Università di Genova

ACCESSIBILITY & WEB HISTORY

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"The power of the Web is in its universality. Access by everyone regardless of disability is an essential aspect."

Tim Berners-Lee, W3C Director and inventor of the World Wide Web (1997)

What is accessibility?

Giving users with disabilities or impairments **alternative ways to access** “products”

- These products can be web pages or other types of digital documents
- Educational, governments, some business clients may require it

In some countries it is also mandated **by law**

What is accessibility?

When you focus on accessibility you tend to build **better stuff**

Web applications built considering the needs of

- **blind** or **visually impaired** users are easier to use in external environments with a lot of light
- **deaf** or **hard of hearing** users can benefit those who do not know well the language or in noisy environments

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WEB HISTORY

1989, at CERN

CERN DD/OC

Information Management: A Proposal

Tim Berners-Lee, CERN/DD

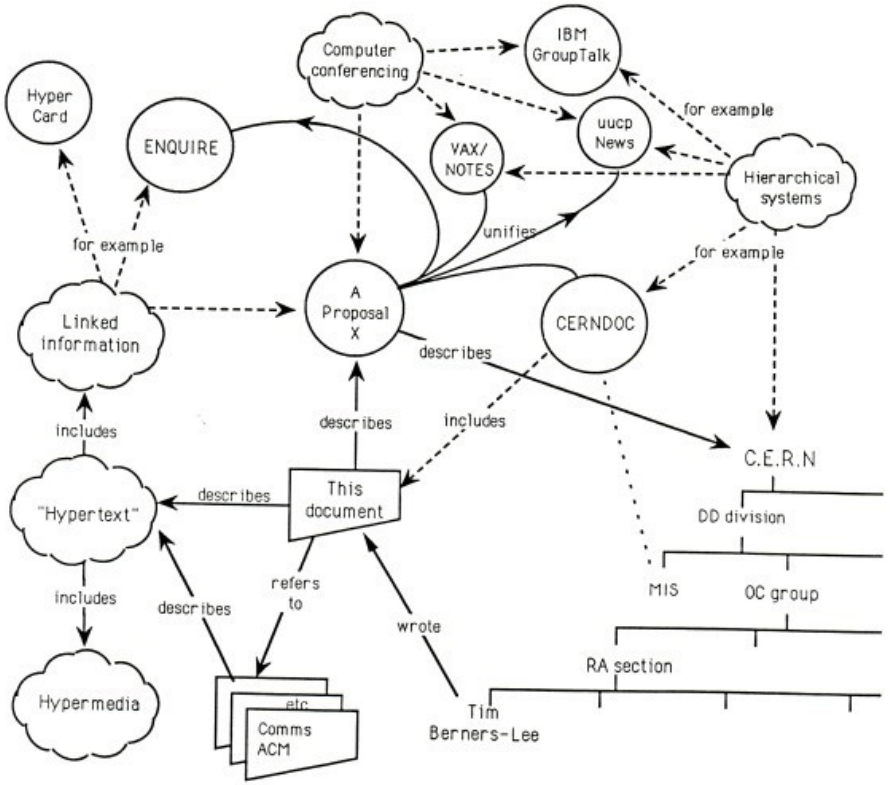
March 1989

Information Management: A Proposal

Abstract

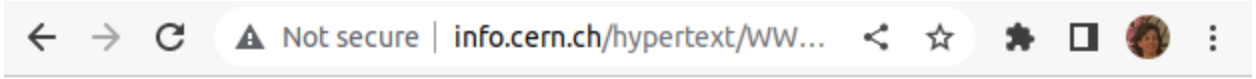
This proposal concerns the management of general information about accelerators and experiments at CERN. It discusses the problems of loss of information about complex evolving systems and derives a solution based on a distributed hypertext sytstem.

Keywords: Hypertext, Computer conferencing, Document retrieval, Information management, Project control



Source: https://home.cern/science/computing/birth-web/short-history-web

1st web page, textual browsers



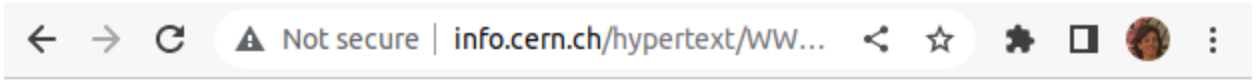
World Wide Web

The WorldWideWeb (W3) is a wide-area hypermedia information retrieval initiative aiming to give universal access to a large universe of documents.

Everything there is online about W3 is linked directly or indirectly to this document, including an executive summary of the project, Mailing lists , Policy , November's W3 news , Frequently Asked Questions .

What's out there?
Pointers to the world's online information, subjects , W3 servers, etc.
Help
on the browser you are using
Software Products
A list of W3 project components and their current state. (e.g. Line Mode ,X11 Viola , NeXTStep , Servers , Tools , Mail robot , Library)
Technical
Details of protocols, formats, program internals etc
Bibliography
Paper documentation on W3 and references.
People
A list of some people involved in the project.
History
A summary of the history of the project.
How can I help ?
If you would like to support the web..
Getting code
Getting the code by anonymous FTP , etc.

