How does the Internet Work?

### The answer to all the questions can be found in the listed videos. I suggest reading through all the questions first so that you know what answers you’re looking for, then watching videos that sound like they will answer the question you’re trying to answer. **Answers must be in complete sentences to receive credit.**

Internet Infrastructure as Fast as Possible - <https://youtu.be/n71TUnTNdw8>

DNS as Fast as Possible - <https://youtu.be/Rck3BALhI5c>

Internet vs Web as Fast as Possible - <https://youtu.be/laepk9KrAZY>

Internet Protocol - IPv4 vs IPv6 as Fast as Possible - <https://youtu.be/aor29pGhlFE>

Routers vs. Switches vs. Access Points - And More - <https://youtu.be/Vc16CCAAz7Q>

What is TCP/IP? - <https://youtu.be/PpsEaqJV_A0>

HTML5 as Fast as Possible - <https://youtu.be/IsXEVQRaTX8>

Bits vs Bytes as Fast as Possible - <https://youtu.be/Dnd28lQHquU>

How Do URLs Work? - <https://youtu.be/OvF_pnJ6zrY>

# Questions:

1. What is the difference between bits and bytes and what are they used for?

One bit is 0.125 byte. A bit is the smallest piece of data in a computer. A byte is a group of binary code.

1. Why is HTML5 the new standard?

It improved things. It made things easier to understand

1. What is the difference between the Internet and the Web?

The internet is a global computer network of interconnected networks using standardized communication protocols.

1. What is the role of an ISP?

They provide a direct connection to the company’s network and the internet

1. What is a modem?

A combined device for modulation and demodulation

1. What is a browser?

A graphical user interface for displaying HTML files

1. What is the difference between guided and unguided media?

The **guided media** signal travels through a physical medium, in an **+** the signal travel through the air

1. Summarize how the internet was developed.

Internet came in the late 1960s the creation of the Advanced Research Projects Agency Network. The online world then took on a more recognizable form in 1990, when computer scientist Tim Berners-Lee invented the World Wide Web.

1. What is a web server and what purpose does it serve?
2. What is a router and what purpose does it serve?
3. What are packets and what purpose do they serve?

Packets are little packs of data and code and they are what makes the computer info travel to another computer

1. What are IP addresses and what purpose do they serve?

IP addresses are unique strings of numbers separated by periods that identifies each computer using the Internet Protocol to communicate over a network. Its purpose is to host or network interface identification and location addressing.

1. What is Intranet and what purpose does it serve?

An Intranet is a tool that is used in your organization’s strategy and internal communications. An Intranets purpose is to provide communication and team collaboration tools to enhance knowledge sharing and file sharing, and drive productivity.

1. What is bandwidth?

A bandwidth is the range of frequencies within a given band, in particular that used for transmitting a signal.

1. What is a firewall?

The firewall is the invisible barrier between a device and the cloud. It blocks out viruses and messed up coding. Only allows things that have been checked over and over

1. What is the “backbone” (Internet backbone service providers) and what purpose does it serve?

An internet backbone is one of the principal data routes between large, strategically interconnected networks and core routers on the Internet.

1. What is the purpose of a domain name?

The purpose of a domain name is to identify one or more IP addresses

1. Match the parts of the URL to its name:

U=Uniform R= Resource L= Locator

1. What is a static IP address?

A Static IP address is a number that is assigned to a computer by an Internet service provider.

1. What is a dynamic IP address?

A dynamic Internet Protocol address is a temporary IP address that is assigned to a computing device or node when it's connected to a network.

1. What is the difference between IPv4 and IPv6?

Internet Protocol version 4 is the fourth version of the Internet Protocol, Internet Protocol version 6 is the most recent version of the Internet Protocol. IPv4 is written in decimal as four numbers separated by periods. IPv6 addresses are 128-bit IP address written in hexadecimal and separated by colons.

1. What is the function of a DNS?

The function of a DNS is to translate domain names into IP Addresses, which computers can understand.

1. What does HTTP stand for and how is it used?

Hyper Text Transfer Protocol and it is used in application layer of layered architecture.

1. What does HTTPS stand for and how is it used?

Hypertext Transfer Protocol Secure, a +secure communication over a computer network, and is widely used on the Internet

1. What does FTP stand for and how is it used?

File Transfer Protocol used for the transfer of computer files between a client and server on a computer network.

1. What does SMTP stand for and how is it used?

Simple Mail Transfer Protocol used when email is delivered from an email client, such as Outlook Express, to an email server or when email is delivered from one email server to another.

1. What does TCP/IP stand for and how is it used?

Transmission Control Protocol/Internet Protocol a set of networking protocols that allows two or more computers to communicate.