UFV

UFV.ES

Introduction to web programming

MODULE 5 / UNIT 3 / 0.6

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FUNDAMENTALS OF COMPUTER ENGINEERING

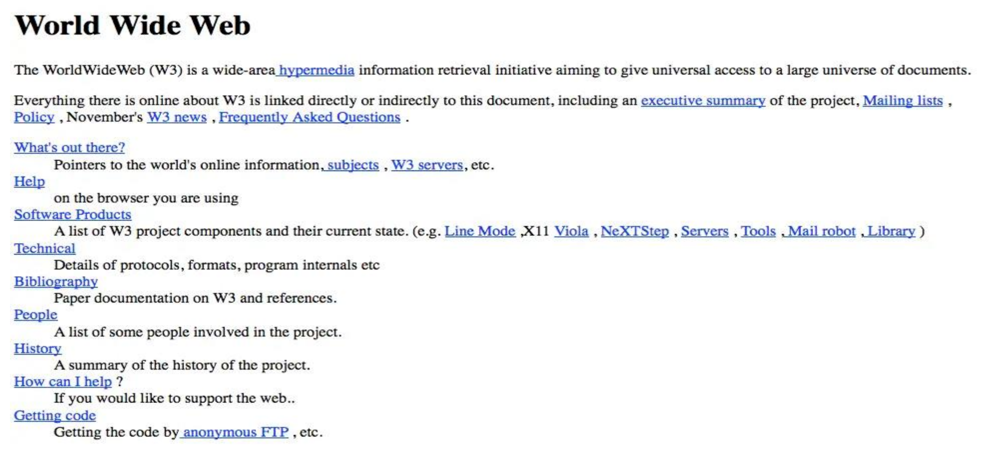
2024/25

What is a web page?

Introduction to web programming

A **web page** (or **webpage**) is a hypertext document (resource) on the World Wide Web accessible using a **url**.

Web pages are delivered by a web server to the user and displayed in a web browser.



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

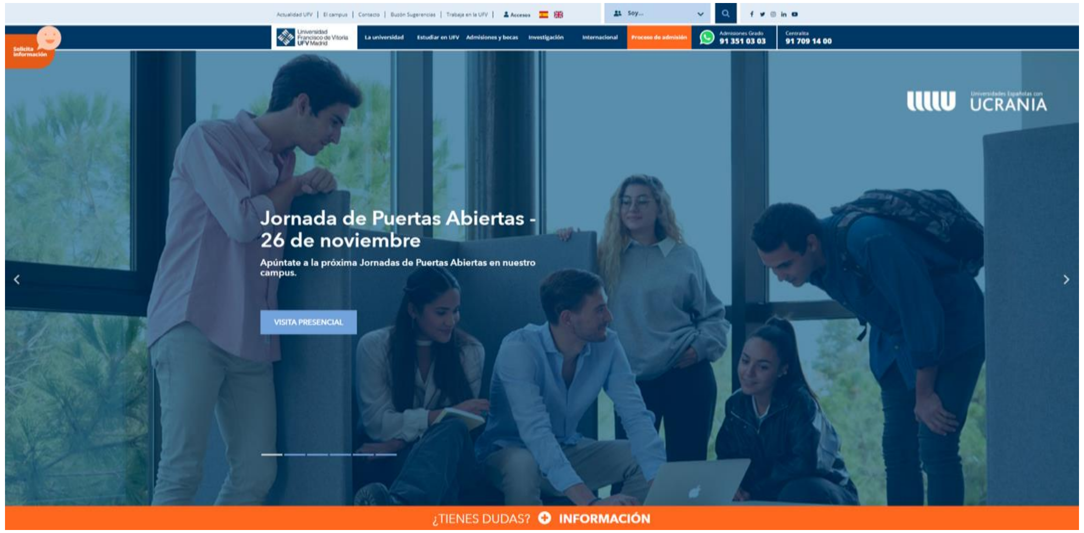
Bibliography
: Paper documentation on W3 and references.

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.



Jornada de Puertas Abiertas - 26 de noviembre

Apúntate a la próxima Jornadas de Puertas Abiertas en nuestro campus.