1st web page, textual browsers



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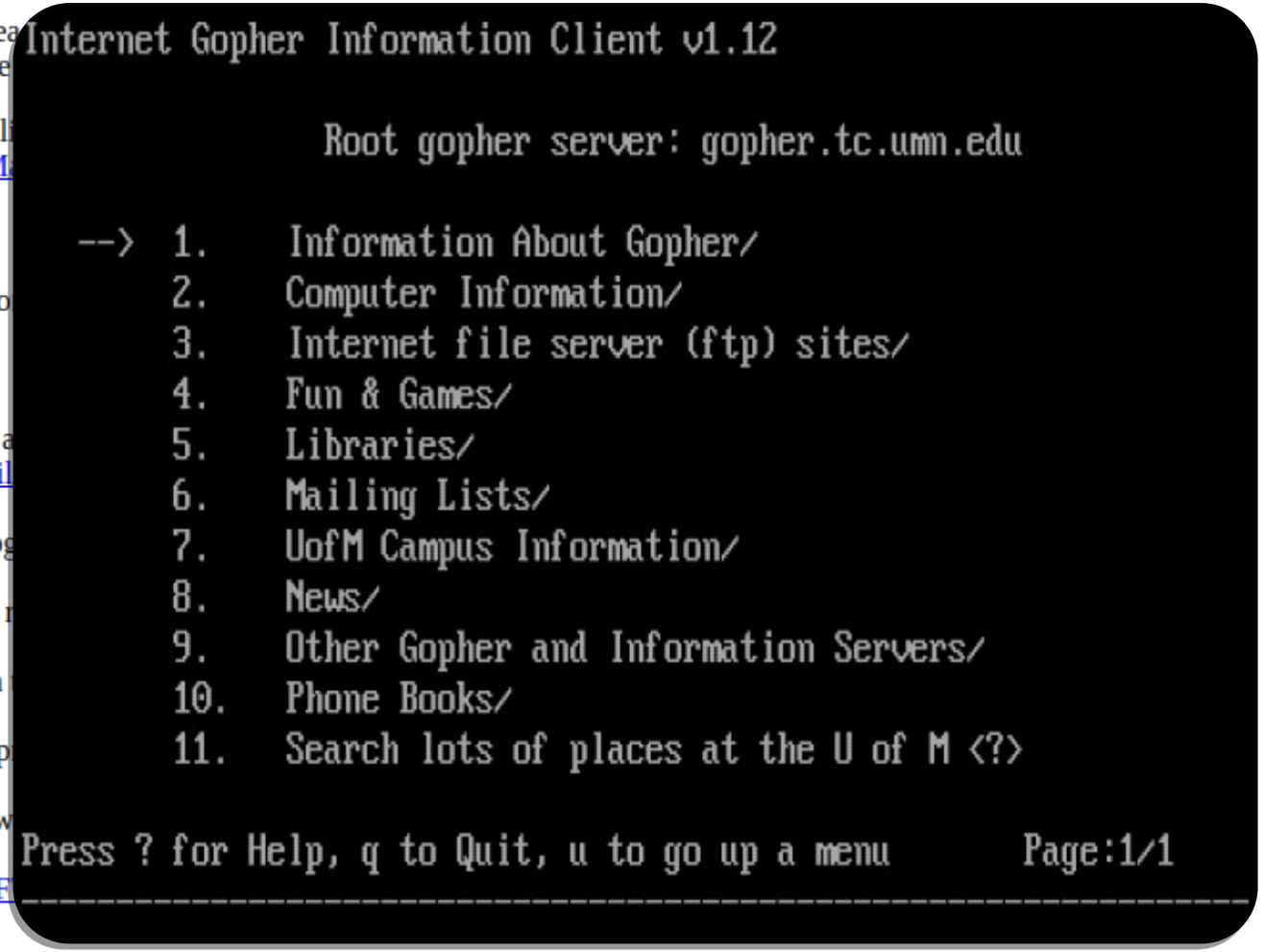

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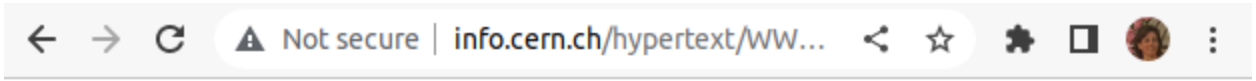

