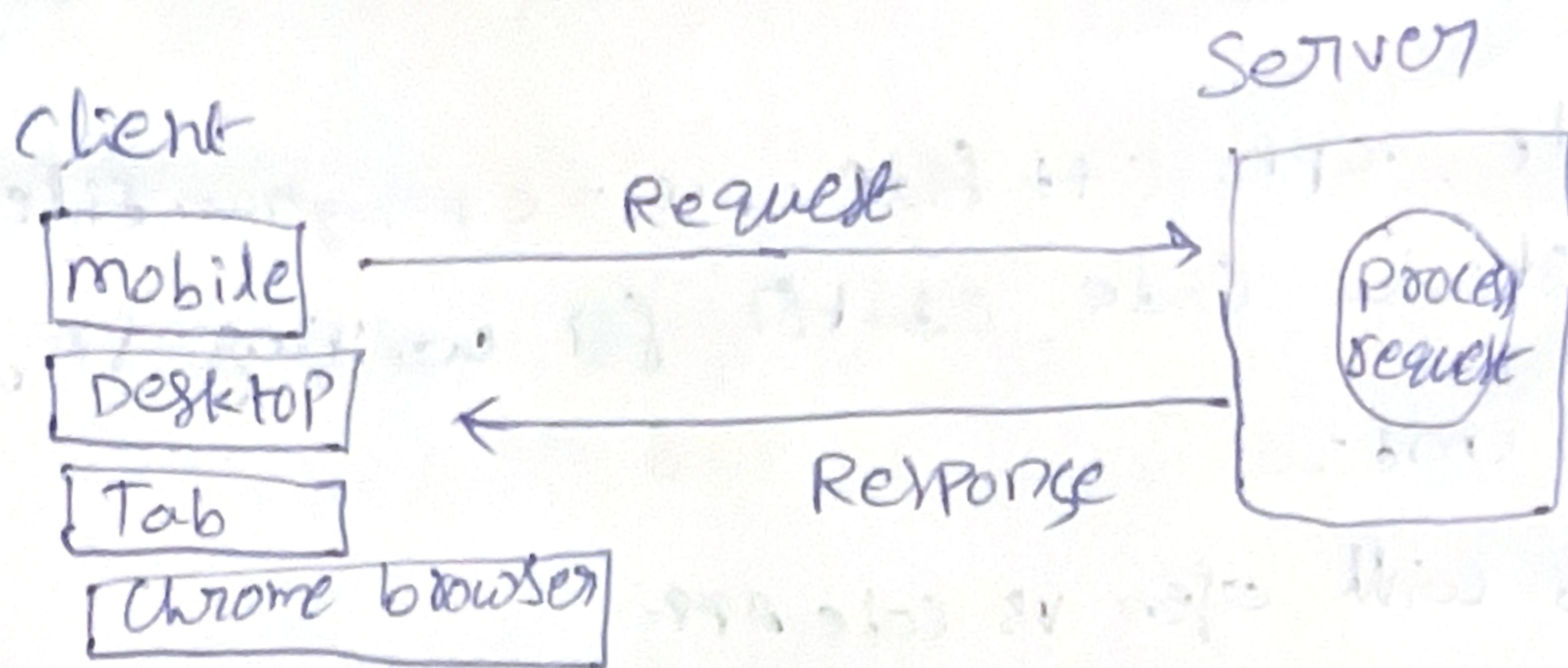


# How internet works?



SERVERS :- Server is a kind of CPU, which is designed to particular process. It will takes request from client and provide response.

⇒ Server is virtual & sitting on OS

⇒ Processor is Physical takes instruction from OS and provide output to OS

⇒ HTTP is a protocol (language) used to talk between client & server

## HTTP Protocol:-

HTTP request :- Client sends HTTP request

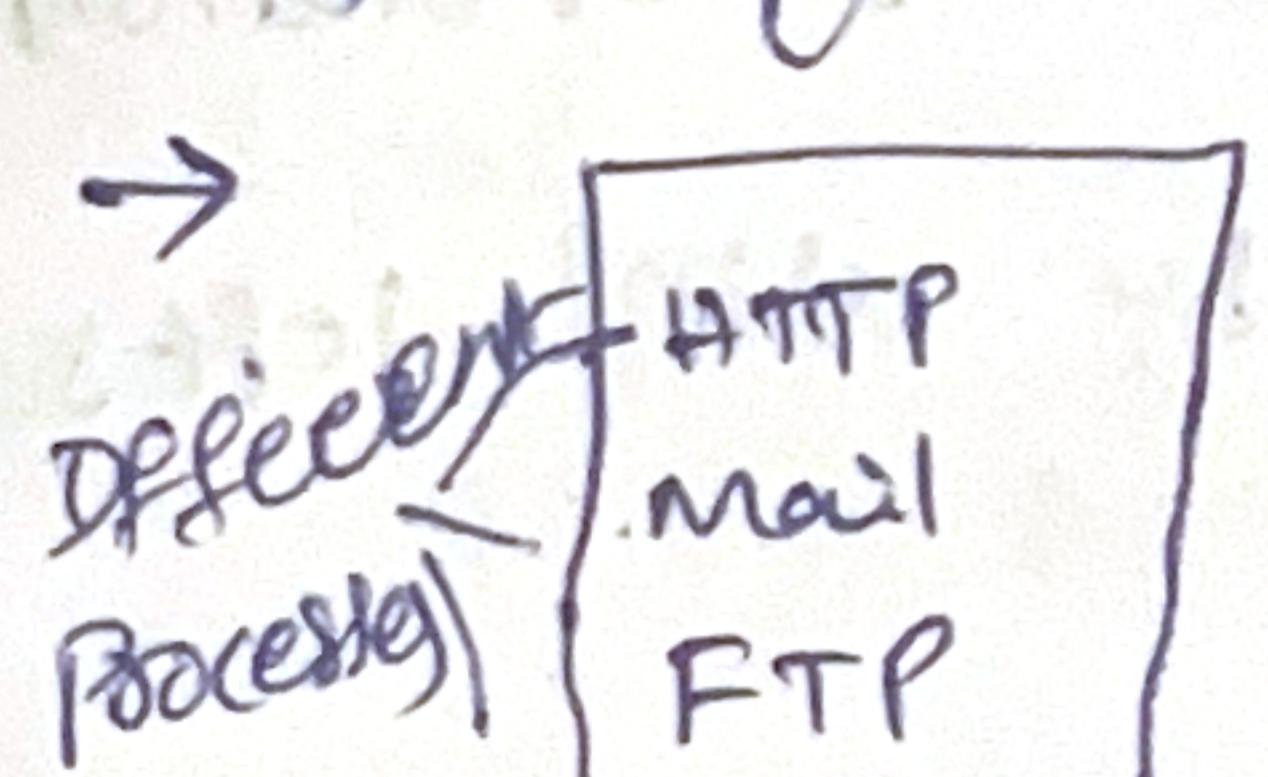
HTTP response :- Server sends HTTP response

