

Notemet

⇒ The internet began year 1969. The US department of defence [ARPA] advance research program agency. To provide immediate communication with in the department in case of war they started the concept of internet. Later on the use of internet becomes wide and the US university started research project with the defense department.

As a scholar begin to go online. It change the network from mainly used to scientific used.

As a ARPA Net grow the national scientific foundation [NSF] took the responsibility for the transmission of the ARPA Net in to the communication used. The internet is a world wide fully communication system that provide connectivity from millions of big or small networks.

⇒ Website ⇒ Website is a collection of web pages, which contains text, audio, images, video, and others. There are available over the internet and can be published on atleast one web server. Website can be identify by a common domain name.

Eg. ⇒ .COM, .ARG, .AC, .AU

The website published under the world wide web (WWW) can accessible publicly. There are few website that can be accessible in to a private network.

Most of the websites are dedicated to a particular topic or purpose.

e.g. ⇒ news, education, sports, games and social networking.

The website start with a home page which is followed by some other pages which are linked with hyper linking between the web pages.

There are two types of websites.

① Static website ⇒ The combination of web page that are stored on a server in the same format and to a client web browser is the type of static website. These type of websites are initially coded in the HTML.

② Dynamic Website ⇒ Dynamic website is a collection of web pages that change or customized it self automatically.

The dynamic web pages will be modify "on the fly". by the computer code. These websites can be coded using HTML, CSS, JAVA, Servlets.

Home page ⇒ The home page come use for the first page of websites. The home page is contains the overview of websites and provide the navigation for different web pages.

Web Browser ⇒ Web browser is a software used to access the information of world wide web at clients screen in web browser, when a user request for any information in web browser. It fetchs the data from a web server and then display the web page on the clients screen.

Eg. ⇒ Chrom, opera, safari, metashop Ag.

Protocols ⇒ Protocols are a set of rules and regulations. They are made for communication purpose (data transmission).

★ Transmission Control Protocol / Internet Protocol (TCP / IP) ⇒
Transmission Control Protocol / Internet Protocol is a set of rules and regulations to define communication between computer and other devices. It also defines conditions on which the data should be sent. TCP / IP is a five layer model which follows OSI model.

- Application layer
- Transport layer
- Internet
- network layer
- physical layer

① physical layer ⇒ This layer defines the interface for communication with the transmission medium and the interface between hardware. It consists of hardware like cable, modem and devices.

② Network layer ⇒ It is a portion of TCP / IP and it actually moves data from one source point to destination point.

③ Internet layer ⇒ This layer defines interface with the physical layer. This layer is responsible for accepting (IP) Datagram and transmitting them over the specific network.

④ Transport layer ⇒ This layer is responsible for data packets in

this layer. The TCP breaks data into small pieces and wrap it with the information needed at the receiving point the bundles wrapped with the needed / required information is called datagram.

⑤ Application layer \Rightarrow It is the highest layer of TCP / IP Protocol. The Application like telnet, FTP and other interact with this layer. The user uses the application program interact with one of the transfer layer protocol to send and receive data. The application program provides all available services to the user.

* Simple Mail Transfer Protocol (SMTP) \Rightarrow The simple Mail Transfer Protocol is used by mail servers to exchange email messages or messages. It supports sending function of email but does not support extension of user email from servers. The SMTP is a mail delivery protocol.

* Post office Protocol (POP) \Rightarrow The Post office Protocol is allows user to receive and download emails from mail server to client inbox. The POP has the access to a database of email messages created by SMTP Server. Once the emails are downloaded to the clients end, All the downloaded messages are deleted from the email server. The active version of post office protocol is POP3.

* IMAP (Internet Message Access Protocol) \Rightarrow The Internet message (IMAP) is a standardized email receiving protocol from the mail server. It stores all email messages in a mail server and enable the recipient to views the emails.

* Telnet \Rightarrow The Telnet is a network protocol which works on TCP client Protocol, allows user to exchange information or messages with remote device or server. The telnet is available of Unix / Linux.

