

WWW is an **Information System** or **collection of data**, means where the links of many photos, videos, text documents is stored/saved in www, which we can access via URL(link).

Every information/ website/video/ artical which u want to view in internet has their specific URL(Address).



The **World Wide Web**, commonly known as **the Web**, **www** or **w3**, is an information system enabling documents and other web resources to be accessed over the Internet.

Documents and downloadable media are made available to the network through **web servers** and can be accessed by programs such as **web browsers**.

What is World Wide Web (WWW, W3)?

The World Wide Web refers to all the public websites or pages that users can access on their local computers and other devices through the **internet**. These pages and documents are interconnected by means of **hyperlinks** that users click on for information. This information can be in different formats, including text, images, audio and video.

The term *World Wide Web* isn't synonymous with the internet. Rather, the World Wide Web is part of the internet.

How the World Wide Web works

World Wide Web consists of multiple components that enable users to access various resources, documents and web pages on the internet. Thus, the WWW is like a vast electronic book whose pages are stored or hosted on different servers worldwide.

These pages are the primary component or building blocks of the WWW and are linked through **hyperlinks**, which provide access from one specific spot in

a **hypertext** or **hypermedia** document to another spot within that document or a different one. Hyperlinks are another defining concept of the WWW and provide its identity as a collection of interconnected documents.

Hypertext is a method for instant information cross-referencing that supports communications on the web. Hypertext makes it easy to link content on one web page to content on another web page or site. Hypertext and HTTP enable people to access the millions of websites active on the WWW.

The Hypertext Transfer Protocol (**HTTP**) is another key component of the WWW. It enables users to access web pages by standardizing communications and data transfer between the internet's servers and clients.

Most web documents and pages are created using Hypertext Markup Language (**HTML**), a text-based way of describing how content within an HTML file is structured. HTML describes the structure of web pages using elements or tags and displays the content of these pages through a **web browser**.

To access one of these pages, a user and their **client** machine supply a universal identifier to the web server via a browser. This identifier may be a uniform resource locator (**URL**) or uniform resource identifier (**URI**) and is unique to each web page.

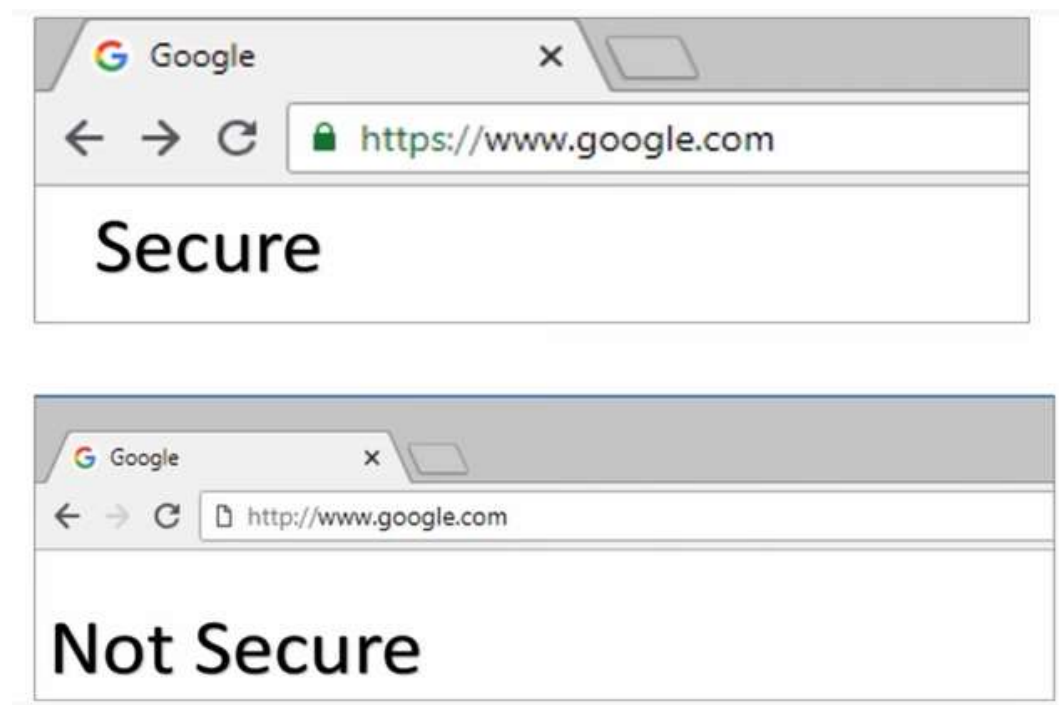
A collection of web pages belonging to a URL is called a website. For example, **www.iccs.ac.in** is a website, while **https://www.iccs.ac.in/contacts** is a web page.