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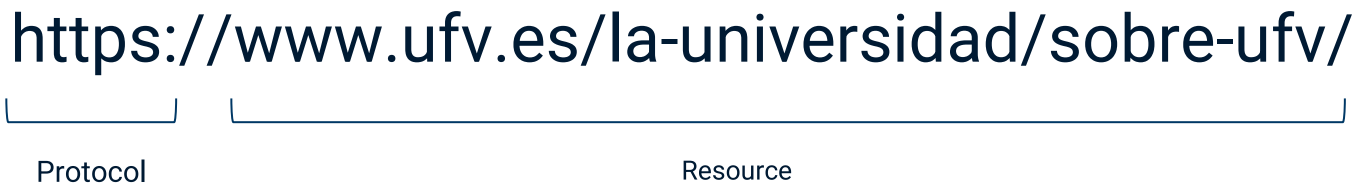
http://info.cern.ch/hypertext/WWW/TheProject.html https://www.ufv.es/

The first web page was created at CERN by Tim Berners-Lee on August 6, 1991.

Introduction to web programming

An URL is an acronym for Uniform Resource Locator and is a reference (an address) to a resource on the Internet. A URL has two main components:

- Protocol identifier: For the URL https://ufv-es.instructure.com, the protocol identifier is https.
- Resource name: For the URL https://ufv-es.instructure.com, the resource name is ufv-es.instructure.com.


https://www.ufv.es/la-universidad/sobre-ufv/

Introduction to web programming

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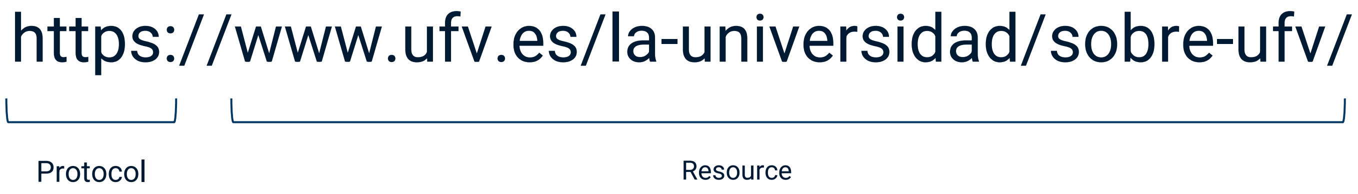

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Protocol

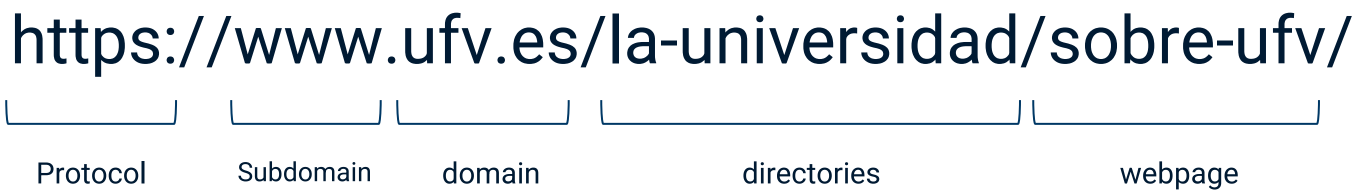
Resource

What is the difference between a website and webpage?

Introduction to web programming

What is the difference between a website and webpage?

A website refers to a central location containing more than one web page. For example, UFV is considered a website, which includes dozens of different web pages.



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The webpage is always the last part of the URL. Currently websites hide the name of the file because the content is usually generated dynamically.

What is the difference between a website and webpage?

