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Internet and it working : Internet which in simple terms means interconnected networks are connections over two or more devices or networks through tcp/ip . There can be public ,private or other types of network .The internet mainly uses two types of model :

1 . Client -Server Model : a client sends a request and the server responds , Examples include websites, web apps , file uploading or downloading .
2 . Peer to Peer Model : In this each node(device) is connected to each other which again may connect to other nodes and all are decentralized , mainly consisting of seeder and leecher .

When a browser requests a website , DNS resolver looks for the website's ip address in the cache , if not present , the root name server will extract the .com , .in , etc and send it to TLD name server which gets the ip address from the authoritative name server .
The ip address is the address of the device on the internet , which can be public or private , like the address of the device is private and that of the router is public . This IP address are assigned to each device by the ISP . IPV4 are made up of 32 bit consisting of 2^32 IP addresses and IPV6 is made up of 128 bit.

API and its uses : An API is way through when two or more applications interact . In this application sends a request to the server and then the server responds . This api mainly follows two styles REST and SOAP . In rest the data is sent in json format and in SOAP it is in xml format . Most of the applications uses rest architecture for getting or sending the data. You make a request through HTTP or HTTPS protocol . The request address mainly consists of the protocol , base url , endpoint , query params , path variable . It also contains request body , request headers . Headers generally consist of info about the requesting url , content , authorization ,etc .

HTTP CRASH COURSE & EXPLANATION : Http is the through which a client can send a request to the server . In Https the data is secured through SSl or TLS . Http headers which contain info about the request url , content , authorization , etc and are divided in general , request and response header . A client can send requests through different methods like GET , POST , PUT , DELETE , which are used to get some data, send data of a form, replace existing data on the server or delete data . Server can different response codes with the Http request :
1xx - for information purposes
2xx - success
3xx - redirection
4xx - error on the client side
5xx - error on the server side

HTTP1/HTTP2/HTTP3 : Creation of Http in 1996 which requires a separate Tcp connection for every request to the server , with Http 1.1 we can use same Tcp connection for multiple request but pipelining introduced in it was hard to implement . With the introduction of streams in Http 2

we can send multiple requests from the same connection , which doesn;t require responses to come in the same order like in Http 1.1 , it also introduced push method in which a server can send responses whenever new data is available , without a client requesting it. Http 3 introduces QUIC streams , which share the same connection but work independently .