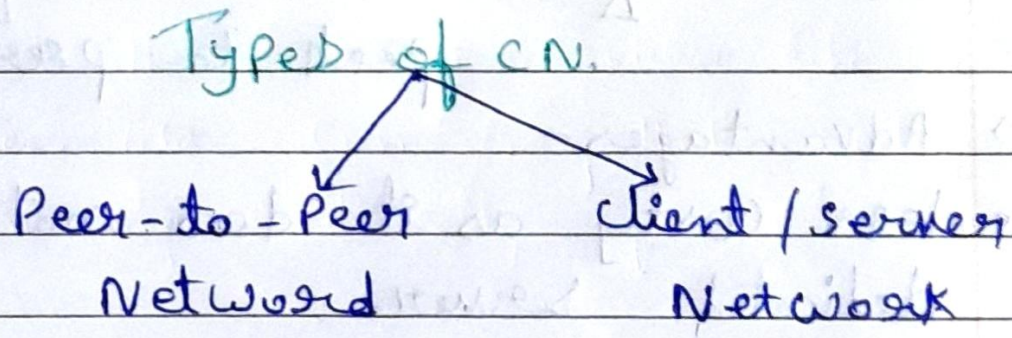
- **Computer network architecture -**

CNA is defined as the physical & logical design of the S/W, H/W, Protocols and media of the transmission of data. Simply we can say that how Com. are organized & how tasks are allocated to com.



1) Peer-to-Peer NetWork -

- Peer-to-Peer network is a network in which all the com. linked together with equal privilge & responsibilities for processing the data.
- P-T-P network has no dedicated server.

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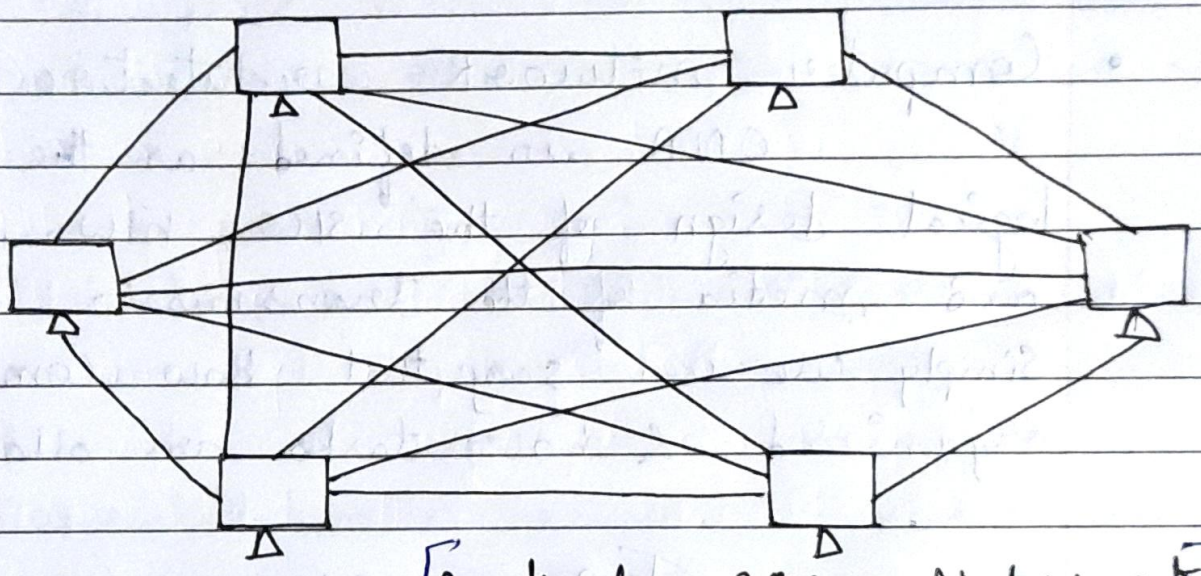
- Peer to peer network is useful for small environment, usually up to 10 com.
- Special permissions are assigned to each com. for sharing the resources, but this can lead to a problem if the com. with the resource is down.



[Peer to peer Network]

⇒ Advantages-

- less costly as it does not contained any dedicated server.
- If one com. stops working & other com. will not.
- It is easy to set up & maintain as each com. manage itself.

⇒ Disadvantages-

- It has a security issue as the device manage itself.
- In the case P-T-P network, it does not contain the centralized sys. Therefore, it cannot back up the data as the data is diff in diff. locations.

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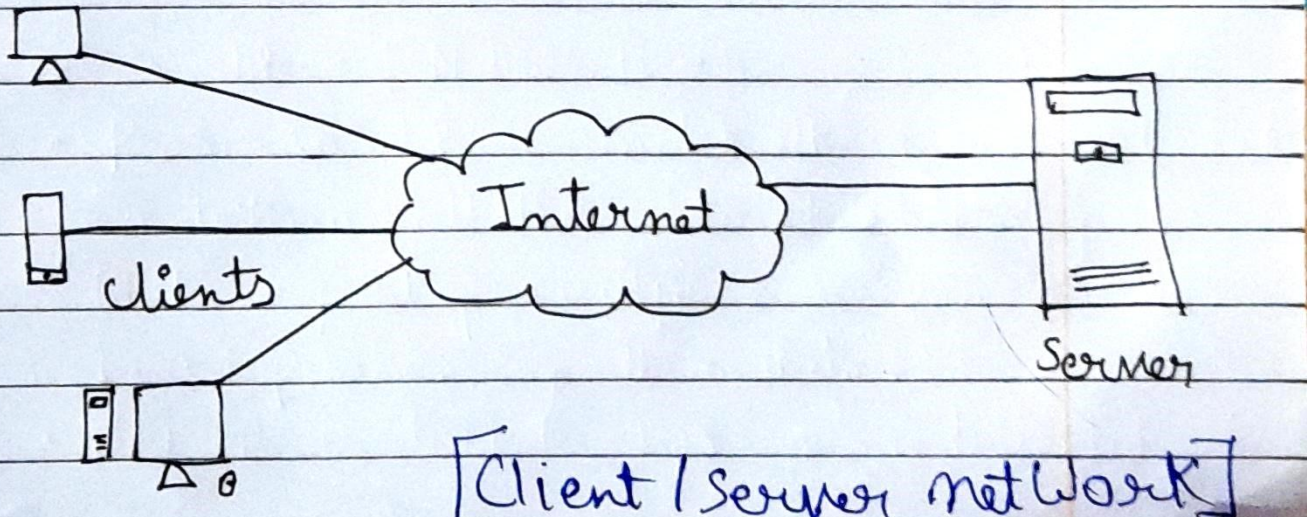
2) Client / server ⇒

- It is network model designed for the end users called clients, to access the resources such as songs, video etc from server.
- The central controller is known as a server while all other com. in network are called ~~networks.~~ clients.
- A server performs all the major operations such as security & net. managnt.
- A server is responsible for managing all the resources such as files, directories etc.
- all clients communicate with each other through server. for example, if client 1 wants to send data to client 2 then it first sends the request to the server for the ~~info~~ the permission. the server sends the response to the client 1 to initiate its communication with the client 2.



[Client / Server network]

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- Advantages -

i) Contains the centralized system. therefor we can back up data easily.

ii) Client / Server has a dedicated server that increases the overall performance of the whole sys.

iii) It also increase the speed of the sharing resources.

- Disadvantages -

i) This is expensive as it requires the server with large memory.

ii) It required dedicated network administrator to manage all the resources.

iii) A server has a Network O.S to provide the resource to the clients, but the cost of NOS is very high.