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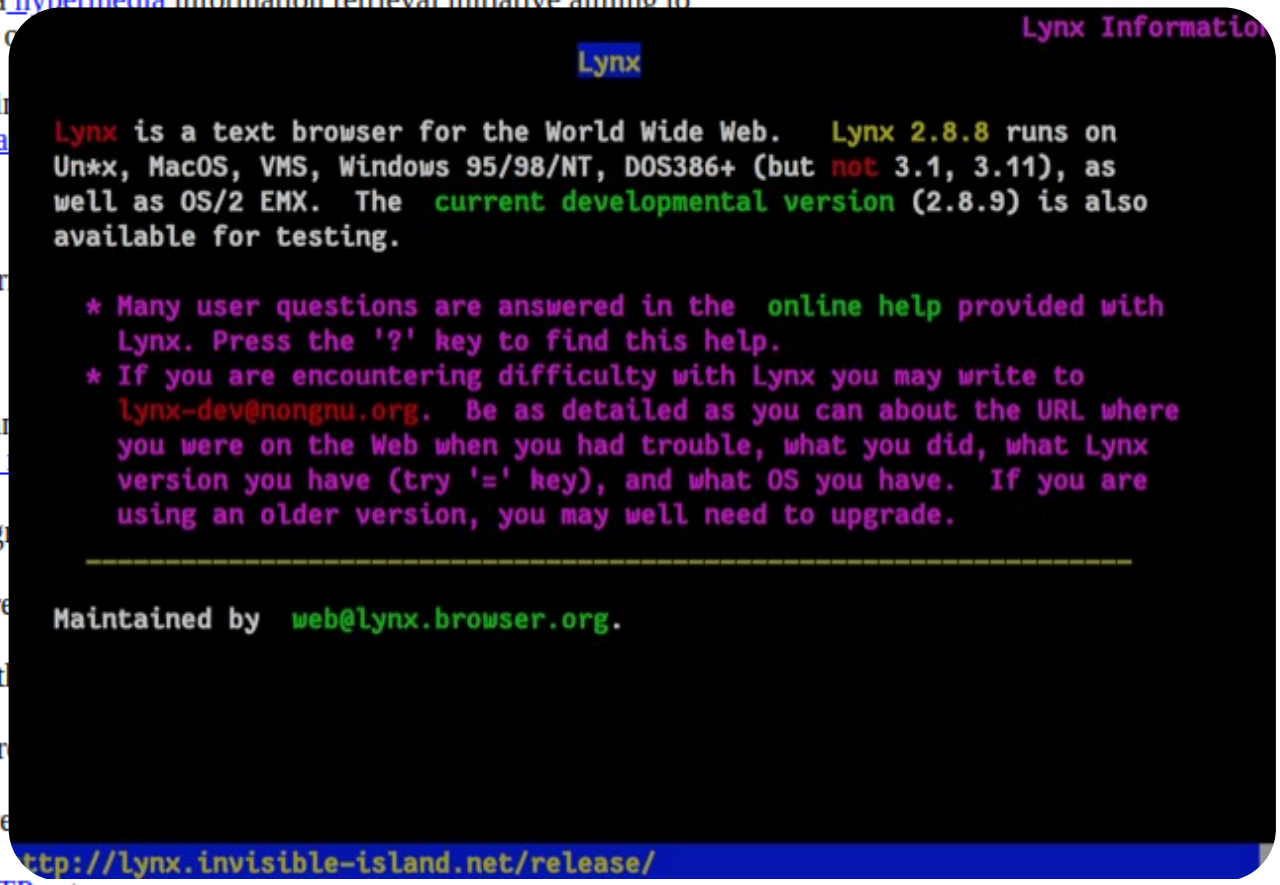
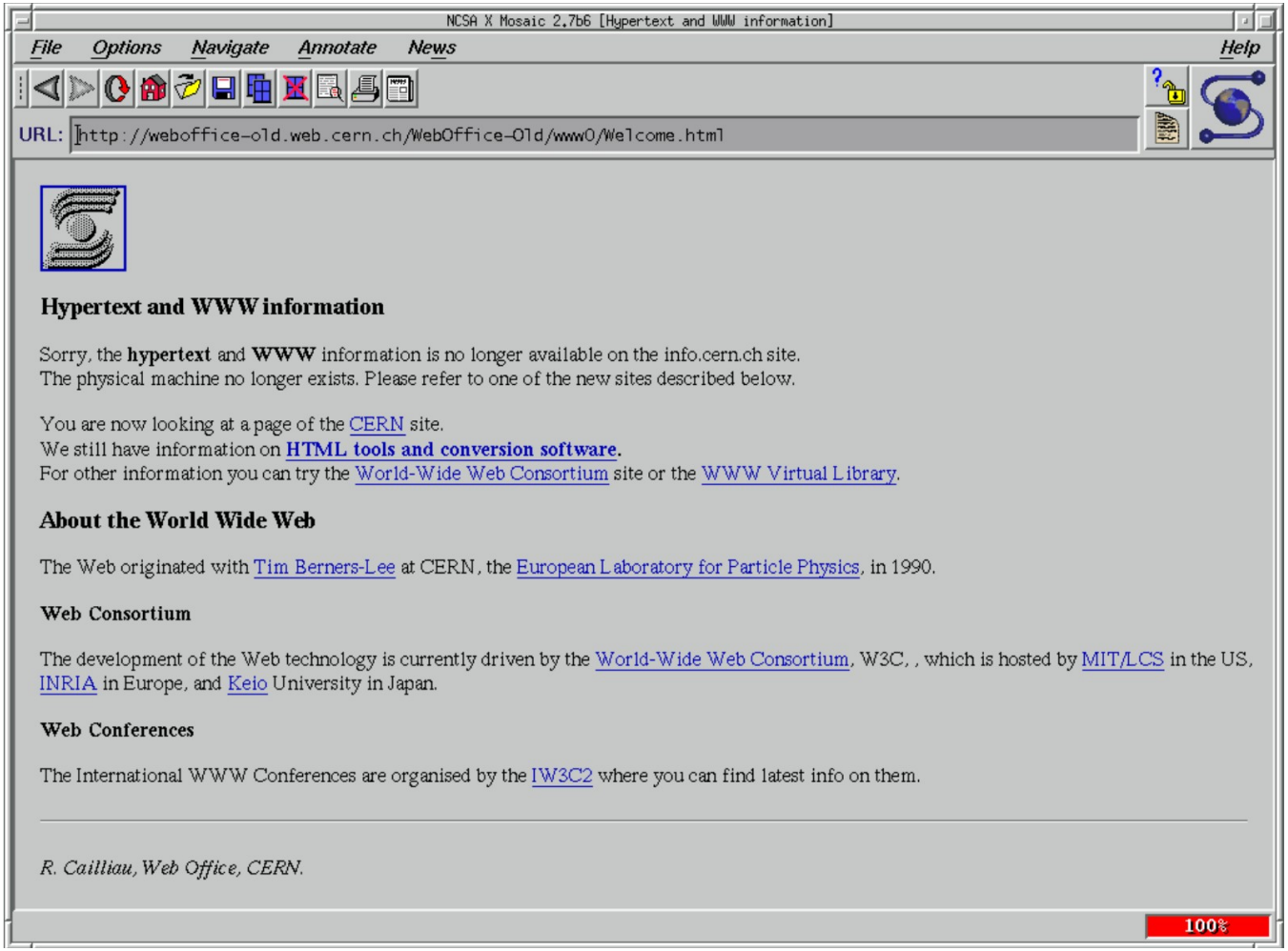


