security, potentially most speed because you have control of the line all the time, most expensive
  2. Circuit-Switched Connections – cheapest, through phone line (phone line is very reliable!), used by most people
  3. Packet-Switched Connections – price is in the middle, users have no control over security and speed, connect through the internet, information send through can be big or small depending on the file size
  4. Cell-Switched Connections – same as packet-switched connections but every file going through will be in the same size (like FedEx where you get 1-size mailbox)

Wireless Networks

* Advantages: Range, no physical cables
* Disadvantages: Reliability, security

OSI Model

* 7 layers
* Layer 7 is closest to human (user interface layer)
* Layer 6 (Presentation) – format data so user can recognize it. Ex: .doc, .jpg etc.
* Layer 5 (Session)
* Layer 4 (Transport) – How do you make sure the data can go from one place to another
* Layer 3 (Network Layer) – How does it find the other computer/server. IP address stuff.