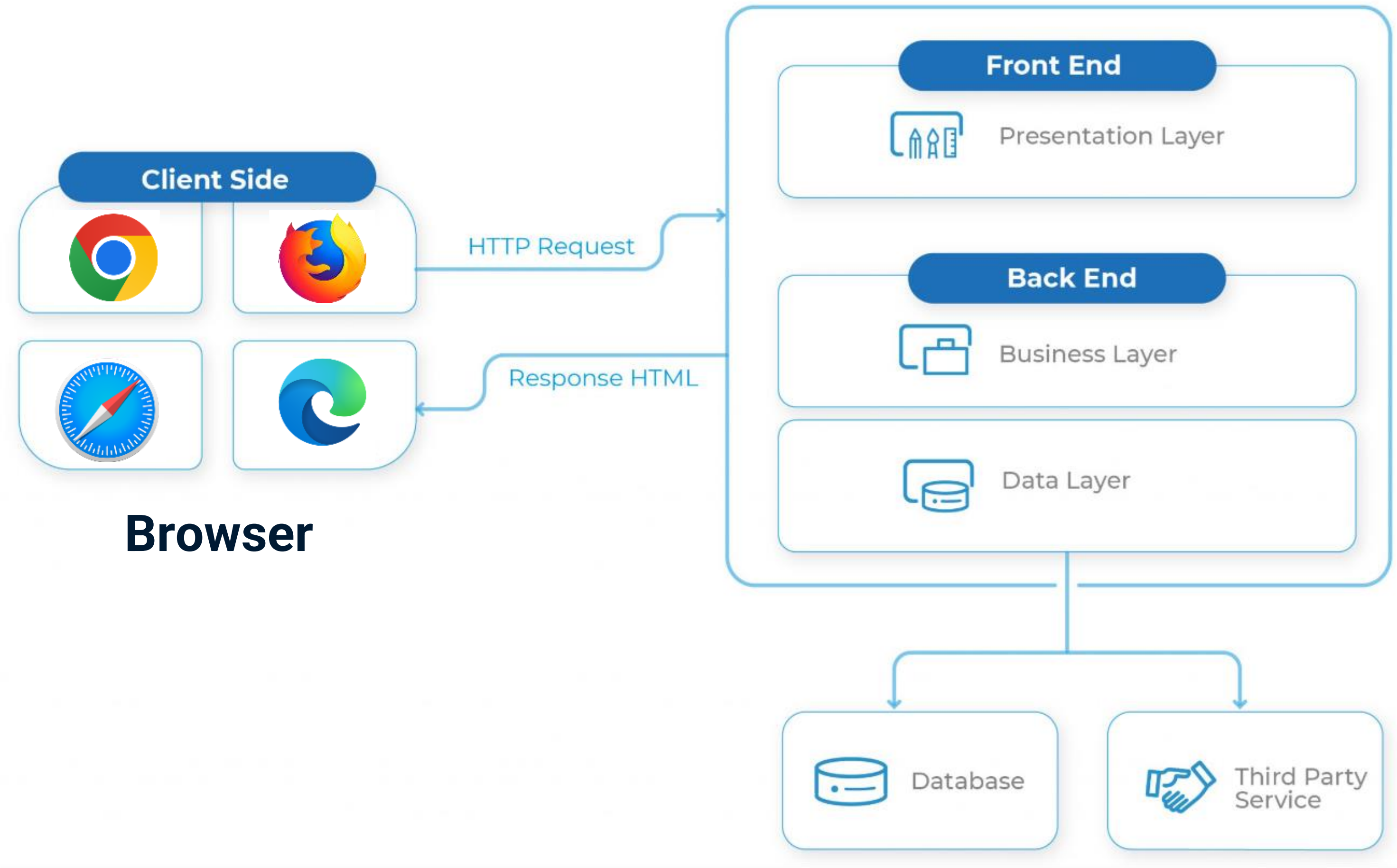
A website is a groups of webpages that are typically accessed through a web browser and are hosted on a web server.

A web application (web app) is a more complex product that allows for many types of interactions and can use APIs to give users access to third-party services. Through a web application, users can complete tasks such as placing and paying for orders, uploading documents, and accessing analytics.

How to build a web application?