1993, at NCSA

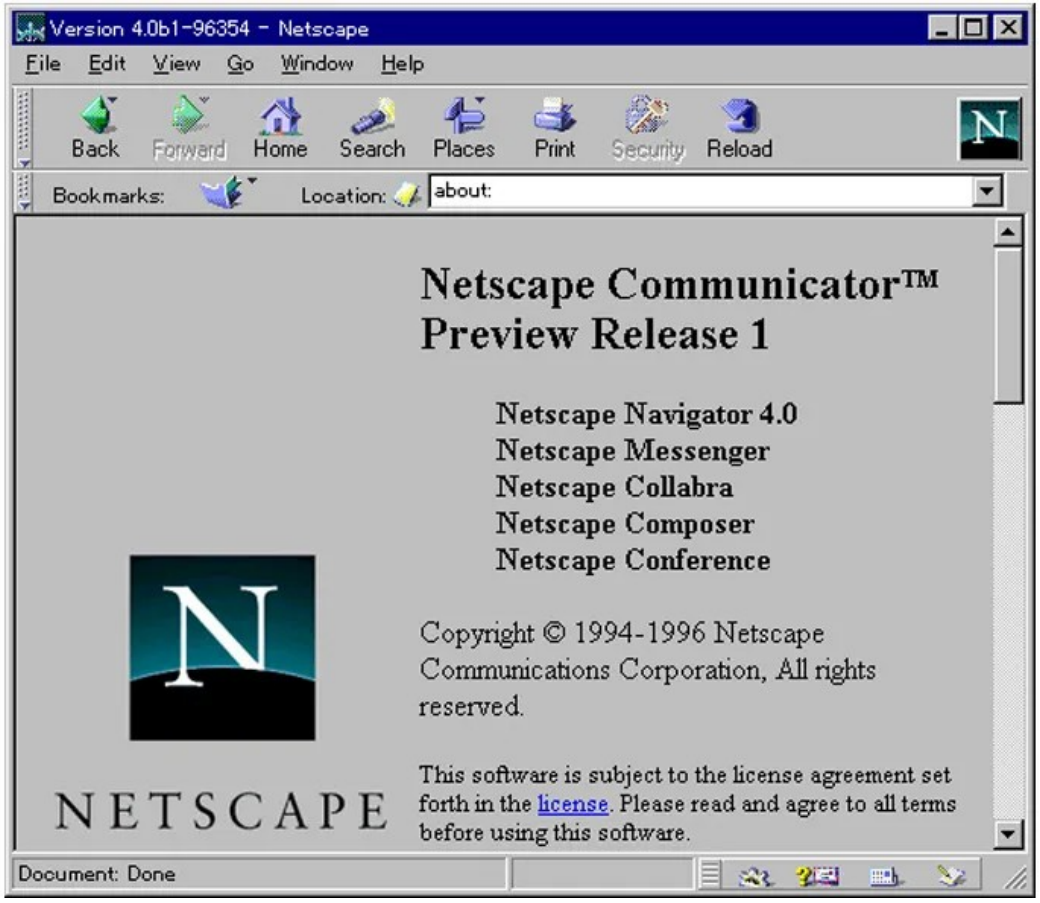
The National Center for Supercomputing Applications (University of Illinois) released a first version of its **Mosaic** browser



1994, first conference on WWW

1994, at Netscape Communications

Netscape announced in its first press release (13/10/1994) that it would make Navigator available without charge to all non-commercial users