- System and also a part of windows OS. This protocol provide command lined interface for communication with each other.
- User Datagram Protocol \Rightarrow The user datagram protocol is a connection less transfer layer protocol it identify various running application on device. This protocol sent the message to the client without taking the connection type. UDP specially use for time sensitive transmission such as video exteme.
- File Transfer Protocol (FTP) \Rightarrow The file transfer protocol is allows computers to communicate and exchange files over a remote network. FTP is the supported by most web browsers. Files can be retrieve from FTP by clicking on particular hyper link. The FFP protocol is used on TCP network. It works by opening a connection that links the computer to communicate each other.
- Trivial File Transfer Protocol (TFTP) \Rightarrow The Trivial File Transfer Protocol is a simple file transfer protocol. Which provide the basic file transfer function with no user authentication this protocol is good example of datagram. Orienteated protocol. But it is not secure protocol. A small file can be transfer using this protocol.
- Hyper Text Transfer Protocol (HTTP) \Rightarrow The Hyper text transfer protocol is the founder of world wide web (www) and it is used to load web page using hyper text links.
- HTTP is a application layer protocol designed to transfer information between network device. It establish a connection to a server and client site. It send request to the server or loading the required information.

Hyper

hyper text transfer Protocol secure (HHTPS) is a protocol that secure the connection and transfer data between web server and client.

MIME => The multipurpose Internet mail

Exchanging exchange protocol is a internet standard that allows user to send and receive various emails and its attachment (files like audio, video, text image, or, any other applications program) it works with SMTP, POP, IMAP, and HTTP protocol.

Internet

S/MIME => Secure Multipurpose mail exchange ^{secure} protocol is a Internet standard that can do both encryption and digital signature for securing emails.

S/MIME provides protection for business emails as it is advance Version of MIME user can send audios, Video, images document and text files in a secure manner.

SNMP (Simple network management protocol =>

This protocol is a Internet Standard protocol used for managing and monitoring monitoring network connected devices.

SNMP is a application layer protocol in which is used to monitor the network failure and configure the remote devices. The SNMP architecture has three main components.

① SNMP Manager = It is a centralised system used to manage and monitor the network. It is also known as network management system (NMS).

② SNMP Agent = It is a software module installed on managed device. The manager access information in database.

③ (MIB) Management Information base \Rightarrow It consists of information on resources they are to be managed.

Router

Router \Rightarrow Router interconnects the multiple networks and devices together and allowing them to transmit or communicate with each other. The Router sends the data packets from one network to another network by selecting path using various protocols.

Repeaters

Re Pe Repeaters

1. Repeater = Repeaters are the networking devices device this device are use to boost (amplify) the Signals in network by Receiving Weak Signals and Regenerate the Signals before retransmitting it used used in both wired and wireless network by boosting the signals bridges.

2 bridge \Rightarrow bridge is a networking device than Support lan to lan it connect two or more local area network (lan) to make (form) a singal bridging lan bridge handles traffic between different networks.

3. Gateway \Rightarrow Gateway is a network device that is to provide Interface between to dissimilitor networks . gateways gateway connect the networks which use different protocol or data Gateway can be use for LAN WLAN. It is slower than bridge but bridge or Router, and it is ^{wire} combination of hardware and Software.

4. client Secure Computing \Rightarrow The client Secure Computing is an arrangement in which Central Computer (Server) Provides data and its peripherals to other Computer (Client). Sometimes clients are also Workstation a Server Without Storage and can be handled Some by one person high Computing capacity and huge Storage capacity that provides data programmes per peripherals and Other Utilities. Whereas the Client has lower Computing capacity than Server Without Storage and can be handled by one person.

