

JANUARY							FEBRUARY							
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11	12	13	14	15	16	17	15	16	17	18	19	20	21	
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25	26	27	28	29	30	31								

# Basics of Networking

What is a Network ?

When more than one computers are connected with each other by any means & in order to share information among them then this can be a computer network.

A computer network works on a global standard called the OSI (Open System Intergration) models in which there is clear rules for communicating devices working on different kind of hardware and software.

This enables a computer network to communicate very well among different kinds of operating system equipments with each other.

How Internet works ?

A very common connecting device available in our computer is known as network interface card known as Ethernet. The connector being used in this interface socket is

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called RJ45 in which 8 different wires are present which is used to communicate data digitally between computer and internet connector device known as Modem. For case of more than two computers we can use switch or hub as connecting device, which works on the basis of IP address which is unique for each computer connected to a network.

Sharing of printing device will be very beneficial and economic for an organization having more than one computers connected locally or globally.

Locally we can make our networks to connect through LAN wires but in case of global network, we have to connect to local Internet Service Providers. These ISP's enable us to communicate

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globally.

That means — A global computer network providing a variety of information and communication facilities consisting of interconnected networks using standardized communication protocols is called Internet.

The internet is nothing but networks of many wide Area Networks connected with each other — "Network of Networks".

There are lot of uses of internet networking as a whole such as we have, YouTube, Skype, CNN, eBay etc.

There are also lot of sites available over internet network.

There are many public servers established to get different kind of information through internet network. These servers listens a request coming from a client — located (connected) anywhere in the network,

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listens the requests and responds as the server and client got the information got from these public servers. ex - google.co.in, youtube.com etc.

Speed of the internet is measured in units as ~~are~~ below: -

Smallest unit is - Bit (0, 1)

8 Bit is equivalent to 1 Byte

Speed of Network

Data Size

1024 Bit = 1 Kilo Bit (kb)	1024 Byte = 1 Kilo Byte (KB)
1024 kb = 1 Mega Bit (Mb)	1024 KB = 1 Mega Byte (MB)
1024 Mb = 1 Giga Bit (Gb)	1024 MB = 1 Giga Byte (GiB)
1024 Gb = 1 Tera Bit (Tb)	1024 GiB = 1 Tera Byte (TB)

Q How long will it take for a 128 KB file to go across at 1 Mbps?

Ans, let us convert the file into bits, i.e.,

$$128 \text{ KB} = 128 \times 8 = 1024 \text{ Kb (Kilo Bits)}$$

$$= 1 \text{ Mega Bit}$$

So, 1 second time will be needed.