01

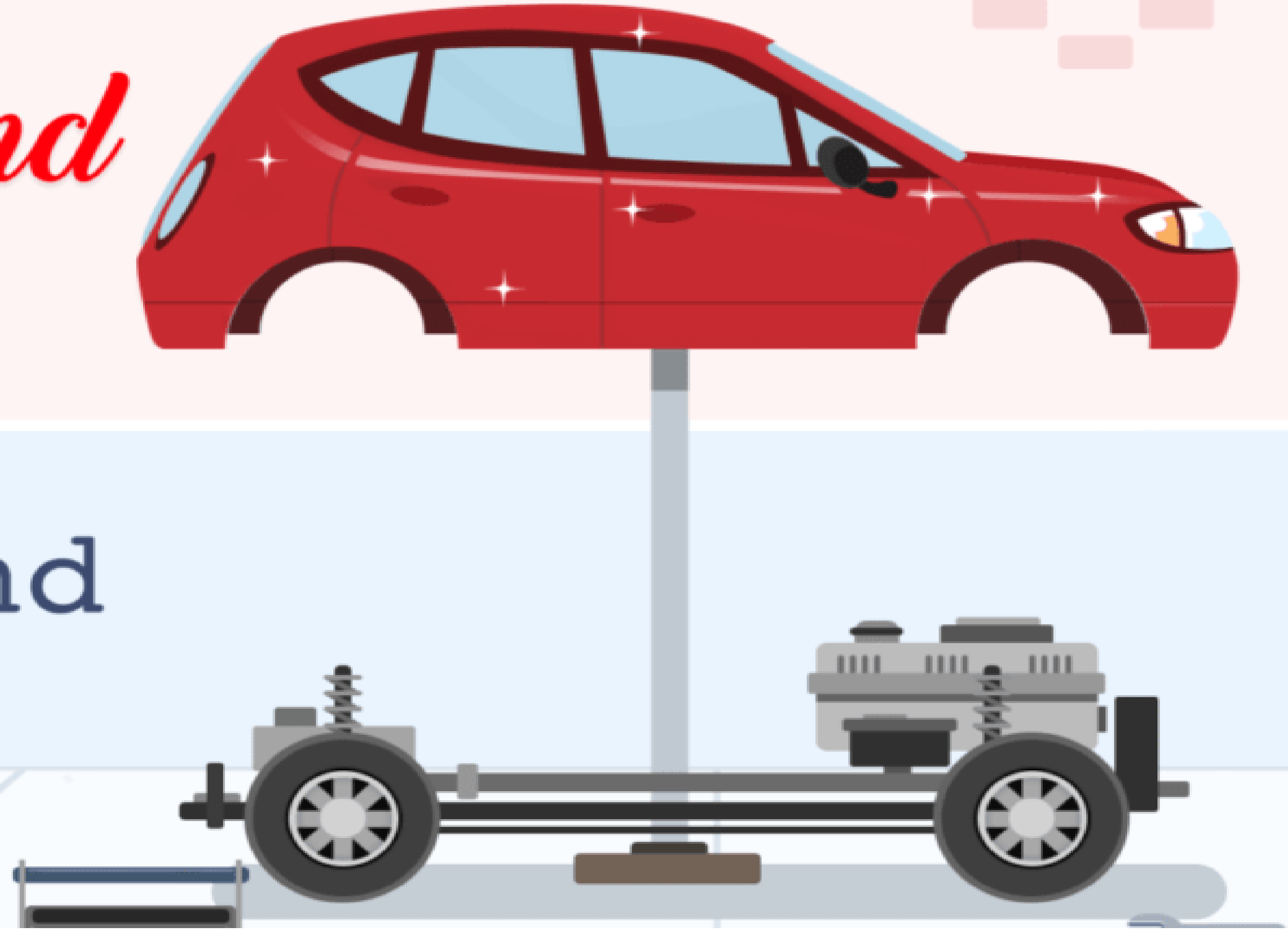
How to build your web application?



How to build your web application?

CSS
HTML
JS
VS
PHP
Front End
Back End

How to build your web application?