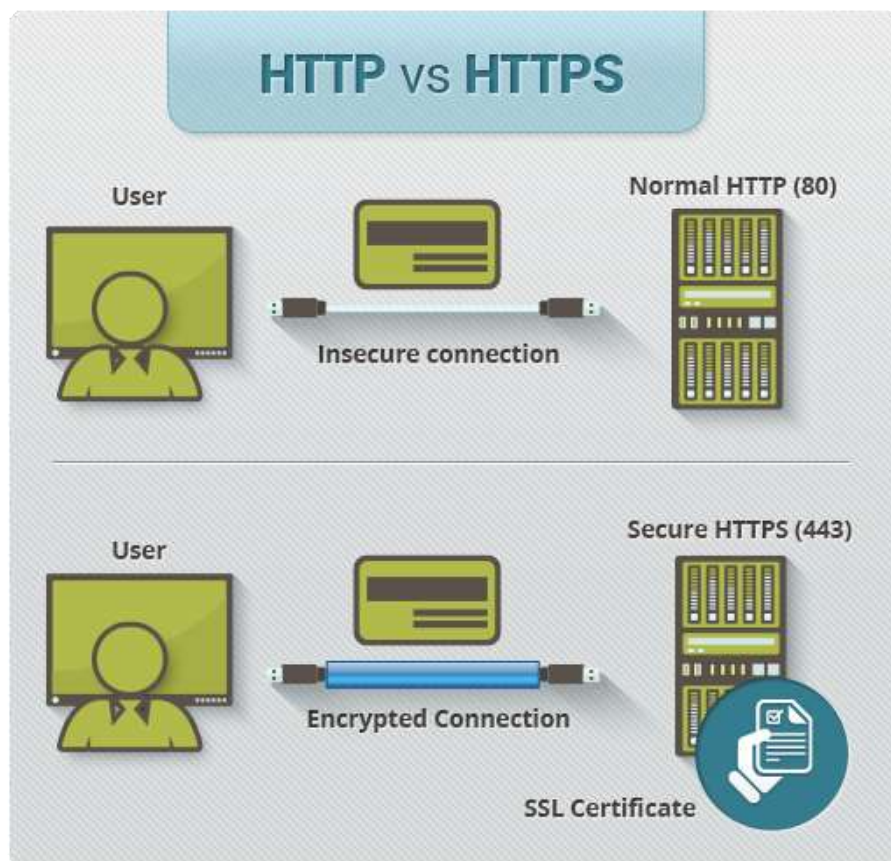
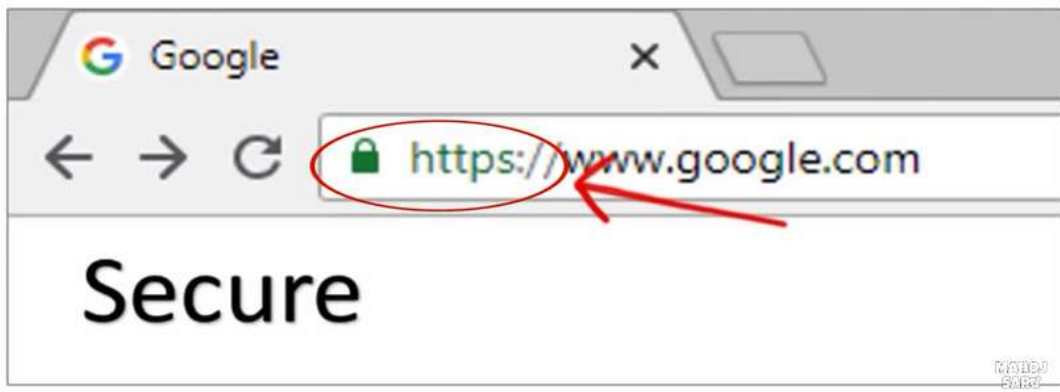
The browser accepts the URL or URI provided by the user and communicates it to the web server. The server then retrieves the web page associated with that URL or URI and presents it to the user in the browser window of their client machine.