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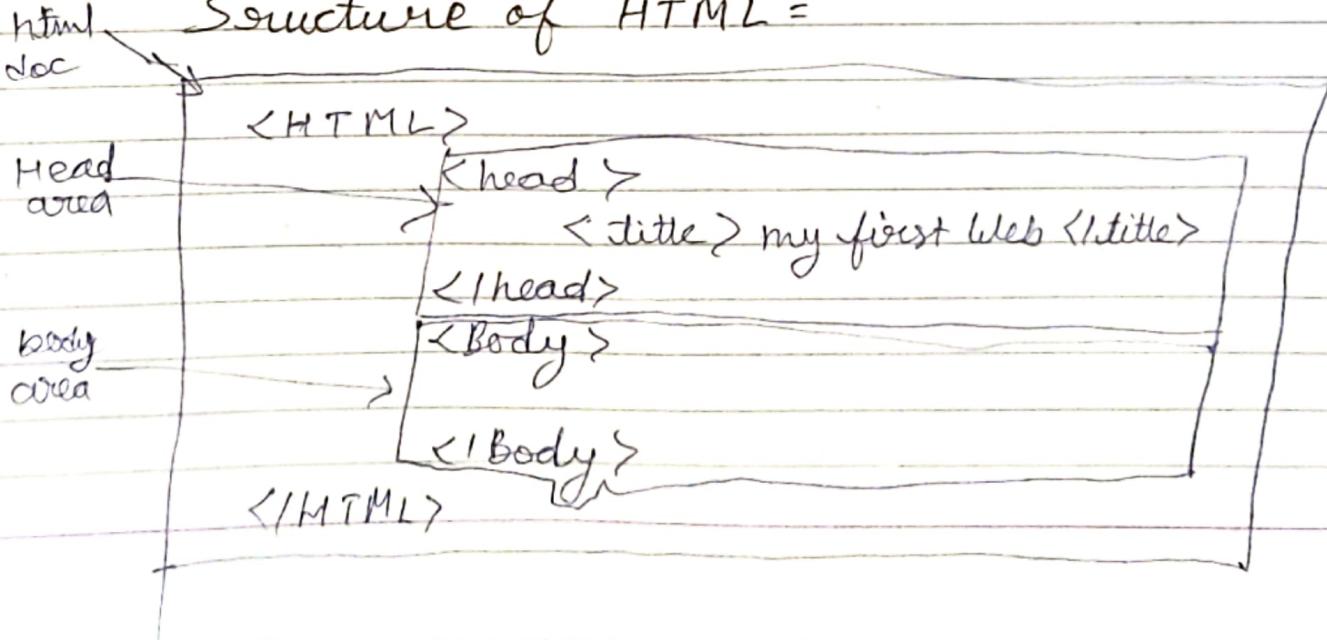
Hyper text Markup language (HTML)

HTML = The hypertext markup language was developed by Tim Berner Lee at cern - in 1993 he is also known as father of HTML the aim of HTML is to create simple way to share and access document over the internet. using HTML we can create web pages in which HTML defines the structure and contents of web documents by using tags and attributes to format text, embed images, creating hyperlinks and build interactive web website.

the HTML communicate between web browsers and server to make it a proper web development.

Structure

Structure of HTML =



Tags
HTML tags \Rightarrow The html HTML tags can be define as instructions (Command) (Command) which are being directly embedded in the text of HTML document. There are various types of tags we used in HTML to tell web browser do to do something. Instead of just displaying text the tag names are define between angle bracket brackets ($<$) and close between. There are two types of tags.

- 1.) Paired tag
- 2.) Unpaired tag

1. Paired tag \Rightarrow An HTML tag is known to has paired tag, if the tag consist of opening tag and closing tag

HTML Format

example

$<\text{tag}>$ - - - $</\text{tag}>$

ex.

$<\text{html}>$ - - - $</\text{html}>$

$<\text{h1}>$ - - - $</\text{h1}>$

$<\text{p}>$ - - - $</\text{p}>$

The content can be return between the opening and closing tag

Ex

<h1> This is my first heading </h1>

opening tag

unpaired tag

closing tag

2 Unpaired tag. \Rightarrow an html tag is called unpaired tag when the tag only has opening tag and does not require the closing tag

Example

<body>

<h1>

<HTML>

<head>

<title>

My first title

</title>

</head>

<body>

<h1>

I am
This my creating my first
Web page

</h1>

<h2>

<h2>

Web page by using HTML

</h2>

</body>

</html>

html

J

1. HTML tag = The HTML tag represent the Root of HTML document.
the HTML tag (`<html>`) contains the other HTML and element tags.
it allows define the document type means the version of HTML. This document type tells the web browser what format and content to the particular web page required.

