

Introduction to World Wide Web

Topics covered:

1. What is the World Wide Web?
2. What are the components of the World Wide Web?
3. How does the World Wide Web work?
4. What is the internet?
5. How is the World Wide Web different from the internet?

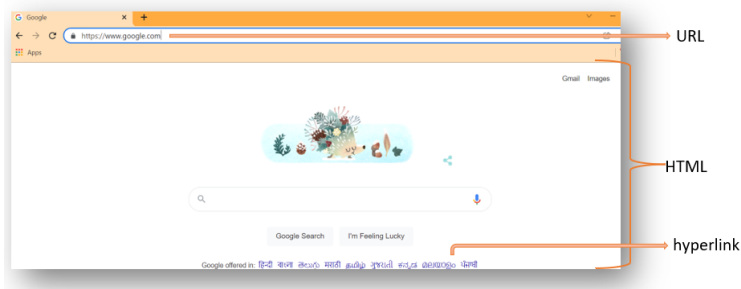
Topics in Detail

World Wide Web:

- World wide web often known as **www/ w3/ web** is an interconnected system of public web pages accessible 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, cell phones, etc.

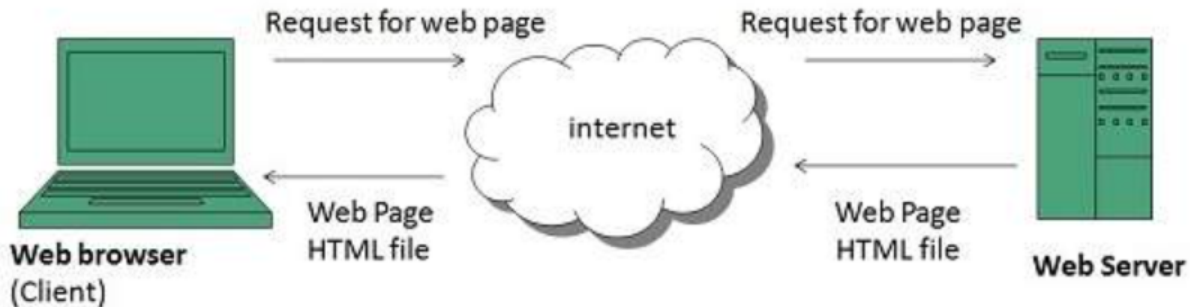
Components of World Wide Web:

- **HTTP:** the http is a protocol that governs data transfer between a server and a client. Specifies communication of browser and server.
- **URL:** to access the web pages an online address URL(Uniform Resource Locator) is essential. A particular collection of web pages that belong to a specific URL is called a website. Serves as a system for resources on the web.
- **HTML:** format in which the web pages are published. Defines structure, organisation and content of webpage.
- **Hyperlink:** for linking and connecting resources.



Working of World Wide Web:

- The web consists of a vast, worldwide connection of **documents or web pages**.
- Each page may contain links to other pages anywhere in the world.



- When a user searches for any webpages, **browser requests** for the web page to the web **server** via the **internet**.
- Web server sends the web page as an **HTML file** and the browser displays the web page on the screen.

- **Browser:**

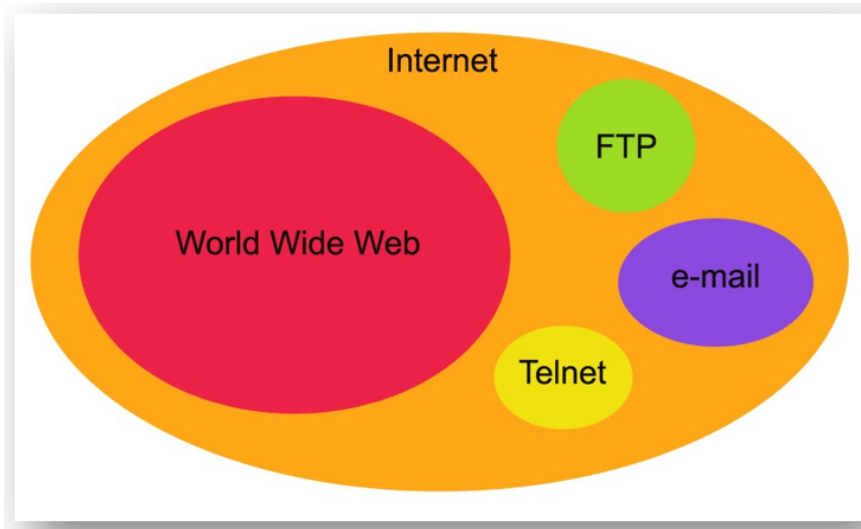
- Program that **displays** text, data, pictures, animation and video on the Internet.
- The browser fetches the page requested, by interpreting the text and formatting commands on it and displays the page on the screen.
- Hyperlinked resources on the World Wide Web can be accessed using **software interfaces** provided by Web browsers.
- Initially browsers were used only for surfing but now it has multiple uses like searches, mailing, file transfer...
- The pages can be retrieved and viewed by using browsers: Google chrome, internet explorer, mozilla firefox, safari, Opera mini.

- **Server:**

- Server is a **computer** that provides **service** to another **computer/user/client**.
- Server is not a special computer; you can even make your desktop a web server, all you need to do is, have a **static IP and 24/7 internet connections**.
- Some types of server: Mail server, web server, database server...
- Example: Oracle, SQL server, Apache, SMTP...

Internet:

- The Internet is a globally **connected network system**.
- The Internet provides communication and access to resources through collection of networks.
- The internet creates a communication medium to share and get information online.



Difference between www and internet:

Internet	www
Connects millions of web pages, images, photos, emails...	Collection of webpages which can be accessed via the internet.
The Internet is the infrastructure.	www is the service on top of the infrastructure.
Book store.	Collection of books in the book store.
Used IP address.	Uses HTTP.
Superset of www.	Subset of the internet.
Hardware oriented.	More software oriented when compared to the internet.

Important Facts:

- On August 6, 1991, the first website **<http://info.cern.ch>** went online.
- Berners-Lee uploaded the first photo on the Web in **1992**. That was an image of the CERN house band Les Horribles Cernettes.
- It is believed that a turning point in the history of the World Wide Web began with the launch of the **Mosaic web browser**.
- Many websites from the early days of the Web have gone dark, but the first one is still live : **<http://info.cern.ch/hypertext/WWW/TheProject.html>**
- Internet came before www:
 - The **internet already existed** when the world wide web came along.
 - But up until the world wide web, nobody had thought of a way to link up all the internet and all of the documents and data on it.

Challenges:

With your new gained ideas on web, internet, browser, and server conduct further studies about Browsers and get to know the following:

- What are the most commonly used browsers?
- Which is the most popular browser?
- Which browser is the most preferable browser for web development? And what is the reason?
- Example of the server being used for mailing purposes?
- Example of the server being used for storing data?