HyperText Markup Language

Html - rfc1866 rfc2854

World Wide Web

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

Everything there is online about W3 is linked directly or indirectly to this document, including an executive summary of the project, M

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 , Lib
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.

In March 1989, Berners-Lee gave managers at CERN a proposal for an information management system that used hypertext to link documents on different computers that were connected to the Internet. (Hypertext, a term coined in 1963, allows a person to get a document or piece of content by clicking on a coded word or phrase.)

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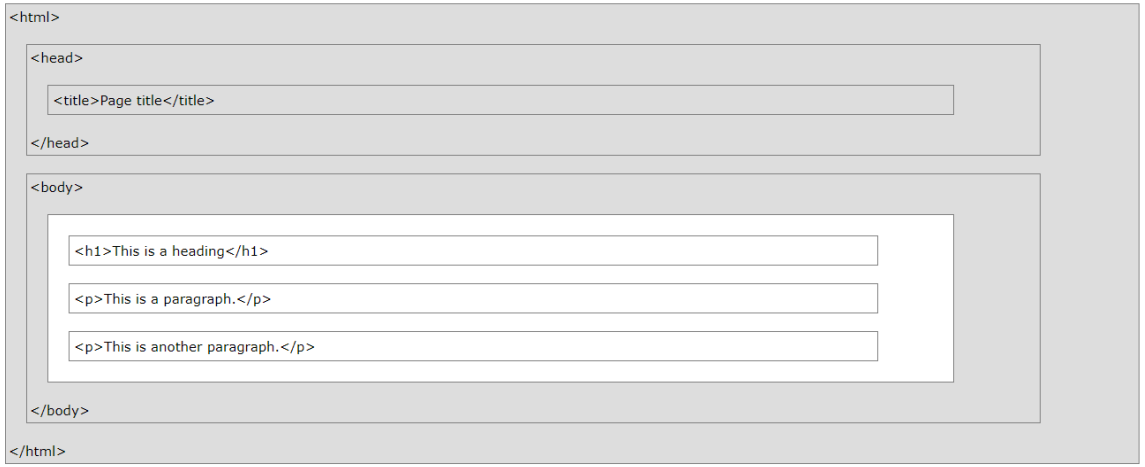
```
<!DOCTYPE html>
<html lang="en">

<meta charset="utf-8">
<title>Page Title</title>

<body>
   <h1>This is a Heading</h1>
   <p>This is a paragraph.</p>
   <p>This is another paragraph.</p>
</body>

</html>
```

HTML elements are the building blocks of HTML pages



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```
<div style="background-color:lightblue">
  <h3>This is a heading</h3>
  <p>This is a paragraph.</p>
</div>

<a href="https://www.w3schools.com">This is
a link</a>

<img src="img_w3schools.jpg" alt="W3Schools"
 style="width:120px;height:150px"
```

https://www.w3schools.com/whatis/whatis_html.asp

Attribute	Example
id	<table **id**="table01"
class	<p **class**="normal">
style	<p **style**="font-size:16px">
data-	<div **data**-id="500">
onclick	<input **onclick**="myFunction()">
onmouseover	<a **onmouseover**="this.setAttribute('style','color:red')">

CSS - Cascading Style Sheets - rfc7993

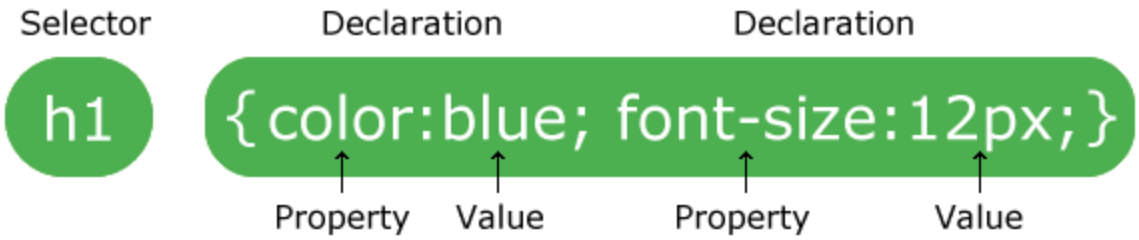
CSS describes how **HTML** elements are to be **displayed**

