Computer Network

Intranetwork - Intranet

Internetwork - internet

* It is a network of networks
* Communication
* Banking (To use applications)
* Social media
* Uploading
* Downloading
* Military purposes
* Stocks

Web (www) – World wide web

* Is a part of internet
* It uses protocol to transfer the data

Protocol

* Set of rules and regulations
* IP
* HTTP : Hypertext transfer protocol
* HTTPS : Hypertext transfer protocol secure
* https://www.icicibank.com/
* SMTP : Simple mail transfer protocol
* FTP : File transfer protocol
* TCP :Transmission control protocol

Methods of HTTP/HTTPS:

* GET – to get data/info (default method) from server
* POST – to send the data/info to server
* PUT – to update/edit/ make few changes in the data that is already available in the server
* DELETE – to delete the data in the server

Some of the http status codes

* 200 (OK)
* 201 (CREATED)
* 404 (NOTFOUND)

MAC

Client- server Architecture

<https://www.facebook.com/>

IP address

>ip config

Types of ip addressing

* Static ip address (fixed/ public ip address)
* Dynamic ip address(allocated by modem each time when we establish the connection)

Facebook servers (any application server)

Facebook.com -> mapped to the specific ip address of facebook server

DNS MAPPING : Domain Name System Mapping

x.x.x.x(ip address of youtube server) 🡪 youtube.com

Godaddy.

1mbps - > 10^6 bits/sec

1gbps -> 10^9 bits/sec

1kbps -> 10^3 bits/sec

1 byte = 8 bits

1MBps -> 10^6 bytes/sec

Types of coonection

-wired - optical fibres

-Wireless – Bluetooth , wifi

Types of network

--------------------------------

LAN(Local area network):

* Devices connected in a small place(house/office)

MAN(Metropolitan area network)

* Across a city

WAN

* Across countries
* Optical fibres

Topologies in network

* Method of connecting devices in a network

Types

* Bus topology
* Ring topology
* Start topology
* Tree topology
* Mesh topology

OOP (Object oriented programming)

* Abstraction
* Encapsulation
* Inheritance
* Polymorphism
* -------------------------------------
* Class
* Blueprint
* Properties / data members
* Behaviours / member functions
* -------------------------------------
* Object
* It is a instance of class
* Multiple objects can be created referring a same class

Blueprint ----------------------contractor-----------------🡪 House

(class) --------------------------JVM--------------------- (Object)

Dog blue print

Properties

* Color
* Cost
* Bread

Behavior

* Barking
* Sleeping
* Eating
* biting

Abstraction

* It is the process of hiding non-essential details and displaying only essentials details
* To improve the security

Encapsulation

* Process of wrapping properties and behaviours into single unit.

Inheritance

* Acquiring the properties and behaviours of a parent class is called inheritance

Blue print 1 (parent)

* Ground floor – properties & behavious(1 hall, conference room, waiting hall)

Blue print 2 (child)

* Ground floor should be same as blue print 1
* First floor 🡪 dining hall ,3 bed room

Polymorphism

* Poly : many , morphos : forms
* Ability of an object to take more than one form is called polymorphism

Void add(int a){---------}

Void add(float b){-------------------}

Add(10.0)