Thanks to user-friendly browsers

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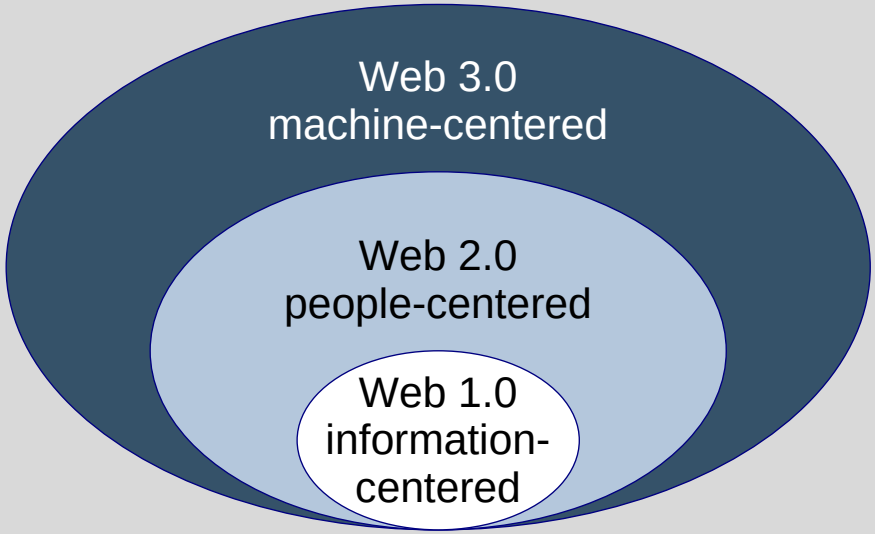
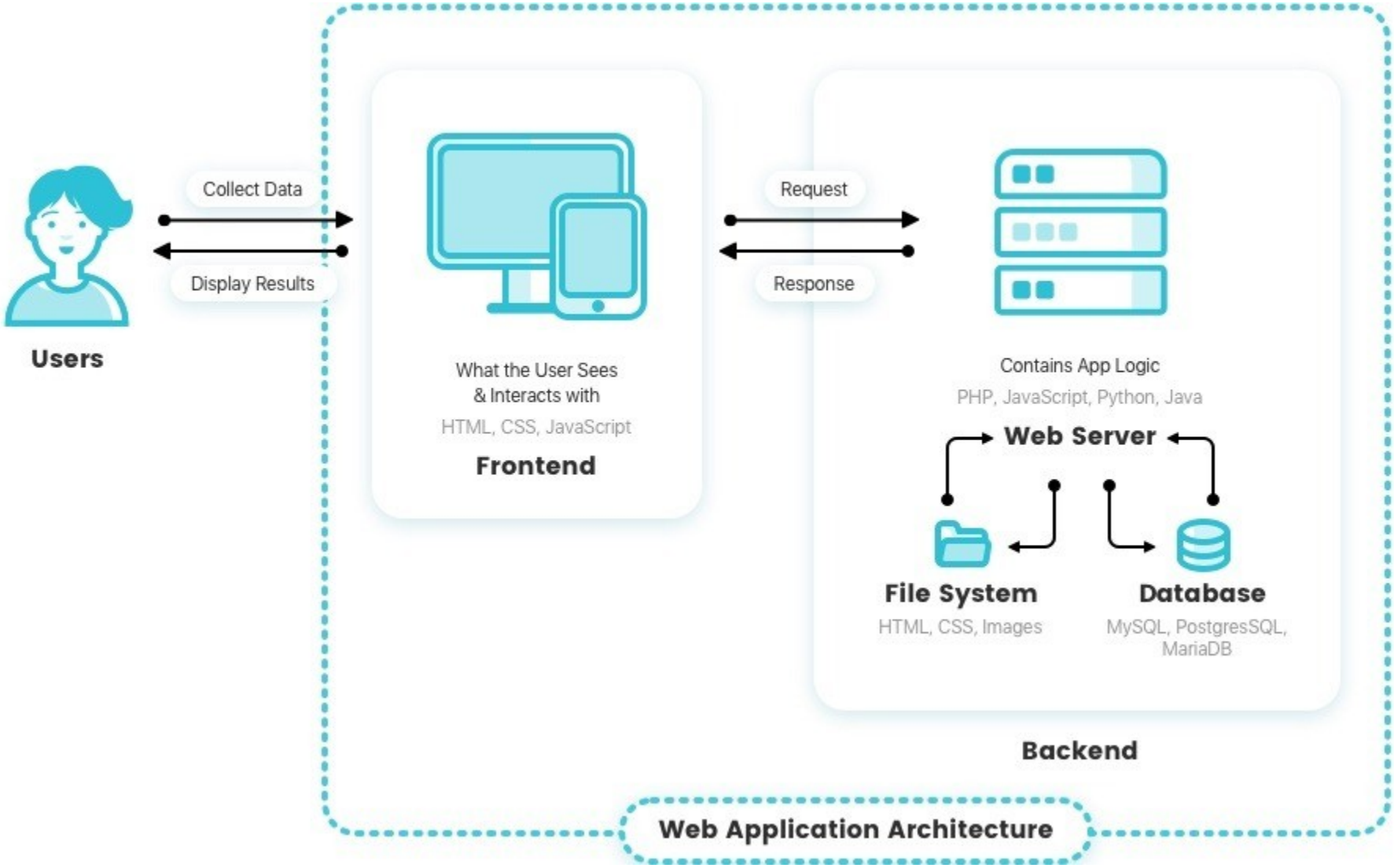
Web 1.0, Web 2.0, Web 3.0



Source: https://www.geeksforgeeks.org/web-1-0-web-2-0-and-web-3-0-with-their-difference/


Users
Collect Data
Display Results
What the User Sees
& Interacts with
HTML, CSS, JavaScript
Frontend
Request
Response
Contains App Logic
PHP, JavaScript, Python, Java
Web Server
File System
HTML, CSS, Images
Database
MySQL, PostgresSQL,
MariaDB
Backend
Web Application Architecture

1991 – 2004, Web 1.0

First stage of the WWW evolution

Information-centered

- personal web pages
- no advertisements on websites
- “controlled” content

1991 – 2004, Web 1.0

Web 1.0 site design

- **static pages**
- content served from the **server's file system**
- pages built using Server Side Includes (SSI) or Common Gateway Interface (CGI)
- **Frames** and **Tables** used to position and align the elements on pages

2004 – today, Web 2.0

User-generated content, usability, interoperability for the users

Called the **participative social web**

Not real modification to any technical specification, but **changes in the way web pages are designed and used**

Enhanced front-end thanks to web browser technologies such as AJAX and JavaScript frameworks