Frontend

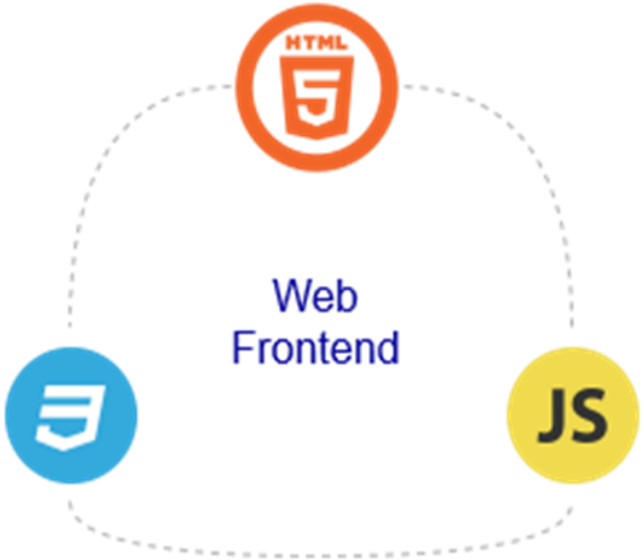
- Users see
- 20% of total effort

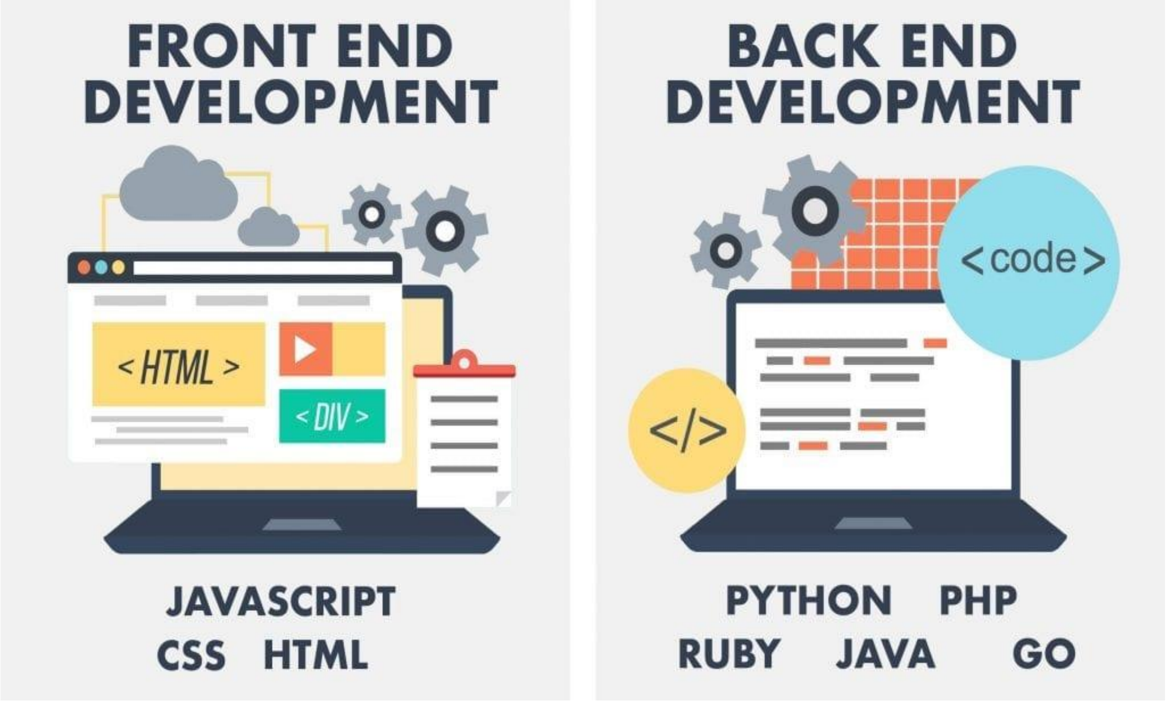
Backend

- Users don't see
- 80% of total effort
- Repetitive

How to build your web application?

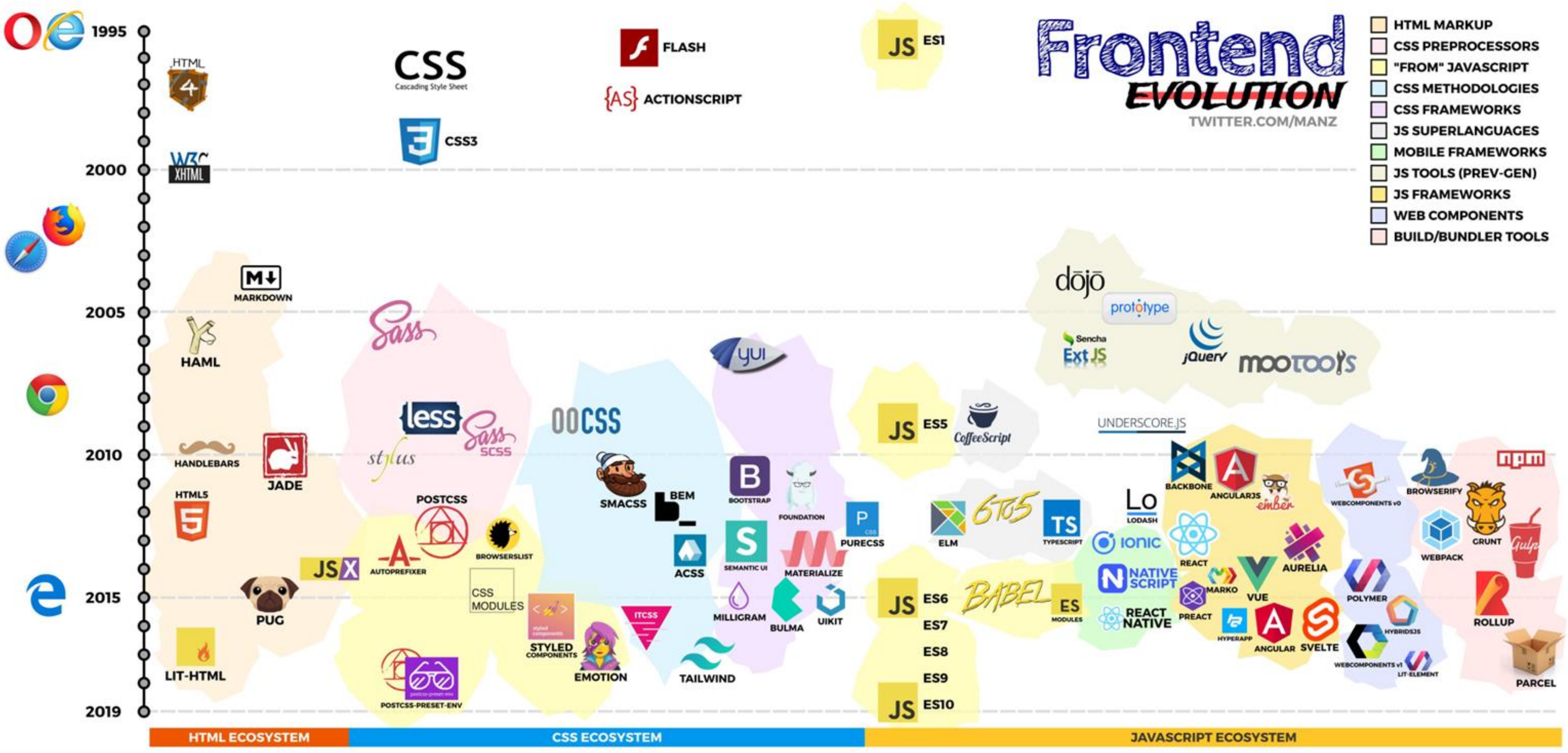
Frontend technologies refer to the programming languages and tools used by the browser to interpret and display content. This means that part of the processing of these pages occurs on the user's side (client-side).





