Project4

1- consider you are sitting in front of Google's company's manager

for an interview. please go ahead and respond this questions:

a- what is a network? Network is a group of computers connected together to communicate with one another in a particular location

b- What is a 3 way hand shake?

**A three-way handshake is a method used in a TCP/IP network to create a connection between a local host/client and server. It is a three-step method that requires both the client and server to exchange SYN and ACK (acknowledgment) packets before actual data communication begins.**

c- when you type a url on the browser what happens until the page opens?

1. browser asks OS for server's IP address.
2. OS makes a DNS lookup and replies the IP address to the browser

Or

d- what do you know about the osi model

The main concept of OSI is that the process of communication between two endpoints in a telecommunication network can be divided into seven distinct groups of related functions, or layers. Each communicating user or program is at a computer that can provide those seven layers of function. So in a given message between users, there will be a flow of data down through the layers in the source computer, across the network and then up through the layers in the receiving computer

e- What is TCP/IP

TCP/IP (Transmission Control Protocol/Internet Protocol) is the basic communication language or protocol of the Internet. It can also be used as a communications protocol in a private network either an intranet or an extranet. When you are set up with direct access to the Internet, your computer is provided with a copy of the TCP/IP program just as every other computer that you may send messages to or get information from also has a copy of TCP/IP.

TCP= the data transporter

IP= the data carrier

f- what UDP? Protocol for sending bits of data known as packets over the internet.

g- what is the difference between TCp and UDP?

UDP TCP

|  |  |
| --- | --- |
| -No Hand shake  -Good with VOIP  -There is absolute no guarantee that the data transferred remains intact and arrives in the same order in which it was sent. | -3 way hand shake  -slow because of overhead  -There is no guarantee that the messages or packets sent would reach at all. |

h- What are some problems we can run into on L1 , L3 and L7

- L1 - disconnection from ethernet, power cord

-L3 - Network Layer: wrong IP address, no DNS , router problems

L7- Application Layer, a program cannot be open, not well installed

i- A client calls you and said his computer is not connecting what can be the problem? please help him/her to troubleshoot.

- Troubleshoot the physical layer

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j- why would the ip address 190.123.78.10 given to a device?= Because the device needs an ip address to communicate

Class B network was given to his/her device A class B network allows 65,536 unique IPs

2- Linux command line

a- what command do you type to create a file? = touch

b- what command do you type to find out how long the server has been up and running? # w # uptime

c- what command do you type to see the content of a directory/folder #ls

d- what command do you use to display the content of a file? #cat

e- what text editor are you familiar with ? = vi

f- how do you remove a directory? rm

g- what command do you type to know where you are in a particular server?= pwd

h- If you are presented with a prompt, what command would you type to check the os running? = #uname

i- what command would you type to check the ip address of a linux server?

#ifconfig -a

3- How do you solve a problem in a team?

- Open communication with team members to identify the problem

4- how many windows are in Delaware?