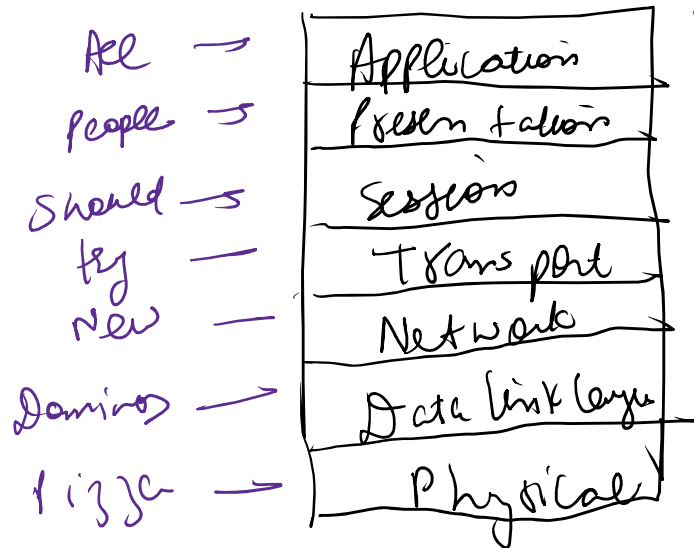


↳ connection of diff computers that share info is called a network.

# OSI model

↳ logical / conceptual model that tells how computers communicate

ISO 1984



set of protocols



⇒ Applications } Network Applications



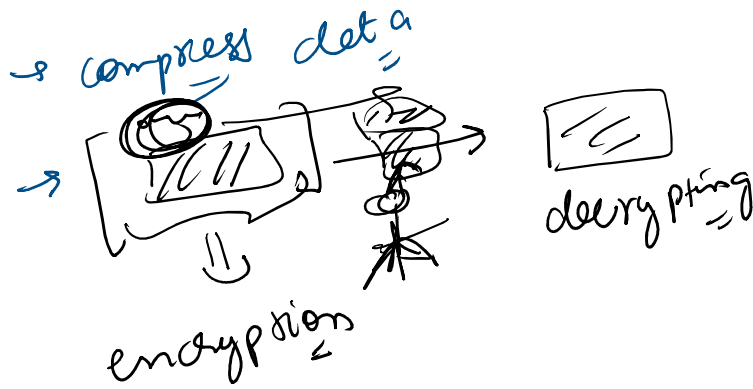
Email  
SMTP

Presentation

↳ Translation

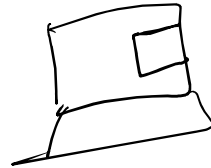
Receives data from application layer and presents it into a machine understandable format.

- process data



# Session Layer

Protocol related to session management



[Software layers]

# Transport Layer

↳ protocol for sending data packets from one machine to other machine

Let's study relevant

[ TCP : Transmission Control protocol } Reliable  
 UDP : User Data gram Protocol. } Non reliable ]

IPv4 → N.N.N.N      32 bits →  $2^{32} = 4 \underline{\underline{0}}$

[0-255]  
8 bits

[ 127 . 0 . 17 . 171 ]

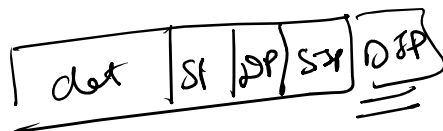
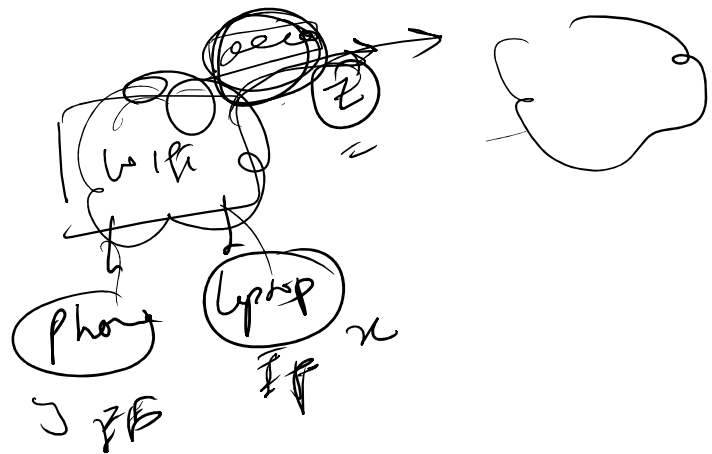
IPv6 → 128 bits

.. N° N° N° N° N° N°

$N^{\circ} N^{\circ} N^{\circ} N^{\circ} N^{\circ} N^{\circ} N^{\circ} N$   
 $\underbrace{16}_{e}$