When we visit any website we see 2 more things:



When u transfer any file from one computer to another “HyperText **Transfer** Protocol” is used. It is a set of rule used to transfer the files.(Server to Client etc). then only internet works.





The HTTP protocol

HTTP = Hypertext Transfer Protocol

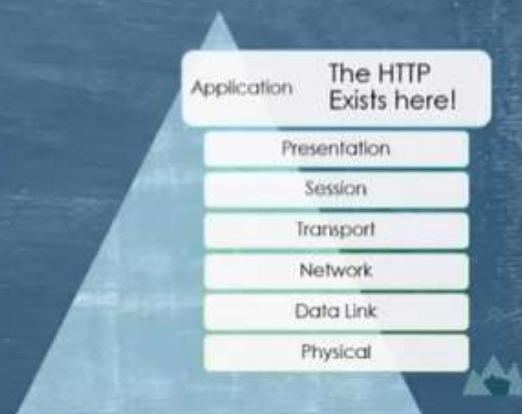
The **HTTP** is an **application layer protocol** that allows web-based applications to communicate and exchange data.

the **HTTP** is the **messenger** of the **web**

It is a **TCP/IP based** protocol

It is used to **deliver contents**, for example, images, videos, audios, documents, etc.

The computers that communicate via the HTTP **must** speak the http protocol



Three Important things about the HTTP

1- HTTP is **connectionless**: after making the request, the client **disconnect** From the server, then when the response is ready the server **re-establish The connection** again and deliver the response

2 - The HTTP can deliver any sort of data, as long as the two computers are **able to read it**.

3 - The HTTP is a **stateless**: The client and server know about each other **just during the current** request, if it closes, and the two computers want to connect again, they need to provide information to each other **anew**, and the connection is handled **as the very first one**.

Why The HTTP?

The http was designed mainly to fetch html documents and sends it to the client

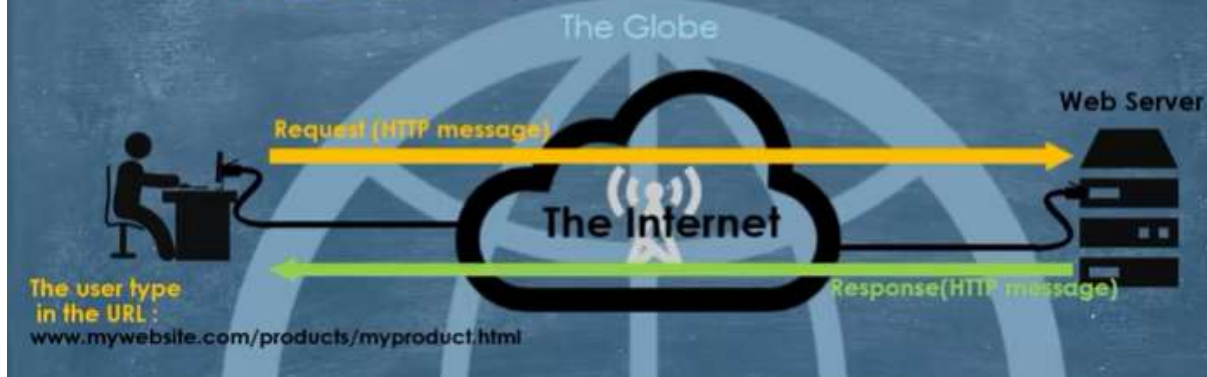
It was designed in a exquisite way

It was being continually evolved and features were being added to it

It became the most convenient way to quickly and reliably move data on the web

How the Web works? And How Http makes that possible?