```
<style>

body {background-color:lightblue; text-align:center;}
h1 {color:blue; font-size:40px;}
p {font-family:verdana; font-size:20px;}

</style>
```

https://www.w3schools.com/whatis/whatis_css.asp

CSS - Cascading Style Sheets - rfc7993

A CSS rule consists of a **selector** and a **declaration** block:



https://www.w3schools.com/cssref/css_selectors.asp

https://www.w3schools.com/cssref/trysel.asp

CSS - Cascading Style Sheets - rfc7993

Bootstrap

Build responsive, mobile-first projects on the web with the world's most popular front-end component library.

Bootstrap is an open source toolkit for developing with HTML, CSS, and JS. Quickly prototype your ideas or build your entire app with our Sass variables and mixins, responsive grid system, extensive prebuilt components, and powerful plugins built on jQuery.

Get started | Download

Currently v4.3.1

Primary Secondary Success Danger Warning Info Light Dark Link

Copy

```
<button type="button" class="btn btn-primary">Primary</button>
<button type="button" class="btn btn-secondary">Secondary</button>
<button type="button" class="btn btn-success">Success</button>
<button type="button" class="btn btn-danger">Danger</button>
<button type="button" class="btn btn-warning">Warning</button>
<button type="button" class="btn btn-info">Info</button>
<button type="button" class="btn btn-light">Light</button>
<button type="button" class="btn btn-dark">Dark</button>

<button type="button" class="btn btn-link">Link</button>
```

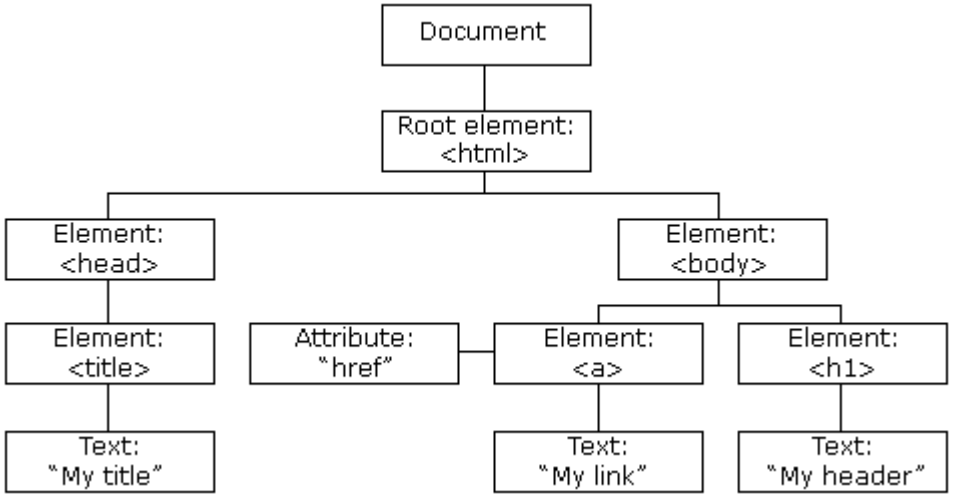
ionic

Pure.css

Html e DOM

The HTML DOM (Document Object Model)

When a web page is loaded, the browser creates a **D**ocument **O**bject **M**odel of the page.



With the HTML DOM, JavaScript can access and change all the elements of an HTML document.

https://www.w3schools.com/whatis/whatis_htmldom.asp

Javascript

JavaScript was initially created to *“make web pages alive”*.

Scripts are provided and executed as plain text. They don’t need special preparation or compilation to run.