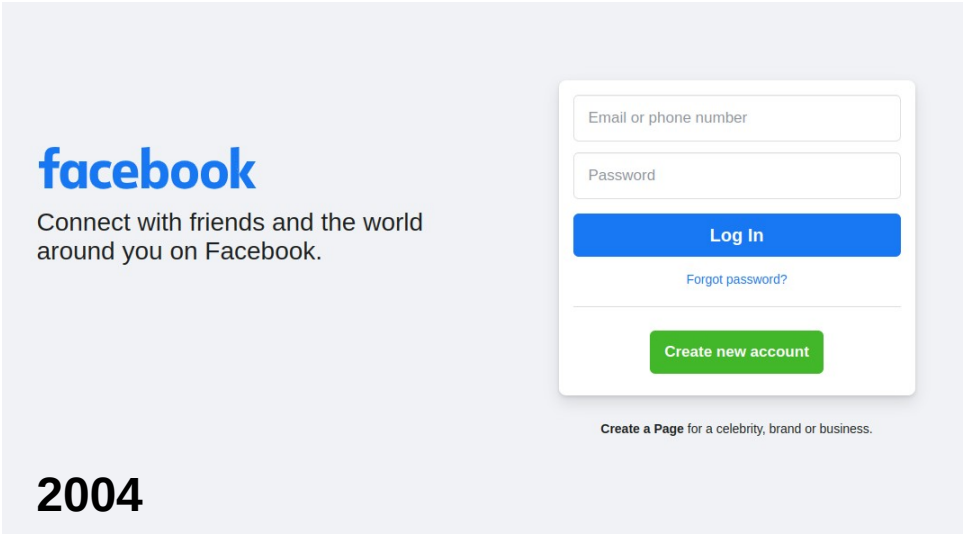
2004 – today, Web 2.0

Online tools and platforms where people share their perspectives, opinions, thoughts, and experiences

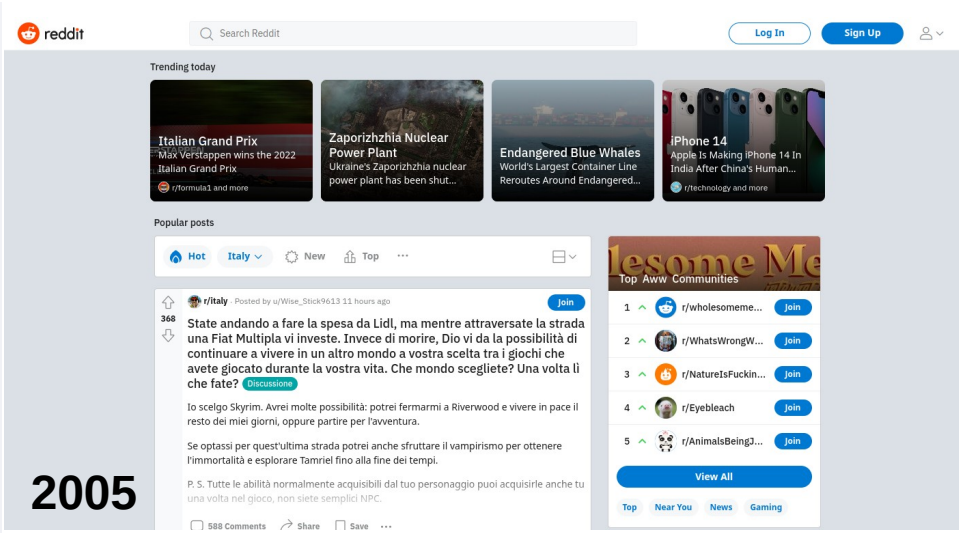
- Podcasting
- Blogging
- Tagging
- Social networking
- Social media
- Web content voting
- Marketplace (eBay, Amazon, Uber,...)
- Complex video creation (TikTok)

2004 – today, Web 2.0

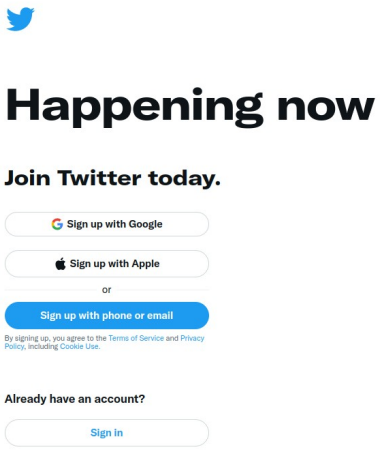
2004 – today, Web 2.0



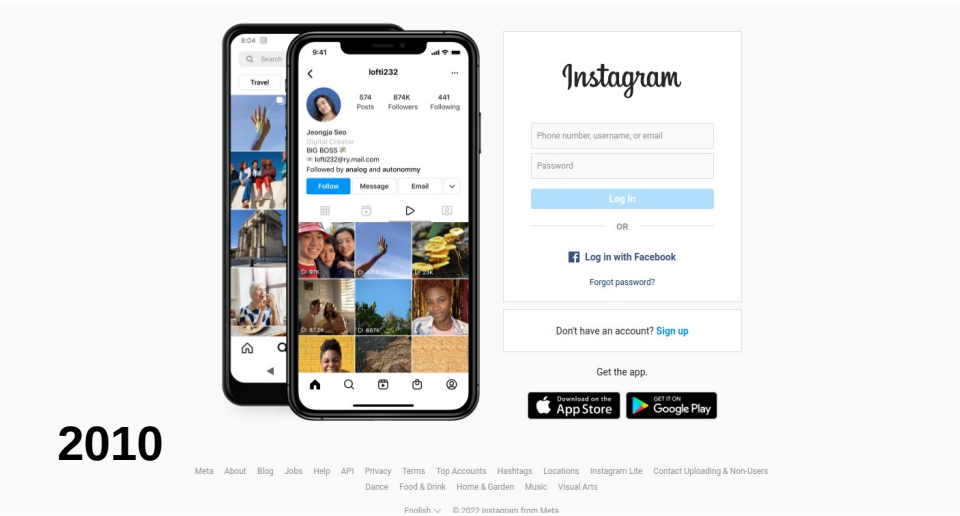
2004



2005



2006, today X



2010

and many others...