The Request Response Cycle



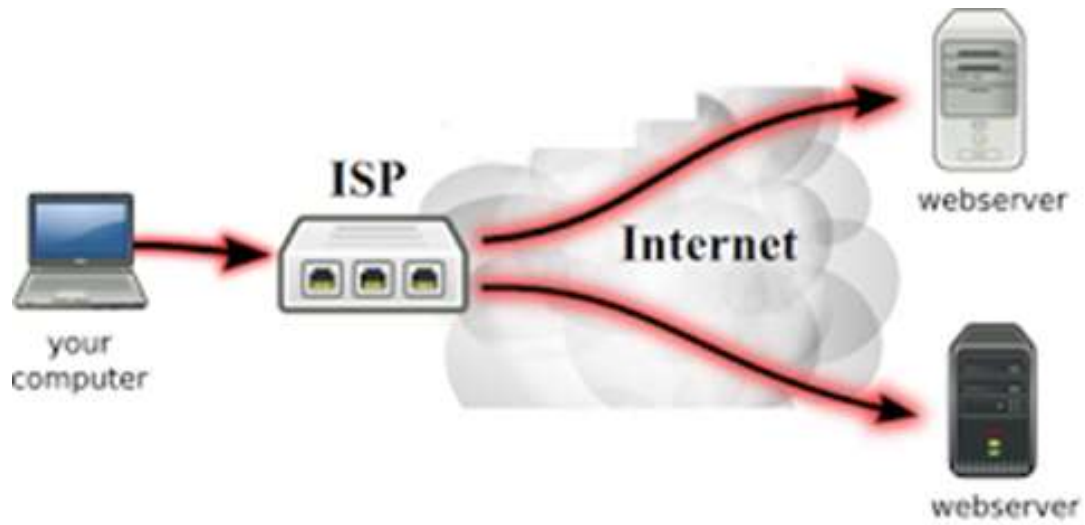
Connection establishes via TCP/IP

To sum up!

- The HTTP is a **TCP/IP based** application layer protocol that allows web-based applications to communicate and exchange data.
- The computers that communicate via the HTTP **must** speak the http protocol.
- The http is stateless, connectionless, and can deliver any data.
- We use the http protocol because it is a convenient way to quickly and reliably move data on the web.
- The request response cycle works on the web via http messages.
- A http message contains three sections, the start line, the headers, and the body.
- The http request message differs from the http response message

Glimpses of my PPT

ISP



Stands for "Internet Service Provider." An ISP provides access to the Internet. Whether you're at home or work, each time you connect to the Internet, your connection is routed through an ISP.

The World Wide Web

The Web

An infrastructure of information combined and the network software used to access it

Web page

A document that contains or references various kinds of data

Links

A connection between one web page and another

The World Wide Web

Website

A collection of related web pages

Web browser

A software tool that retrieves and displays web pages

Web server

A computer set up to respond to requests for web pages

The World Wide Web

Uniform Resource Locator (URL)

A standard way of specifying the location of a Web page, containing the hostname, "/", and a file

What is the relationship between the Internet and the Web?

- The URL (Uniform Resource Locator) consists of for example



protocol like

- `http`: in general
- `file`: which tells the client document is in a local machine
- `ftp`: file transfer protocol

It is the universe of
network – accessible
information.

The World Wide Web

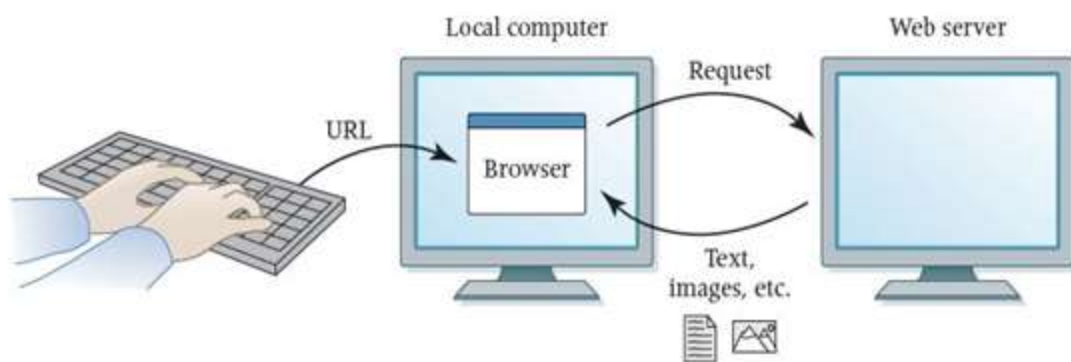
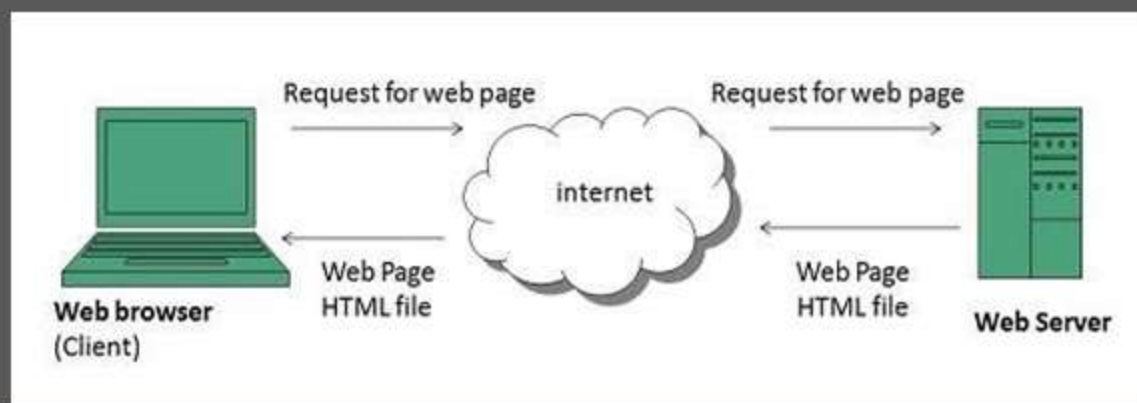


