Monday, 3 July 2023   11:51 AM

HTTP Request

google.com

→

DNS

Domain Name Server ⟶ google servers

returns IP addr. of

184. 156. XX.XX

corresponding domain name

in a look up table
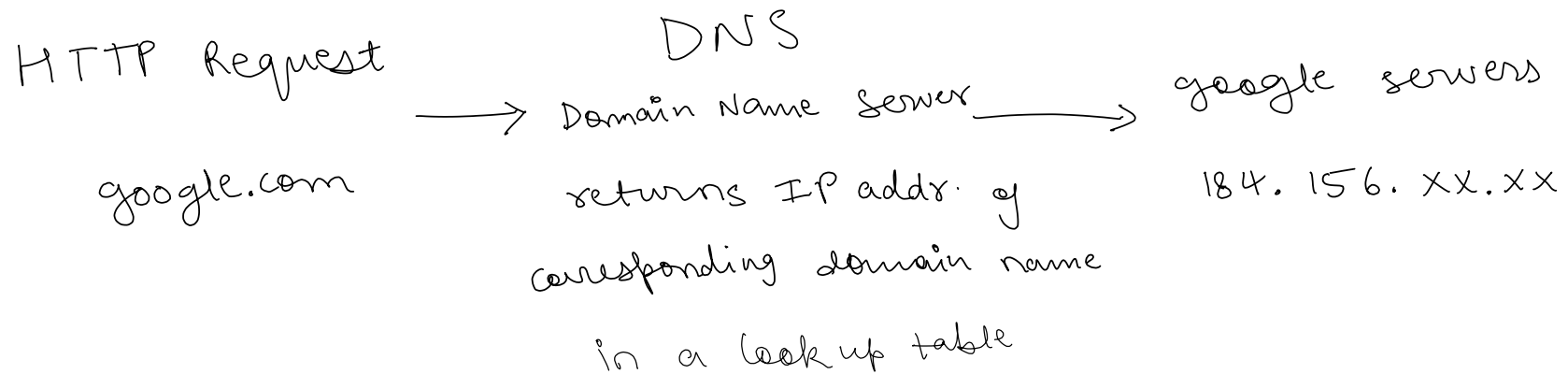
MAC Address:

The IP Address depends on the network device and configuration and hence changes if we connect to different routers or modems. So in order to uniquely identify any device connected to the network, **MAC** **address is used**.

MAC address is usually hard coded into the network device/Network Interface Card/Network Interface Adapter and remains constant throughout it's lifetime.

Layering Architecture

Application Layer

checkout gzip - Brotli
Algo

OSI
MODEL
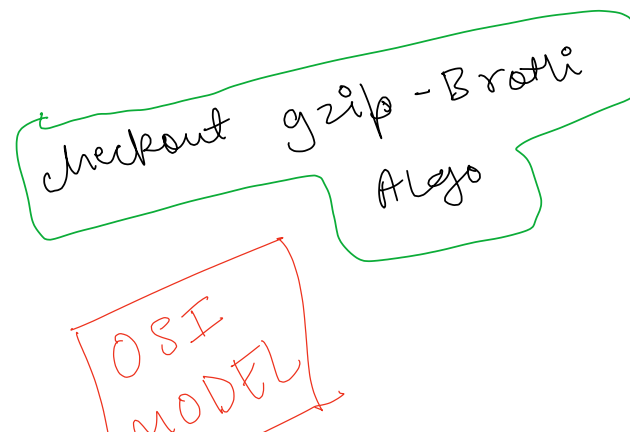
| Presentation Layer | encryption
compression |

| Session Layer | storage of cookies & session |

OSI is only a theoretical model

| Transport Layer | TCP/UDP layers

TCP is lossless — eg when we send important files
UDP is lossy
  — eg: video/audio streams. |

| Network Layer | Routing |

| Data link layer | Deals with devices on the same n/w through Ethernet/WiFi
uses MAC addr. to send packets/frames
  to respective devices |

| Physical layer | Routers, modems, towers etc
all the hardware |

Port Number

OS runs every application with a port number assigned which specifies the network connection of that application.
Let's say if some data is being received, then port number specifies which application to direct the data to.

React — 3000

HTTP — 80

HTTPS — 443

Redis — 6379

DBMS — 3306

SFTP — 22

Java — 8080