$2^{128}$

RSR



# DLL

MAC

NIC → Network Interface  
 Card

# Physical





MAC address

media Access Control

NC



NAT

Network Address Translation

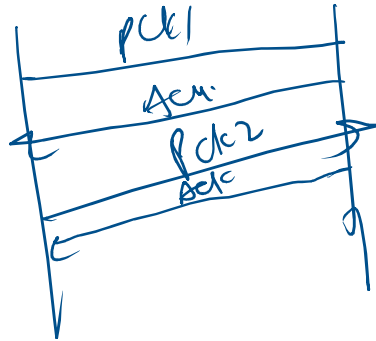
IP + MAC

48 bit

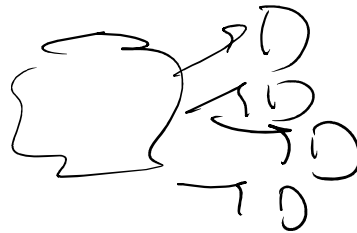
# TCP vs UDP  
Reliable      Non reliable

[TCP → main forms a connection and sends the packets in a sequence]





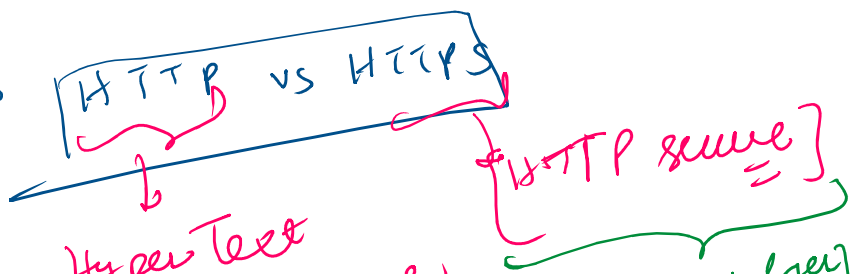
[ → TCP can retry in case of errors. ]  
 → optimize the route



checksum



# Application



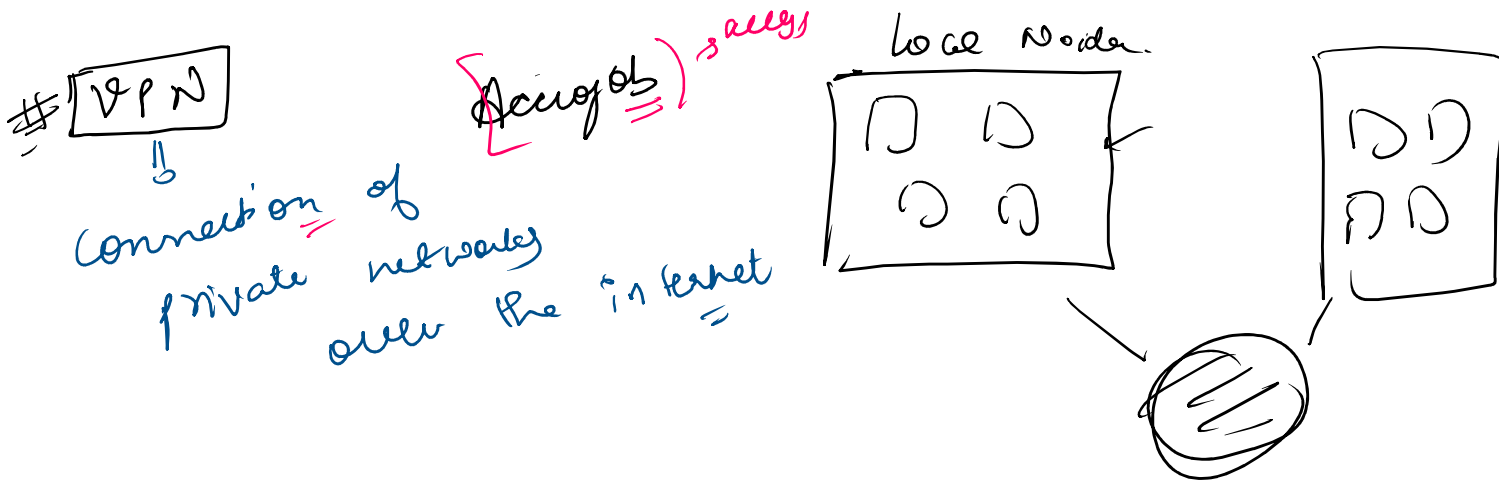
HyperText  
Transfer Protocol  
Application

[Transport Layer]

HTTPS = [HTTP + SSL]  
↳ [Secure Socket Layer]

authentication : verifying whether user is genuine or not

authorization : what all action a user can perform



# NS Resolution  
↳ Domain Name Server