⇒ SMTP → Two mail servers with each other by using this protocol

DNS :- This is a process of converting Domain name to IP or vice versa.

## Diff b/w Port num & IP address:-

→ By using IP, we can call entire machine/server

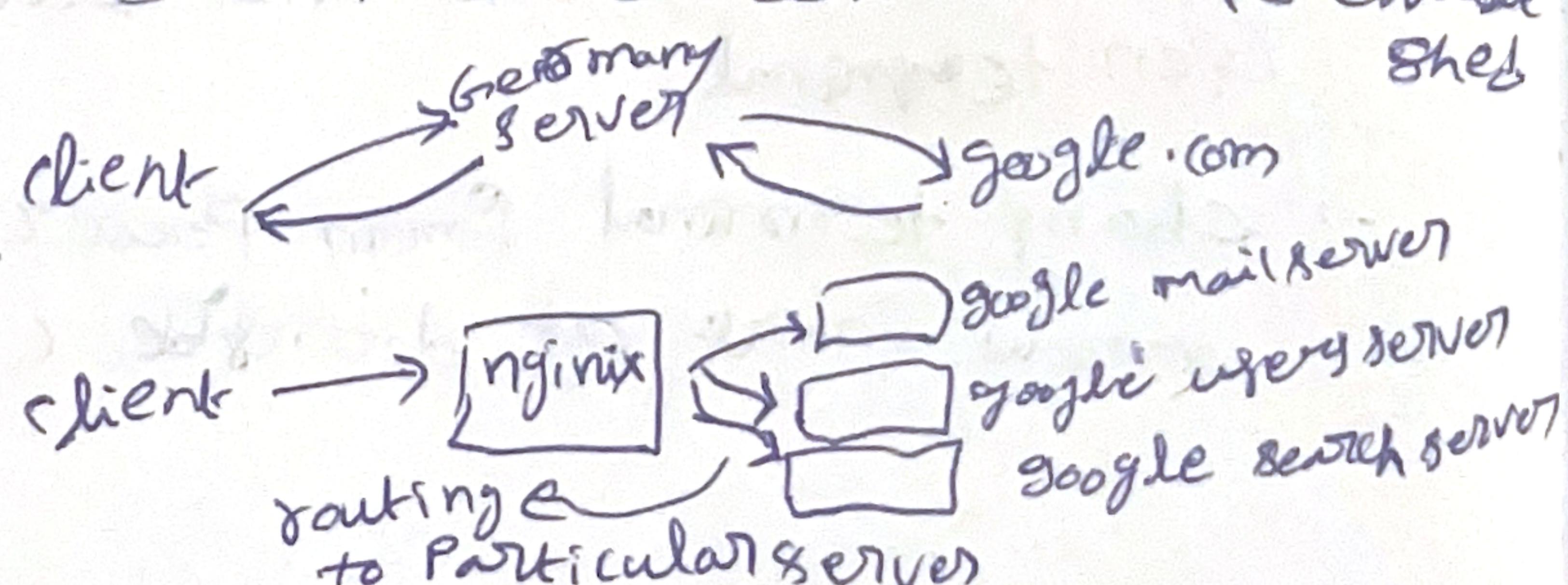
→  ⇒ we can call particular process in server by using that process port number

ex:- 8080 | HTTPS

⇒ First send connection request to the server and followed by send data request to the server once connection is established

VPN = forward proxy

Nginix = Reverse proxy



## Network Commands:-

1. IPconfig :- IPv4 Address = us

default gateway = ~~our~~ <sup>first</sup> router's IP address which is hitting

→ check in wireless LAN adapter, if we connected to WiFi

→ check in Ethernet adapter Local Area connection, if we connect through LAN

2. IPconfig/all - It will shows mac address details in

Physical address section in wireless Lan & Ethernet

3. nslookup :- press enter and give url of the website that

we want. IP address. after that press enter

then it will show IP.

(ctrl+c → to exit)

4. ping ipaddress :- the server of that IP will reply to us.

5. tracert - IP address of use :- Tracing all routers ~~IP address~~ between our system and destination server.

6. netstat -a → shows all ~~active~~ connections and listening ports.

⇒ wire shark is a tool is used to read the info in the packets transferred from source to destination when any protocol is called/running.