Topics to be covered:
Networking Basics: Protocols used for communication, Hub, switch, router, how is data transmitted, How internet works, OSI model

Reading material:

https://www.cisco.com/c/en/us/support/docs/ip/routing-information-protocol-rip/13788-3.html
https://www.howtogeek.com/99001/htg-explains-routers-and-switches/
https://www.ssh.com/ssh/protocol/
https://github.com/isunitha98selvan/ACM-CyberSecurity/blob/master/src/11.%20Security.pdf
http://www.tcpipguide.com/free/t_TCPIPInternetArchitectureandProtocolSuite.htm

Videos:

https://youtu.be/HEEnLZV2wGI - OSI Model
https://youtu.be/Ofjsh_E4HFY - Hubs, switches and routers
https://youtu.be/EkNq4TrHP_U - TCP/IP and Subnet Masks

Assignments:

Using IPConfig
1. Open your command prompt or DOS prompt.
2. Type in ipconfig .
3. Use the IPConfig command to find out information about your computer.
4. Write down your computer's IP address, default gateway, and subnet mask.
(If you are using ubuntu, run ifconfig)

Using Tracert
1. Open your command prompt or DOS prompt.
2. Type in tracert www.chuckeasttom.com .
3. Note what hops your computer takes to get to www.chuckeasttom.com.
4. Then try the same process with www.whitehouse.gov and http://home.pearsonhighered.com/
5. Notice that the first few hops are the same. Write down what hops are taken to reach each destination and what hops are the same. Then briefly describe why you think some of the intermediate steps are the same for different destinations.

NSLOOKUP
1. Go to the command prompt
2. Type nslookup www.chuckeasttom.com .
3. Note that this command gives you the actual name of the server, as per the hosting company's naming conventions; its IP address; and any aliases under which that server operates.

Cisco Packet tracer:
Download it from the following link
https://www.computernetworkingnotes.com/ccna-study-guide/download-packet-tracer-for-windo

ws-and-linux.html

If you are using ubuntu :
https://askubuntu.com/questions/718064/how-to-install-packet-tracer-6-2-on-ubuntu-14-04-64bit

Guide:
https://ccnav6.com/cisco-packet-tracer-tutorial-for-beginners-how-to-use-packet-tracer
Go through all the six tutorials and try them out. Save your work as a .pkt file and push it to your respective folders on github.