OFF-EXAM CONTENT

How to build your web application?



HTML (HyperText Markup Language)

The HyperText Markup Language or HTML is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets and scripting languages such as JavaScript.

- HyperText: HyperText simply means "Text within Text." A text has a link within it, is a hypertext. HyperText is a way to link two or more web pages (HTML documents) with each other.
- Markup Language: A markup language is a computer language that is used to apply layout and formatting conventions to a text document.

It can be understood as the skeleton of a web page.

CSS (Cascading Style Sheets)

Cascading Style Sheets (CSS) is a stylesheet language used to describe the presentation of a document written in HTML or XML (including XML dialects such as SVG, MathML or XHTML).

- CSS provides a much better view to our HTML page as compared to HTML attributes.
- Styles are applied like cascading rules to every occurrence of that element. So, short code means high-speed download times.
- Changes are automatically updated within all web pages. We do not need to change html.
- CSS permits content which work in all web browsers.

It can be understood as the skin of a web page.

JavaScript (JS)

JavaScript, often called JS, is a imperative, lightweight, interpreted (use a virtual machine), or just-in-time compiled programming language with object oriented and first-class functions. It is one of the core technologies of the World Wide Web, alongside HTML and CSS.

- 98% of current websites use JS on the client side, often incorporating third-party libraries.
- All major web browsers have a dedicated JS engine to execute the code on users' side.

Although Java and JavaScript are similar in name, syntax, and respective standard libraries, both languages are distinct and differ extremely in design.

