What is world wide web?

→ World wide web is also known as a web, is a collection of websites or webpages in webservers and connected to local computers through the Internet.

→ These websites contain text pages, digital images, Audios, Videos etc.

→ users can access the content of these sites from any part of the world over the internet using their devices such as computers, laptops, cellphones etc.

→ The WWW along with Internet, enables the retrieval and display of text and media to your device.

→ world wide web is like a huge electronic book whose pages are stored on multiple servers across the world.

→ Small websites stores all of their webpages on a single server.

→ But big websites or organizations place their web pages on different servers in different countries. so that when users of a country search their site they could get the information quickly from the nearest server.

→ The web provides a communication platform for users to retrieve and exchange information over the internet.

→ You need a browser, which is installed on your computer, to access the web.

Difference between world wide web and Internet

→ Internet is entirely different from WWW
→ Internet is connecting computers.
→ WWW is connecting people.

Internet	world wide web
→ A global system of interconnected computer networks that use the TCP/IP protocol to link devices worldwide.	→ online content that is formatted in HTML and accessed via HTTP protocol.
→ A massive interconnection of computer networks around the world.	→ Service provided by the Internet.
→ uses Transmission control protocol/ Internet protocol (TCP/IP) & IP addresses.	→ uses Hyper Text Transfer protocol (HTTP)
→ The first version of the Internet was known as ARPANET.	→ In the beginning WWW was known as NSFNET
→ Internet is primarily hardware-based.	→ WWW is more software oriented

Comparison chart.

Basis for Comparison	Internet	WWW
Basic	It is a physical Infrastructure.	It is a service.
Defined as	A huge network which is a collection of several networks.	A set of software services that operate on Internet
Nature	Hardware based.	Software oriented.
protocol used	TCP/IP	HTTP (HyperText Transfer protocol)
Identification	Through IP address	Through URL
1st version	ARPANET. (Advanced Research Projects Agency Network).	NSFNET. (National Science Foundation NETWORK).
Dependency	Independent existence	Existence depends on the Internet.

Users / Websites	3.5 billion Users	1.6 to 1.9 billion websites
Accessibility	Through Various Softwares	Through Internet Browser

Note → The Internet doesn't show dependency on WWW as it mainly relies on the devices that are being connected within the Network. While WWW being a service of Internet solely depends on it.

① Internet connects devices while the web connects people.

HTML Tables

HTML tables allow web developers to arrange data into rows & columns.

```
<table>
  <tr>
    <th> Name </th>
    <th> rollno </th>
    <th> hobby </th>
  </tr>
  <tr>
    <td> abc </td>
    <td> 12 </td>
    <td> P </td>
  </tr>
  <tr>
    <td> XYZ </td>
    <td> 13 </td>
    <td> C </td>
  </tr>
  <tr>
    <td> ABC </td>
    <td> 14 </td>
    <td> D </td>
  </tr>
</table>
```

Name	rollno	hobby
abc	12	P
XYZ	13	C
ABC	14	D

td stands for the table data Everything between <td> and </td> are the content of the table cell.

tr stands for table row.

<th> stands for table header.

By default th elements are bold and centered.

HTML table tags

<table> Defines a table
<th> Defines a header cell in a table
<tr> Defines a row in a table.
<td> Defines a cell in a table
<caption> defines a table caption.

Web Technologies

In a web page information are presented using the following technologies -

① HTML
② Javascript.
③ Java Applets
④ Java Server pages (JSP)
⑤ Active Server pages (ASP)
⑥ Java servlets

The browser machine executes the first three.
Last three run in the server machine.

· XML, cookies & plug-ins.

History of the world wide web (Assignment).

