# WEDNESDAY MAY 10TH AT 3:00 PM

## Exam Questions

1. Technology is having but got hired right away
2. Finish all of the homework
   a. prog
3. The final is just like the midterm (DON'T LOG OUT MAKE SURE YOU SAVE)
   **a. Half theoretical // Half practical (using Wireshark)**
      i. NAT
      **ii. Protocols we’ve learned**
         1. TCP/UDP
         2. HTTP (1.1, 2.0)
            a. 2.0 has the binary framing
            b. Headers (hpack)
            c. They also allowed for more types of media
            d. The data could have pipelining allowing for 2 files to be sent at a time instead of sending one per request
               i. This allows for prioritization (dependency graph)
                  1. Orders that are sent and how the information is sent and what is sent first
         3. HTTP + TLS
         4. ARP
         5. TFTP
         6. IP
         7. DNS ← major on the exam
      **iii. Things to know**
         1. IP addresses
         2. Certs
            a. Private and public keys
               i. Private keys allow you to keep information that is sent to you safe by allowing you to decode it
               ii. Public keys allow you
            b. Sockets
               i. Programs
      **iv. Tools we’ve used (commands + what they do)**
         1. Wireshark
            a. Firewall-cmd
               i. (deny/allow LNS)
            b. Ss
               i. Command to see what socket we've used
            c. -4lnt
               i. 4 = IPV4
               ii. L = listening

            iii. N = Don't translate the numbers
            iv. T = tcp
    2. NMAP
    3. Traceroute
        a. Worked by using the time to live to increase it for the response to come back to the router to come back to the ICMP
            i. ICMP -> used by ping
    4. Ping
    5. NAT
    6. DNS lookup
        a. nslookup/dig
    7. TCP
        a. Is reliable because it has a 3-way handshake
        b. Handles dropped packets allowing retransmission
            i. How to know what packet it is
                1. AKA sequence number
        c. Timeouts
        d. Flow controls
        e. Congestion control
        f. Sliding window
            i.
v. Malware (beacon)
    1. Use beacons to detect malware
vi. Routing table questions
vii. 1 open-ended questions