20?? – today, Web 3.0

Web 3.0 is a term that is used to describe **many evolution of web usage** and interaction among several paths

After a long time of focusing on the front-end, the back-end of the web becomes fundamental

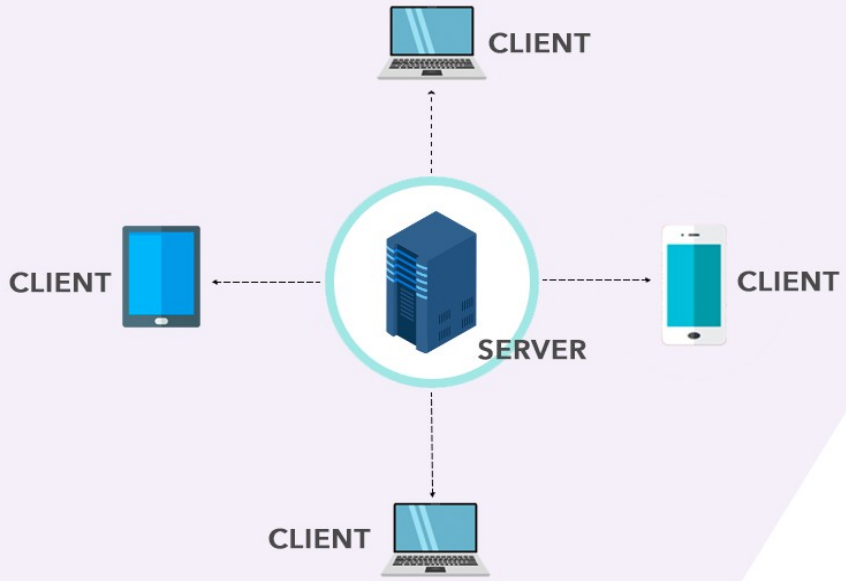
Data is not owned but instead shared, and services show different views for the same web / the same data

20?? – today, Web 3.0

Topics which are included in Web 3.0 are

- Semantic web
- Artificial Intelligence
- 3D graphic
- Ubiquity
- DLT and Smart Contract