FIGURE 16.1 A browser retrieving a web page

English scientist [Tim Berners-Lee](#) invented the World Wide Web in 1989. He wrote the first web browser [computer programme](#) in 1990 while employed at [CERN](#) in Switzerland.

WWW is also known as W3. It offers a way to access documents spread over the several servers over the internet.

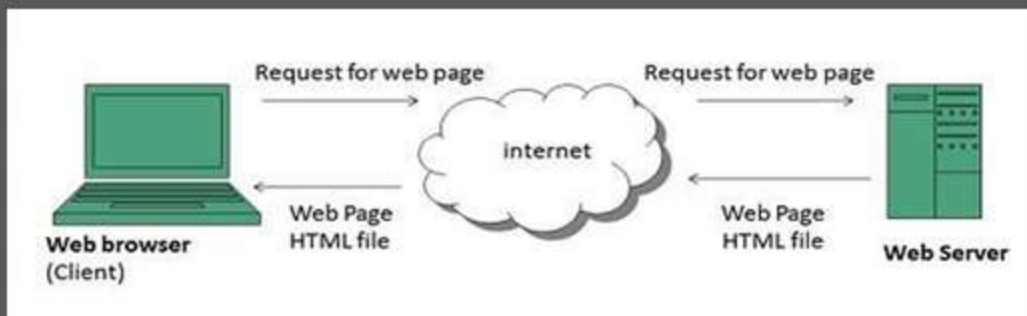
These documents may contain texts, graphics, audio, video, hyperlinks. The hyperlinks allow the users to navigate between the documents.



WWW Operation

WWW works on client- server approach. Following steps explains how the web works:

1. User enters the URL (say, <http://www.iccs.ac.in>) of the web page in the address bar of web browser.
2. Then browser requests the Domain Name Server for the IP address corresponding to www.tutorialspoint.com.
3. After receiving IP address, browser sends the request for web page to the web server using HTTP protocol which specifies the way the browser and web server communicates.
4. Then web server receives request using HTTP protocol and checks its search for the requested web page. If found it returns it back to the web browser and close the HTTP connection.
5. Now the web browser receives the web page, It interprets it and display the contents of web page in web browser's window.



One Line Definition

What do you mean by ISP?

Internet service provider (ISP), company that provides Internet connections and services to individuals and organizations.

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What is DNS?

DNS is a system for computers and services connected to the Internet that resolves domain names to IP addresses. It converts human readable domain names (www.google.com) into Internet Protocol (IP) addresses (173.194.39.78).

What is HTTP?

HTTP is a protocol for fetching resources such as HTML documents. It is the foundation of any data exchange on the Web and it is a client-server protocol, which means requests are initiated by the recipient, usually the Web browser.

What is HTTPS?

Hypertext Transfer Protocol Secure (HTTPS) is an extension of the Hypertext Transfer Protocol (HTTP). It is used for secure communication over a computer network,