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The world wide web World Wide Web is a distributed system that provides access to related documents located on different computers connected to the Internet. The world wide web is made up of millions of web servers. Most of the world wide web resources are hypertext. Hypertext documents placed on the world wide web are called web pages. Multiple web pages that share a common theme, design, or link to each other and are usually located on the same web server are called a web site. Special browser programs are used to download and view web pages. The world wide web has caused a real revolution in information technology and a boom in the development of the Internet. Often, when talking about the Internet, they mean the world wide web, but it is important to understand that this is not the same thing. The word web is also used to refer to the world wide web. web) and "WWW".

World Wide Web is sometimes ironically called Wild Wild Web (wild, wild Web) - similar to the name of the movie of the same name Wild Wild West (wild, wild West)

## **1. Structure and principles of the world wide web**

World wide web around Wikipedia

The world wide web is made up of millions of Internet web servers located around the world. A web server is a program that runs on a computer connected to a network and uses the HTTP Protocol to transmit data. In its simplest form, such a program receives an HTTP request for a specific resource over the network, finds the corresponding file on the local hard disk, and sends it over the network to the requesting computer. More complex web servers can dynamically allocate resources in response to an HTTP request. The world wide web uses uniform resource identifiers (URIs) to identify resources (often files or parts of them). Uniform Resource Identifier). Uniform URL resource locators are used to determine the location of resources on the network. Uniform Resource Locator). These URL locators combine URI identification technology and the DNS domain name system. Domain Name System) — the domain name (or directly the IP address in a numeric entry) is included in the URL for the computer (or rather, one of its network interfaces), which executes the code of the desired web server.

A special program—a web browser — is used on the client computer to review information received from the web server. The main function of a web browser is to display hypertext.

The world wide web is inextricably linked to the concepts of hypertext and hyperlinks. Most of the information on the Web is hypertext. To facilitate the creation, storage, and display of hypertext on the world wide web, the HTML language is traditionally used. HyperText Markup Language), a hypertext markup language. Work on the markup of hypertext is called a layout, master on the markup of a web master or a webmaster (without the hyphen). After HTML markup, the resulting hypertext is placed in a file. this HTML file is the main resource of the world wide web. After the HTML file becomes available to the web server, it is called a "web page". A set of web pages forms a website. Hyperlinks are added to the hypertext of web pages. Hyperlinks help users of the world wide web easily navigate between resources (files), regardless of whether the resources are located on a local computer or on a remote server. Web hyperlinks are based on URL technology.

## **2. World wide web technologies**

In General, we can conclude that the world wide web is based on" three pillars": HTTP, HTML, and URL. To improve the visual perception of the web, CSS technology has become widely used, which allows you to set uniform design styles for many web pages. Another innovation that is worth paying attention to is the urn resource designation system. Uniform Resource Name).

A popular concept for the development of the world wide web is the creation of a semantic web. The semantic web is an add-on to the existing world wide web, which is designed to make information placed on the network more understandable for computers. A semantic web is a concept of a network in which every resource in human language would be provided with a description that is understandable to a computer. The semantic web provides access to clearly structured information for any application, regardless of the platform and regardless of programming languages. Programs will be able to find the necessary resources, process information, classify data, identify logical connections, draw conclusions, and even make decisions based on these conclusions. When widely distributed and implemented correctly, the semantic web can cause a revolution in the Internet. To create a resource description that is understandable to a computer, the semantic web uses the RDF format. Resource Description Framework), which is based on XML syntax and uses URI identifiers to refer to resources. New items in this area are RDFS (English. RDF Schema) and SPARQL (English. Protocol And RDF Query Language) (pronounced" sparkle"), a new query language for quick access to RDF data.

## **3. History of the world wide web**

Tim Berners-Lee and, to a lesser extent, Robert Cayo are considered the inventors of the world wide web. Tim Berners-Lee is the author of HTTP, URI/URL, and HTML technologies. In 1980, he served on the European Council for nuclear research (FR. Conseil Européen pour la Recherche Nucléaire, CERN) software consultant. It was there, in Geneva (Switzerland), that he wrote the "Enquire" program for his own needs. "Enquire", can be loosely translated as "Inquirer"), which used random associations to store data and laid the conceptual Foundation for the world wide web.

In 1989, while working at CERN on the organization's internal network, Tim Berners-Lee proposed a global hypertext project, now known as the world wide web. The project involved publishing hypertext documents linked by hyperlinks, which would make it easier for CERN scientists to find and consolidate information. To implement the project, Tim Berners-Lee (together with his assistants) invented URI identifiers, the HTTP Protocol, and the HTML language. These are technologies without which it is impossible to imagine the modern Internet. Between 1991 and 1993, Berners-Lee improved the technical specifications of these standards and published them. But, nevertheless, the official year of birth of the world wide web should be considered 1989.

As part of the project, Berners-Lee wrote the world's first "httpd" web server and the world's first hypertext web browser, called "WorldWideWeb". This browser was also a WYSIWYG editor (socr. from the English. What You See Is What you Get-what you see is what you get), its development was started in October 1990, and completed in December of the same year. The program worked in the "NeXTStep" environment and began to be distributed over the Internet in the summer of 1991.