20?? – today, Web 3.0

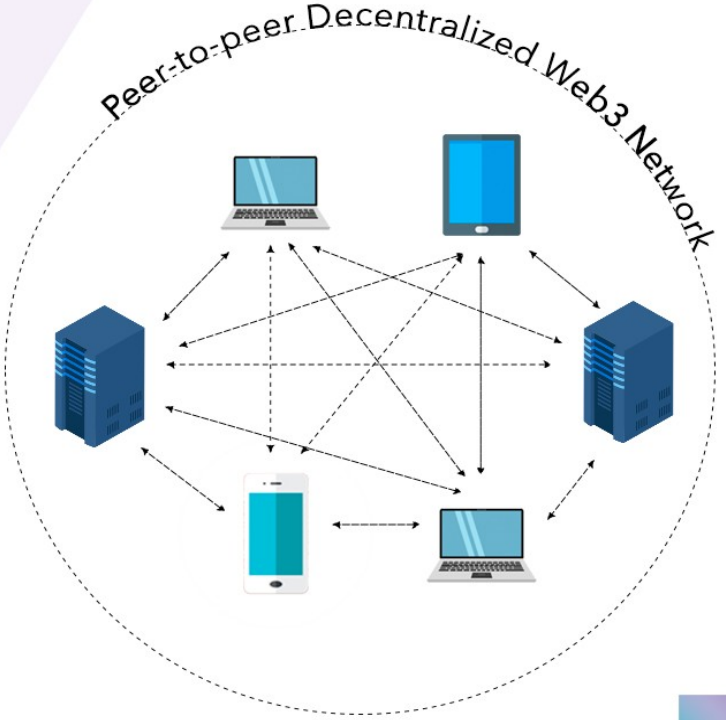


WEB2

Data & apps stored on servers owned and controlled by companies and regulations

WEB3

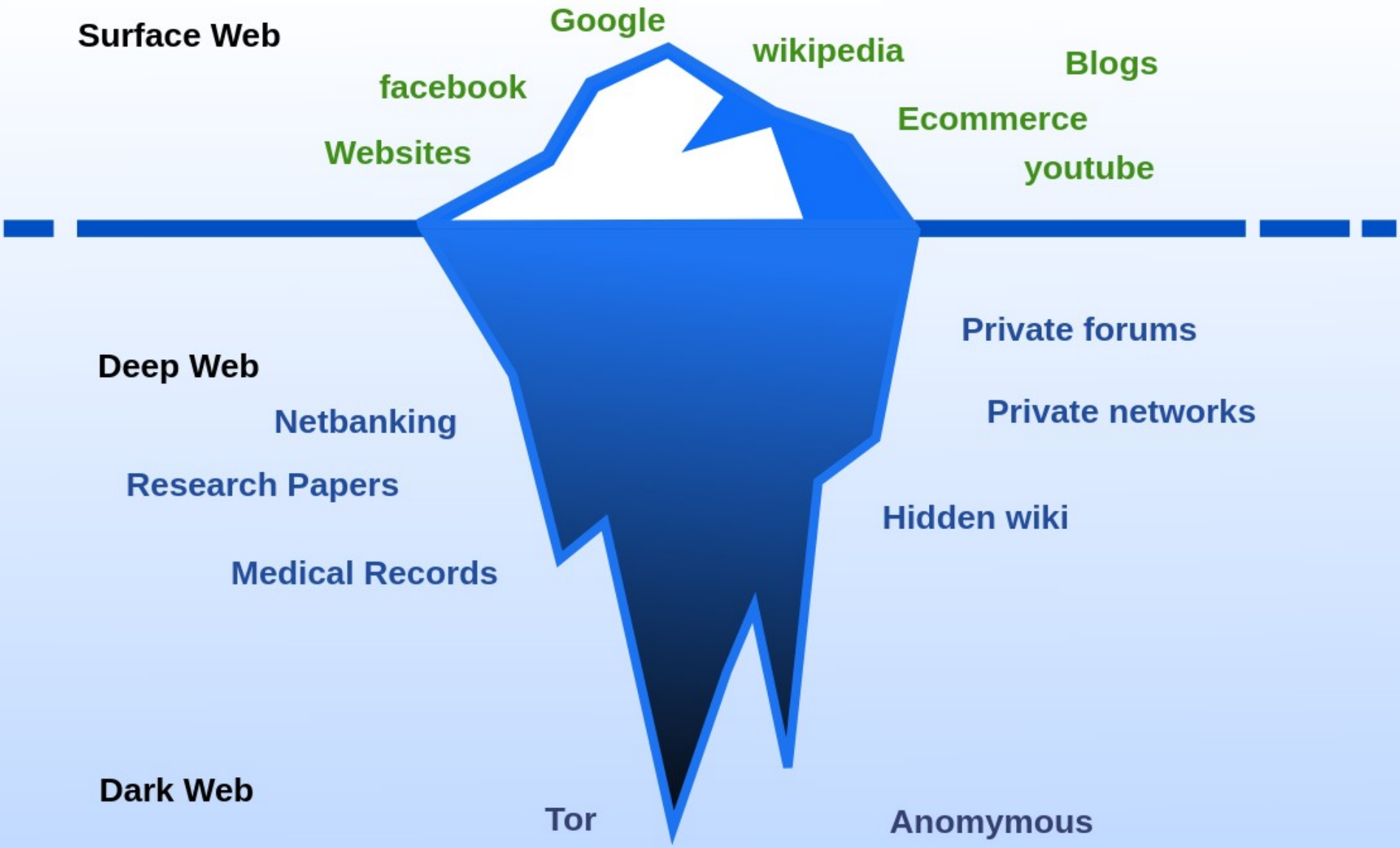
Data & apps owned by many and stored on servers throughout the Web3 network



SKIP LEVEL

	Web 1.0	Web 2.0	Web 3.0
1.	Mostly Read-Only	Wildly Read-Write	Portable and Personal
2.	Company Focus	Community Focus	Individual Focus
3.	Home Pages	Blogs / Wikis	Live-streams / Waves
4.	Owning Content	Sharing Content	Consolidating Content
5.	WebForms	Web Applications	Smart Applications
6.	Directories	Tagging	User behavior
7.	Page Views	Cost Per Click	User Engagement
8.	Banner Advertising	Interactive Advertising	Behavioral Advertising
9.	Britannica Online	Wikipedia	The Semantic Web
10.	HTML/Portals	XML / RSS	RDF / RDFS / OWL

11.	Data was not Focused.	Data of many was controlled by some mediatory.	Data was personalized and no use of mediatory.
12.	Information sharing is the goal.	Interaction is the goal.	Immersion is the goal.
13.	It connects information as its primary goal.	It aims to connect people.	Focuses on relating knowledge.
14.	Static websites	Introduction of web applications	Intelligent web-based functions and apps
15.	A simpler, more passive web.	An enhanced social Web	A semantic web exists.
16.	Web and File Servers, HTML, and Portals are technologies connected to Web 1.0.	AJAX, JavaScript, CSS, and HTML5 are examples of related technology.	Web 3.0 technologies include blockchain, artificial intelligence, and decentralized protocols.
17.	**Associated Technologies:-** • Web and File Servers • Search Engines (including AltaVista and Yahoo!) • E-mail accounts (Yahoo!, Hotmail) • Peer-to-Peer File Sharing (Napster, BitTorrent) and others.	**Associated Technologies:-** • Frameworks for Ajax and JavaScript • Microsoft.NET • Blogs • Wikis and others.	**Associated Technologies:-** • Searching Using Semantics • Databases of Information • Ontologies • Intelligent Digital Personal Assistants and others.


Surface Web
Google
wikipedia
Blogs
facebook
Ecommerce
Websites
youtube
Deep Web
Private forums
Netbanking
Private networks
Research Papers
Hidden wiki
Medical Records
Dark Web
Tor
Anomymous
Illegal Information
Silk Road