

14/03/2023

12th Computer Application

- RTF - 1987 (Microsoft)
- MPEG-1 - Video CD & MP3
- MPEG-2 - Set top boxes
- MPEG-4 - Multimedia & mobile web
- MPEG-7 - audio & visual
- MPEG-21 - "e multimedia framework"
research in 2000.

* Mysql Current version is 2003.

* It runs on multiple platforms like windows, Linux.

PHP

⇒ 1990 - Tim Berner's Lee introduced WWW (World wide web)

⇒ PHP invented by Rasmus Lerdorf in

1994

⇒ Server side scripting language

⇒ Current version of PHP, 7.3 is released by official team on

30 November 2017

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⇒ Different types of PHP syntax

1. Default
2. Short open tags
3. HTML script embed tags.

⇒ PHP functions hide information.

Looping Structure

⇒ foreach provides an easy way to iterate over arrays.

⇒ which loop will issue an error when you try to use it on a variable with a different datatype? foreach.

Forms & files

Two types of validation

EX

Client-side validation Javascript & HTML

Server-side validation PHP, ASP or JSP

⇒ PHP has **built-in** function which can be easily connected to MySQL database.

⇒ **Facebook** has written alternative version of PHP, (ie) **HHVM's HHVM/C** helps to convert **PHP → C++**.

Computer Networks

⇒ **Vint Cerf** ⇒ Founding father of Internet.

⇒ **Lawrence Roberts** considered as one of the father of Internet.

I - Interesting
N - Notions
T - Transmitted
E - Electronically
R - Round
N - Newly
E - Engineered
T - Technology.

⇒ **Facebook** was created in 2004

Computer network uses:-

Communication $\Rightarrow$ Communicate

Via (mobile, social media, telephone, e-mail, chatting, video telephone, video conferencing SMS, MMS, Groupware).

Resource sharing:

Sharing such as printers, scanner, PDA, fax machine & modems

Software (or) Data sharing:-

Software can be shared among other computers.

Money saving:-

Reduces paperwork

Manpower

Resources sharing

Sw sharing

Time saving.

1966 WAN (wide Area Network)

introduced for time sharing.

N/w examples & protocols

Types of networking protocols -

* Network Communication protocol

HTTP & TCP/IP

* Network Security protocol

HTTP, SFTP & SSL - secure socket layer.

↓
Secure file transfer protocol

* Network management protocol

ICMP & SNMP.

Generations of mobile N/w



(1G)	-	1981	-	NMT
(2G)	-	1991	-	GSM
3G	-	2000	-	GPRS launch
(2.5)	-	2003	-	UK 3G launch
(3G)	-	2007	-	
(4G)	-	2019+	-	
(5G)	-		-	

⇒ First Generation (1G)

NMT - Nordic mobile Telephone Communication.

Analog transmission

Low traffic density leads to Spoofing its identities.

⇒ Second Generation (2G) 1991

GSM - Global System for mobile Communication.

Uses. 900 MHz & 1800 MHz for frequency bands

SIM - Subscriber Identity Module.

Transmission used :-

TDMA - Time Division Multiple Access

CDMA - Code " " " "

⇒ (2.5G) second - third generation

GPRS (General packet Radio Service)

or Speeds up to 115k bits/s maximum
384k bits/s using EDGE

EDGE - Enhanced Data Rates for
Global Evolution.

GSM data transmission rates
reached 9.6 kbits/s (%)

⇒ 3G (2003) (UK launch)

Deliver data rate up to 2 Mbit/s

European standard is UMTS
(Universal Mobile Telecommunication
Systems).

Data transmission uses WCDMA
(Wideband Code Division Multiple Access).

Transmission data rate

$1900 \text{ \& } 2200 \text{ MHz}$

UK holds a 20 year license
80% achieved by 31 December
2007.

4G (2007)

Based on ad hoc network.

IPv6 Network.

Transmission

2 Mbit/s to 10-100 Mbit/s

5G

High data rate.

Two phases.

⇒ Release - 15 March 2019

⇒ Release - 16 March 2020

ITU IMT - 20 gigabits/second.

5G¹ access lower frequencies

from 600 MHz to 6 GHz

Wifi $\Rightarrow$ Wireless Fidelity.

$\downarrow$
technical code $\Rightarrow$ 802.11

Wi-Fi	Li-Fi
$\Rightarrow$ wireless Fidelity	Light Fidelity
$\Rightarrow$ wireless technology	It is also a wireless technology
$\Rightarrow$ uses <u>radio frequencies</u> for <u>data transmission</u>	uses <u>light-emitting diodes</u> for <u>data transmission</u>

LiFi was first used by Harald Haas.

RFID - Radio Frequency Identification

Two types:-

Active RFID - larger distance

Passive RFID - short range transmit

Components:-

$\Rightarrow$ RFID tag

$\Rightarrow$ A reader

$\Rightarrow$ A controller.

OSI - Open system interconnection

↓
1934.

OSI - Layers

7 layers.

Data-link Layer $\Rightarrow$ simple protocols

802.3 $\Rightarrow$ ethernet

802.11 $\Rightarrow$ Wi-Fi

Banking websites are common

examples for HTTPS.

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