Introduction to Web Development

Web development encompasses all the work involved in creating a website or web application. It includes everything from building a simple static web page to developing complex web-based internet applications, electronic businesses, and social network services. Web development is a broad term for the work involved in developing a web site for the Internet (World Wide Web) or an intranet (a private network).

C **by Channel one**

Importance of Web Development Strategies

Effective Planning

Developing a clear strategy ensures that goals are met efficiently and effectively. It involves defining clear objectives and the steps to reach them.

User Experience

Implementing strategic web development techniques leads to a better user experience, which is crucial for attracting and retaining visitors.

Competitive Advantage

Strategically developed websites can set a company apart from its competitors, providing a unique advantage in the digital marketplace.

History of the Web and the Internet

1 **Early Development**

The concept of hypertext and the Internet was first proposed by Vannevar Bush in 1945.

2 **WWW Introduction**

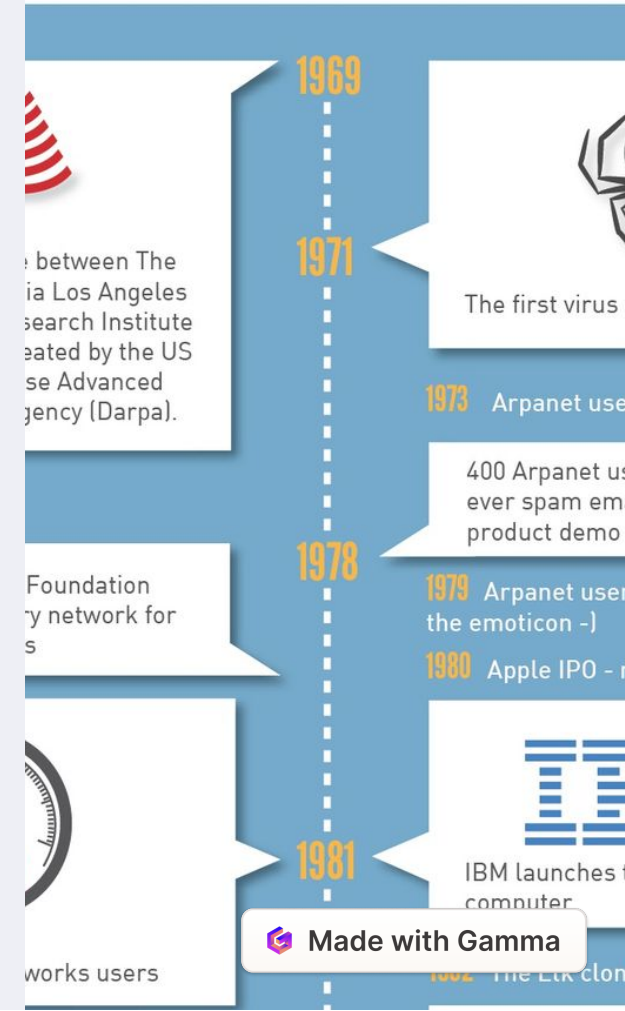The World Wide Web was created in 1989, leading to a massive increase in the use of the internet.

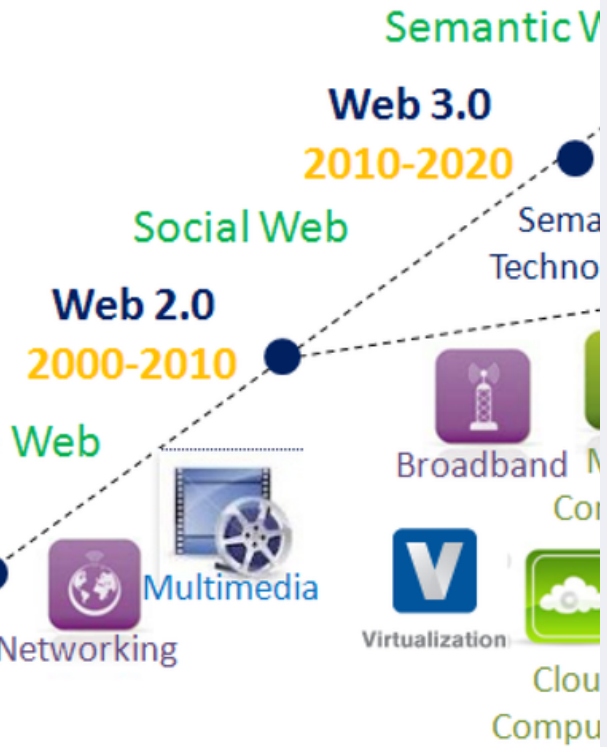**3** **Modern Day Internet**

Today, the internet has revolutionized the way we communicate, conduct business, and access information.

ORY —of the— INT
1969 - 2012

1969

1971
The first virus

1973   Arpanet use

400 Arpanet us
ever spam em
product demo

1978

1979   Arpanet user
the emoticon -)

1980   Apple IPO - r

1981

IBM launches
computer

Foundation
ry network for
s

e between The
ia Los Angeles
search Institute
eated by the US
se Advanced
gency (Darpa).

works users

Made with Gamma

Evolution of Web Development Technologies

1 **HTML and CSS**

They form the foundation of web development and are crucial for creating a visually appealing and user-friendly site.

2 **JavaScript and Frameworks**

Introduced a new level of interactivity to websites, allowing for stronger user experiences and dynamic content.

3 **Responsive Design**

As mobile technology advanced, it became crucial for websites to adapt to various devices, leading to responsive design frameworks.

Made with Gamma

Protocols Governing the Web (HTTP, TCP/IP)

HTTP (Hypertext Transfer Protocol)	Facilitates communication between different systems via the internet.
TCP/IP (Transmission Control Protocol/Internet Protocol)	Defines how electronic devices should connect to the internet and how data should be transmitted between them.

Role of Protocols in Web Communication

Data Transmission

Protocols ensure smooth and reliable data transfer over the internet, allowing for efficient communication.

Security

They play a critical role in securing the data being transmitted and maintaining the privacy of communications.

Interoperability

Protocols enable different systems to work together and communicate seamlessly, promoting compatibility and integration.

Key Features and Functions of HTTP

1

2

3

Request-Response Cycle

HTTP operates based on a request-response cycle where a client makes a request and the server responds.

Stateless Protocol

Each request from a client to the server is handled based on the information that is contained in that particular request.

Content Negotiation

Allows for different representations of the same response, such as multiple language options or file formats.

Impact of Protocols on Web Development

+50%

The use of efficient protocols can lead to a significant increase in the performance and speed of web applications.

24/7

Protocols enable websites to be accessible around the clock, providing constant availability to users.

10K+

They allow for large-scale connections, facilitating widespread access to content and services.