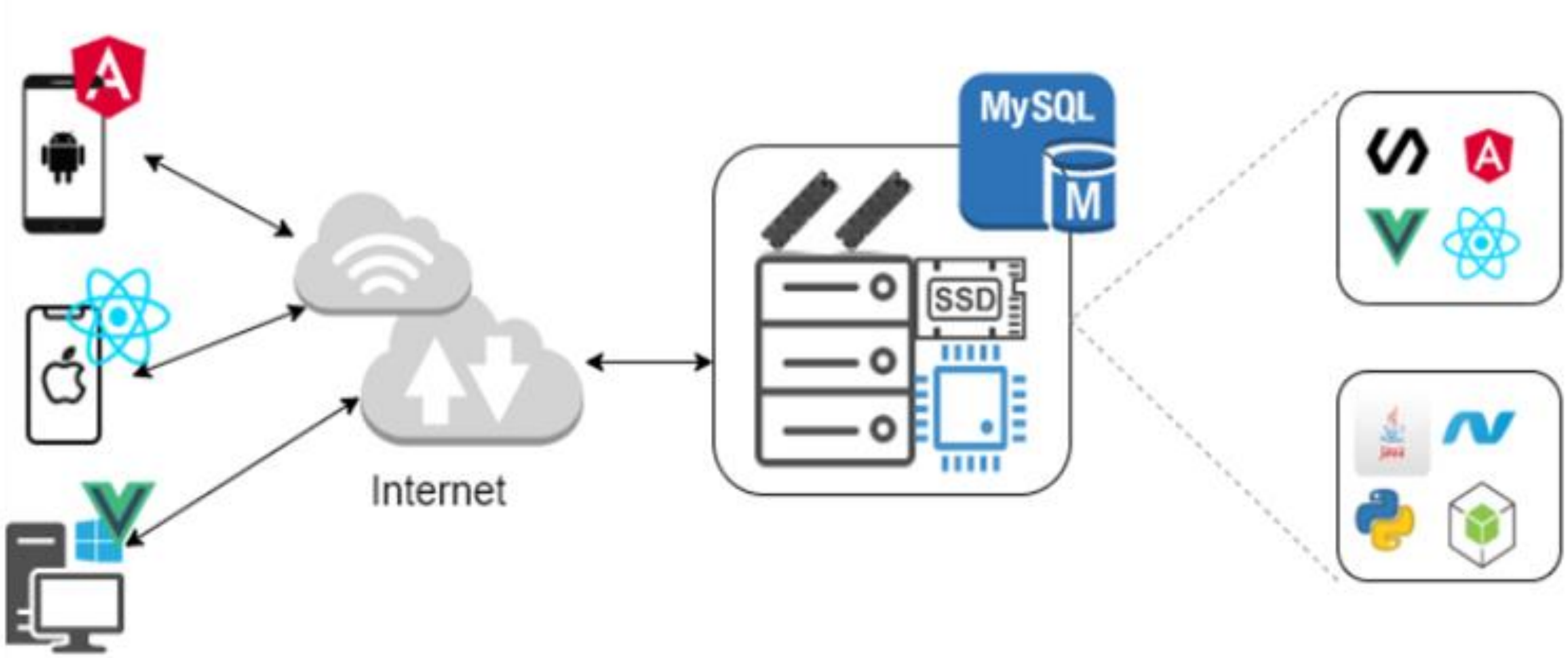
It can be understood as the behavior engine of a web page.

How to run a web application?

02

How to run your web application?

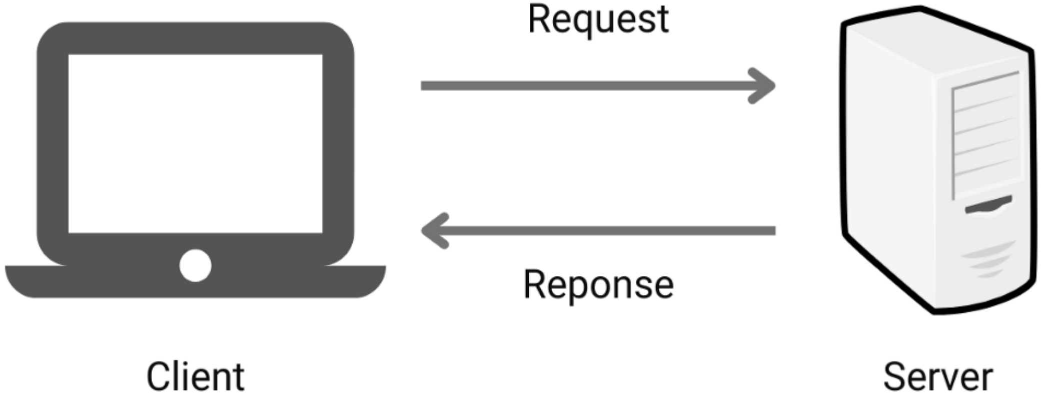
The client-server architecture refers to a system that hosts, delivers, and manages most of the resources and services that the client requests.



How to run your web application?

An operational client-server architecture execute the next operations:

- The client request a web page through a network-enabled device.
- The web server receives and processes the request.
- The web server send a response to the client.



What next?

What next?

The next units of the subject consists of:

- Basic concepts about web development.
- HTML - How it works.
- CSS - How it works.

Practical works

- Design and deploy your own personal website (Practical work II)