

The World Wide Web (WWW)

Is combination of all resources and users on the **Internet** that are using the Hypertext Transfer Protocol (**HTTP**)

It is an information system where documents and other web resources are identified by Uniform Resource Locators (URLs, such as *https://www.example.com/*), which may be interlinked by hypertext, and are accessible over the Internet. The resources of the WWW may be accessed by users by a software application called a **web browser**.

WEB BROWSER (commonly referred to as a browser) is a software application for accessing information on the World Wide Web. Each individual web page, image, and video is identified by a distinct Uniform Resource Locator(URL), enabling browsers to retrieve these resources from a web server and display them on a user's device.

HTTP is the underlying protocol used by the World Wide Web and this protocol defines how messages are formatted and transmitted, and what actions Web servers and browsers should take in response to various commands.

THE INTERNET is a globally connected network system that uses TCP/IP to transmit data via various types of media. The internet is a network of global exchanges – including private, public, business, academic and government networks – connected by guided, wireless and fiber-optic technologies.

The terms internet and World Wide Web are often used interchangeably, but they are not exactly the same thing; the internet refers to the global communication system, including hardware and infrastructure, while the web is one of the services communicated over the internet. The Web is a communications model that, through HTTP, enables the exchange of information over the internet.

Internet Protocol (IP): The internet's primary component and communications backbone. Because the internet is comprised of hardware and software layers, the IP communication standard is used to address schemes and identify unique connected devices.

Prominent IP versions used for communications include Internet Protocol version 4 (IPv4) and Internet Protocol version 6 (IPv6).

Communications: The internet is the most cost-effective communications method in the world, in which the following services are instantly available:

- *Email *Web-enabled audio/video conferencing services*
- *Online movies and gaming*
- *Data transfer/file-sharing, often through File Transfer Protocol (FTP)*

**Instant messaging * Internet forums* Social networking*Online shopping
* Financial services*

The internet originated with the U.S. government, which began building a computer network in the 1960s known as ARPANET. In 1985, the U.S. National Science Foundation (NSF) commissioned the development of a university network backbone called NSFNET. The system was replaced by new networks operated by commercial internet service providers in 1995. The internet was brought to the public on a larger scale at around this time.

Domain Name System (DNS) is a hierarchical and decentralized naming system for computers, services, or other resources connected to the Internet or a private network. It associates various information with domain names assigned to each of the participating entities. Most prominently, it translates more readily memorized domain names to the numerical IP addresses needed for locating and identifying computer services and devices with the underlying network protocols. By providing a worldwide, distributed directory service, the Domain Name System has been an essential component of the functionality of the Internet since 1985.

An often-used analogy to explain the Domain Name System is that it serves as the phone book for the Internet by translating human-friendly computer hostnames into IP addresses. For example, the domain name `www.example.com` translates to the addresses `93.184.216.34` (IPv4) and `2606:2800:220:1:248:1893:25c8:1946` (IPv6). The DNS can be quickly and transparently updated, allowing a service's location on the network to change without affecting the end users, who continue to use the same hostname. Users take advantage of this when they use meaningful Uniform Resource Locators (URLs) and e-mail addresses without having to know how the computer actually locates the services.

Web server

A Web server is a program that uses HTTP (Hypertext Transfer Protocol) to serve the files that form Web pages to users, in response to their requests, which are forwarded by their computers' HTTP clients.

Dedicated computers and appliances may be referred to as Web servers as well.

Web framework (WF) or web application framework (WAF) is a software framework that is designed to support the development of web applications including web services, web resources, and web APIs. Web frameworks provide a standard way to build and deploy web applications on the World Wide Web.

Web frameworks aim to automate the overhead associated with common activities performed in web development. For example, many web frameworks provide libraries for database access, templating frameworks, and session management, and they often promote code reuse. Although they often target development of dynamic web sites, they are also applicable to static websites

A web **app framework** or **web framework** is a software framework that is created to support the development of dynamic sites, web services and web applications. Web frameworks exist to make it easier for the developer to make a web application.