Hub and switch are used to create network

Router is used to connect network

MODEM (MOdulate DEModulate) is used to convert analog signal received from the internet to digital signal that computer and cellphone can process

If we only have one computer which mean no network we don’t need hub or switch or router

We directly connect the MODEM to our computer

DHCP (Dynamic Host Configuration Protocol)

It helps computer to get an uncopied address. First computer sends a signal to the router(switch+router+modem), router then find an unused address and assign it to the new computer in the network

TCP (Transmission Control Protocol)

Establish first connection between the two devices like a channel

Sender device sends a syn (synchronization)

Once receiver receives it, it sends back syn/ack to the sender

Now sender sends an ack message to receiver saying I’ll send you data

Each time sender send data to receiver, the receiver must send back an ack message to the sending saying yes, I receive the data, if no, data is resent again

Data are transmitted sequentially

Domaine name: www.google.com

DNS (Domain name system)

Computer communicates with internet using IP address

When browsing a website we insert the domain name of that website

DNS work is to find the corresponding IP address to that website using first the root server(.com)

That identify for example which country the domain name belong to

Then TLD ( top level domain) will list a bunch of IP address

Finally domain name layer gives the right IP address linked to that domain name

URL stands for Uniform Resources Locator

Ex: http:domaine name/doc/file

HTTP Hypertext Transport Protocol allows Web browsers and Web servers to communicate

Hypertext Markup Language (HTML) is the language of the World Wide Web