Example

```
<!DOCTYPE html>
```

a web browser can differentiate between HTML content and simple content.

Attributes => Attributes are used to describe a particular information to display content of web page in better way.

Example -

```
<body bgcolor = "Red">
```

```
<!DOCTYPE html>
<html>
  <head>
    <title> my first web page
  </head>
  <body bgcolor = "yellow">
  </body>
</html>
```

head section \Rightarrow This section is define the head part of any web page. There are different tags like which can be used under link tag.

1 link tag = the link tag is used to inform the web browser about previous and next web document. it also define the `Rel=Previous` attribute hyperlink Reference & to inform about the location of web document.

ex `<link Rel=Rel = "Previous" href = "Prev.htm" />`
2 base = `<base href = "Bennar" href = "Bennar.gif" />`

2 Base = the base tag declares the global reference values for href and target attributes. the attribute href specifies the ref Reference URL, which is used to help compute Relative URLs. the attribute target specifies the default frame name to which all links are targeted.

3 Meta example

```
<base href = "target.wel" />  
<base href = "fram-name" />
```

3 Meta \Rightarrow The meta tag defines the documents with meta info like information like keywords, author, date, expiry date it also supports a dynamic tag which in which the browser loads a new document.

Example \Rightarrow

```
<meta name="keyword" content="BCA,  
BCA collage, Kotes university">
```

4 Script = It This tag contains the little code reference in the body of document or web page

Ex

```
<Script language="javascript">  
    code  
</Script>
```

5.) Style \Rightarrow This tag specifies the style information for the document of webpage

Ex =

```
<Style type="mso-type">  
    ;  
    ;  
</Style>
```

Body Section (Body tag) → The HTML body tag is the main part of any web page it represent the main content which is visible to user it works to the user, it define with is the HTML tag and works in conjunction with the head tag. it is used for defining the structure, layout and content displayed in a browser including text, images, links, tables and audio, video, contents.

Syntax =

```
<body>
```

```
.
```

```
:
```

```
</body>
```

Example →

```
<body>
```

Creating

```
    <h1> I am on my first webpage
```

```
    </h1>
```

```
    <p>
```

This is the ~~real~~ webpage development
using the <body> tag

```
    </p>
```

```
</body>
```

Example 2 →

```
<body background="E:\html\cat.jpg">
```

```
<h1>
```

I am creating my first web page

```
</h1>
```

```
<p>
```

This is the real time Web page development, using the <body> tag.

```
</p>
```

```
</body> <a href="image-3.jpg"> open here  
to open it </a>
```

```
</body>
```

The following attributes can be used in the body tag

- 1. background → The background attribute in body tag is used to specify a background image for entire the page

Syntax

```
<body background="url image/file path">
```

it contains the value (URL) which specifies the address of the background image

Example →

```
<body background="E:\html\cat.jpg">
```

2 Bgcolor \Rightarrow The bgcolor attribute in body tag is used to set the background color of web page. it accepts the colour name, RGB Values or hexadecimal Color code.

Syntax

```
<body bgcolor = "Color name">
```

Example =

```
<body bgcolor = "green">
```

3 Text = The text attribute in body tag is used to define color for the text in Web Webpage

Syntax

```
<body text = "green color">
```

Example

```
<body text = "yellow">
```

4 alink \Rightarrow The alink attribute in body tag specifies the colour of active link

Example

```
<body alink = "yellow">
```

5 link = the ~~alink~~ attribut in body tag is
use to specific the color of given
link

Example =

<body alink="#77AD56" link="Red">
Vlink

6 Vlink => The ~~Vlink~~ attribut in body
tag Specific the color of
Visited link

<body alink="#77AD56" link="Red"
Vlink="skyblue">