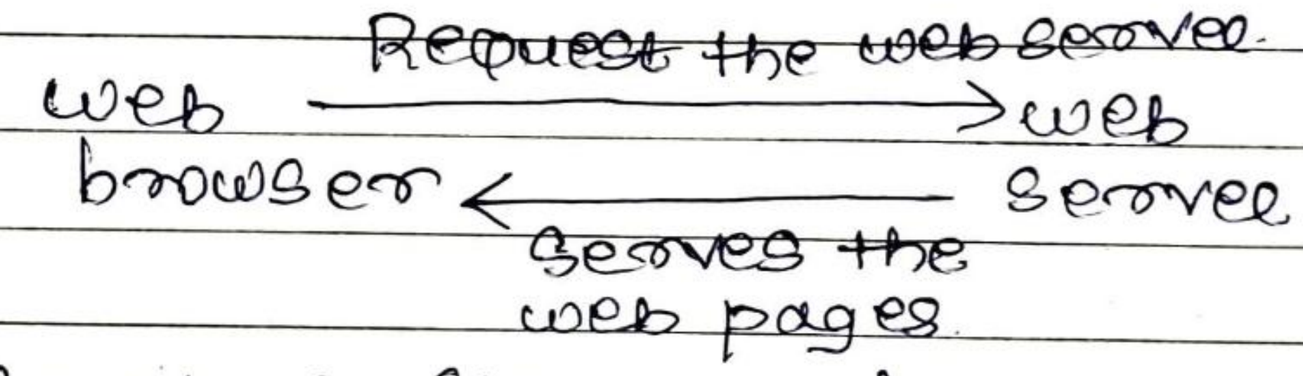
→ The WWW was invented by a british scientist, Tim Berners Lee in 1989.

→

How the world wide web works?

→ WWW is a collection of websites connected to the internet, so that people can search & share Information

→ Let us understand how it works.

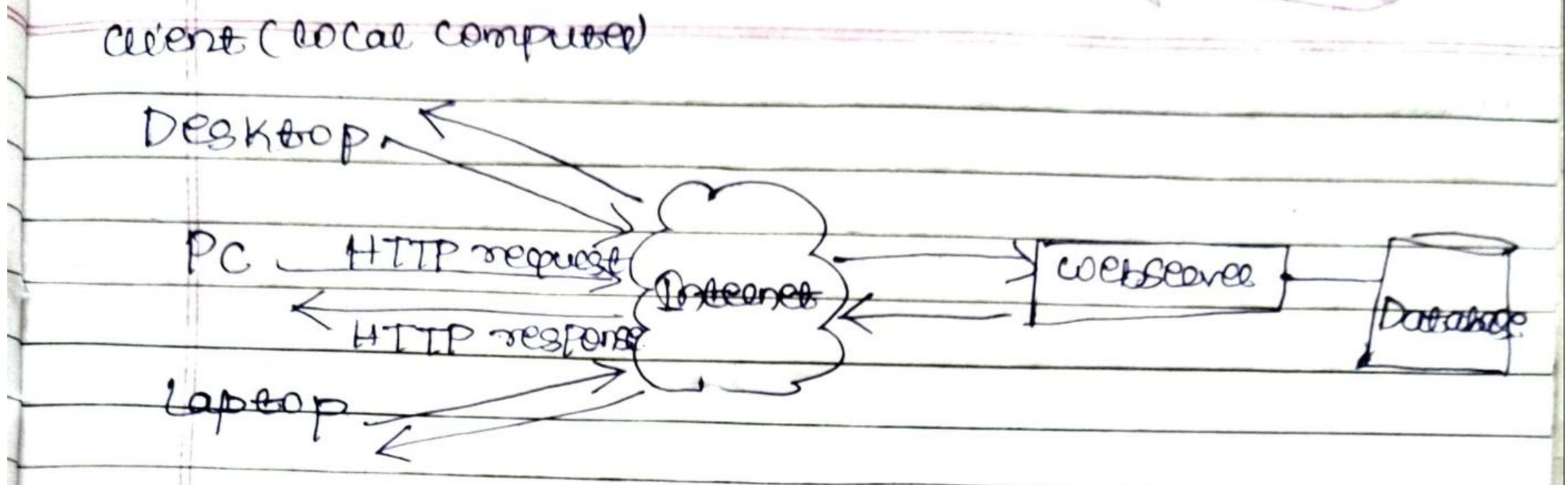


→ The servers store and transfer web pages or information to user's computers on the network when requested by the users.

