

# Network

- A network can be defined as two or more computers connected by a cable (or in some cases, by wireless connections), so that they can exchange information.
- Two most common types of networks:
  - **Local-area network (LAN):** Connects devices in a small geographical area.
  - **Wide-area network (WAN):** Connects to other networks over a wide geographical area.
    - Internet is a Wide Area Network.

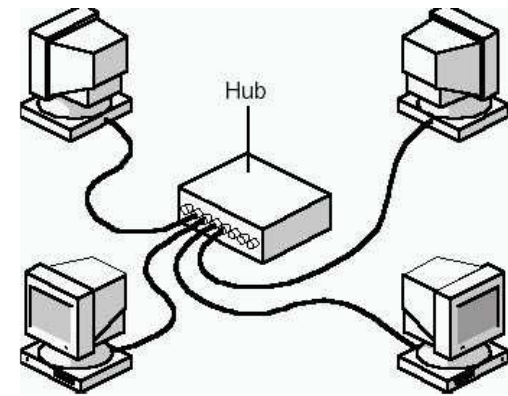


Image Source : <http://pluto.ksi.edu/~cyh/cis370/ebook/ch01d.htm>

## Server:

- In a client-server setup, a server is a network computer that stores information, provides the information when asked, or performs tasks when requested by the client.

## Client:

- Any device in a client-server configuration that requests information from server can be referred as client.

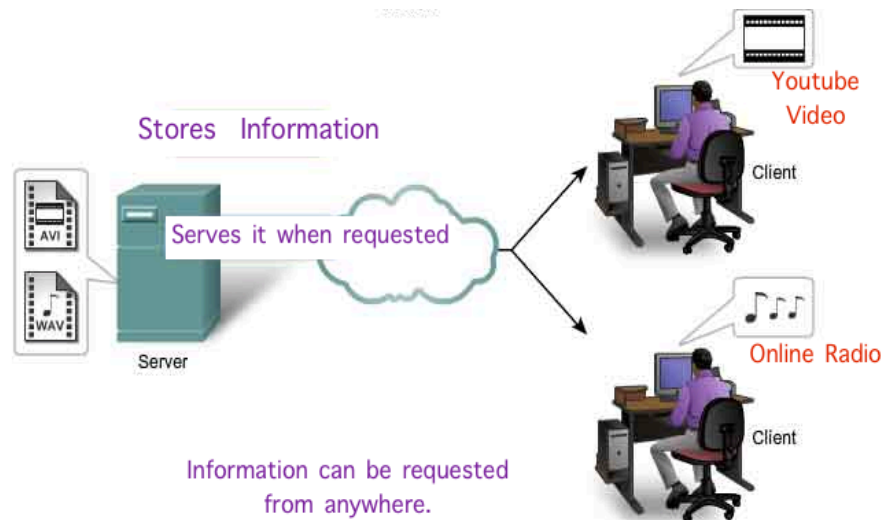


Image Source: [http://www.highteck.net/EN/Application/Application\\_Layer\\_Functionality\\_and\\_Protocols.html](http://www.highteck.net/EN/Application/Application_Layer_Functionality_and_Protocols.html)

## IP address:

- An IP address is a number that uniquely identifies every device (computer, smartphone, embedded device) on the network.
- 4 bytes e.g. 192.168.1.100.
- Devices connected on the network communicate with each other using their IP addresses as identities.



Image Source: <http://www.darkreading.com/identity-and-access-management/the-problem-with-two-factor-authentication/d/d-id/1113697>

## Packet:

- A packet contains the information exchanged over the network.
- It also contains the details of the sending and receiving computers.



Image Source: [http://www.webreference.com/programming/php\\_mysql/index.html](http://www.webreference.com/programming/php_mysql/index.html)