→ A web server is a software program which serves the web pages requested by web users using a browser.

→ The computer of a user who requests document from a server is known as a client

→ Browser, which is installed on the users computer, allows users to view the retrieved documents.



→ All the websites are stored in web servers. Just as someone lives on rent in a house, a website occupies a space in a server and remains stored in it.

→ The Server hosts the website whenever a user requests its webpages, and the website owner has to pay the hosting price for the same.

Note → The basic objective of the webserver is to store, process and deliver webpages to the users.

→ The moment you open the browser and type a URL in the address bar or search something on Google, the WWW starts working.

→ There are three main technologies involved in transferring information (web pages) from servers to clients (computers of users)

→ These technologies include HTML, HTTP (Hypertext Transfer protocol) and web browsers

Web browser

e.g Chrome, Safari, UCBrowser, Firefox, IE etc

→ A web browser is commonly known as a browser, is a program that displays texts, data, pictures, video, animation & many more.

→ It provides a software interface that allows you to click hyperlinked resources on the world wide web.

→ when you double click the Browser icon installed on your computer to launch it, you get connected to the world wide web and can search Google or type a URL into the address bar.

How the web works

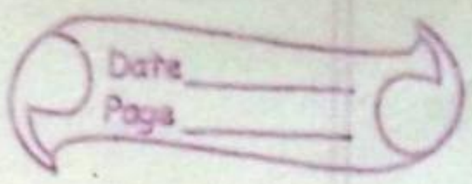
Let's imagine that the web is a road.
On one end of the road is the client which is like your house.
On the other end of the road is the servers which is a shop you want to buy something from.

In addition to the client & the server, we need

(1) Internet connection
→ Allows you to send and receive data on the web. It's basically like the street between your house and the shop

(2) TCP/IP
→ Transmission control protocol and Internet protocol are communication protocols that define how data should travel across the Internet.
This is like the transport mechanisms that let you place an order, go to the shop & buy your goods.
→ In our example, this is like a car or a bike (or however else you might get around).

(3) DNS
→ Domain Name System is like an address book for websites. When you type a web address in your browser, the browser looks at the DNS to find the website's IP address before it can retrieve the website. The browser needs to find out which server the website lives on, so it can send HTTP messages to the right place.



House (Client)

Bike or Car

TCP/IP protocol

Road (web) or Internet

Shop1 (Cold drinks) (Server)

Items (websites)

Shop2 (Purses, Items)

DNS → looking up the address of the shop

HTTP → ~~HTTP~~ This is like the language you use to order your goods.

This is like looking up the address of the Shop so you can access it.

(9) HTTP = HypeeText ~~transfer~~ protocol it's an application protocol that defines a language for clients & servers to speak to each other. This is like the language you use to order your goods.

(5) Component files

→ A website is made up of many different files which are like the different parts of the goods you buy from the shop. These files come in two main types

(a) code files → websites are built primarily from HTML, CSS and Javascript.. other technologies.

(b) Assets → This is a collective name for all the other stuff that makes a website, such as images, music, video, word documents and PDFs.

So what happens, exactly?

When you type a web address into your browser (for our analogy that's like walking to the shop)

1.) The browser goes to the DNS server, and finds the real address of the server that the website lives on (you find the address of the shop)
2) The browser sends an HTTP request message to the server, asking it to send a copy of the website to the client (You go to the shop & order your goods)
This message, and all other data sent between the client and the server, is sent across your Internet connecting using TCP/IP.

3) If the server approves the client's request, then starts sending the website's files to the browser as a series of small chunks called data packets (the shop gives you your goods, and you bring them back to your house)

4)