```
<!DOCTYPE html>
<html>
<body>

<h2>JavaScript Statements</h2>

<p>A <b>JavaScript program</b> is a list of <b>statements</b> to be executed by a computer.</p>

<p id="demo"></p>

<script>
var x, y, z;  // Declare 3 variables
x = 5;    // Assign the value 5 to x
y = 6;    // Assign the value 6 to y
z = x + y;  // Assign the sum of x and y to z

document.getElementById("demo").innerHTML =
"The value of z is " + z + ".";
</script>

</body>
</html>
```

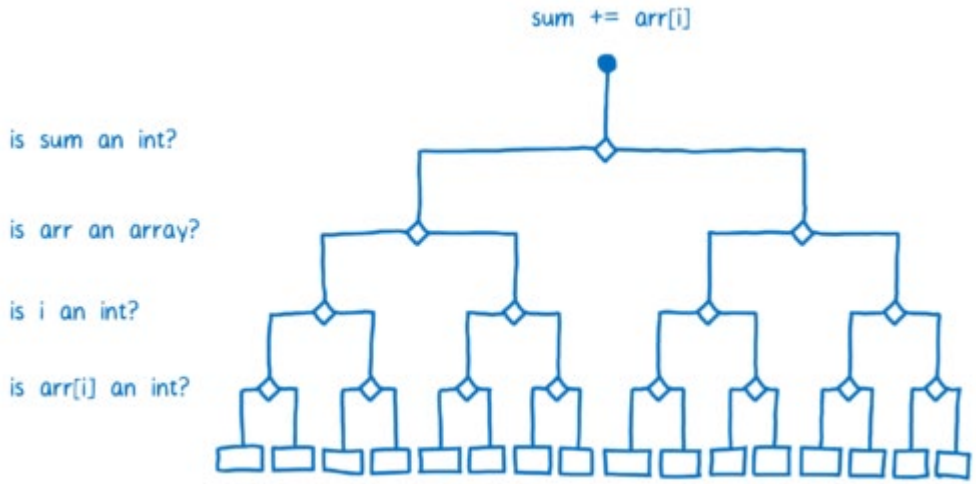
https://www.w3schools.com/js/js_examples.asp

Javascript

Javascript è un linguaggio debolmente tipizzato

https://hacks.mozilla.org/2017/02/a-crash-course-in-just-in-time-jit-compilers/


```
function arraySum(arr) {
  var sum = 0;
  for (var i = 0; i < arr.length; i++) {
    sum += arr[i];
  }
}
```



Javascript

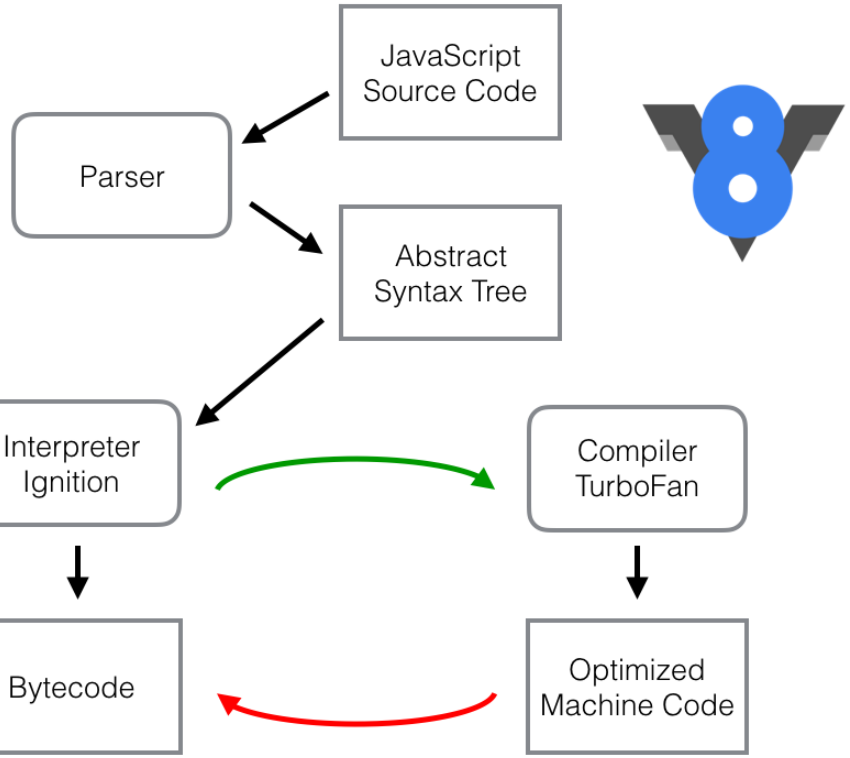
(SpiderMonkey)

(Nitro)

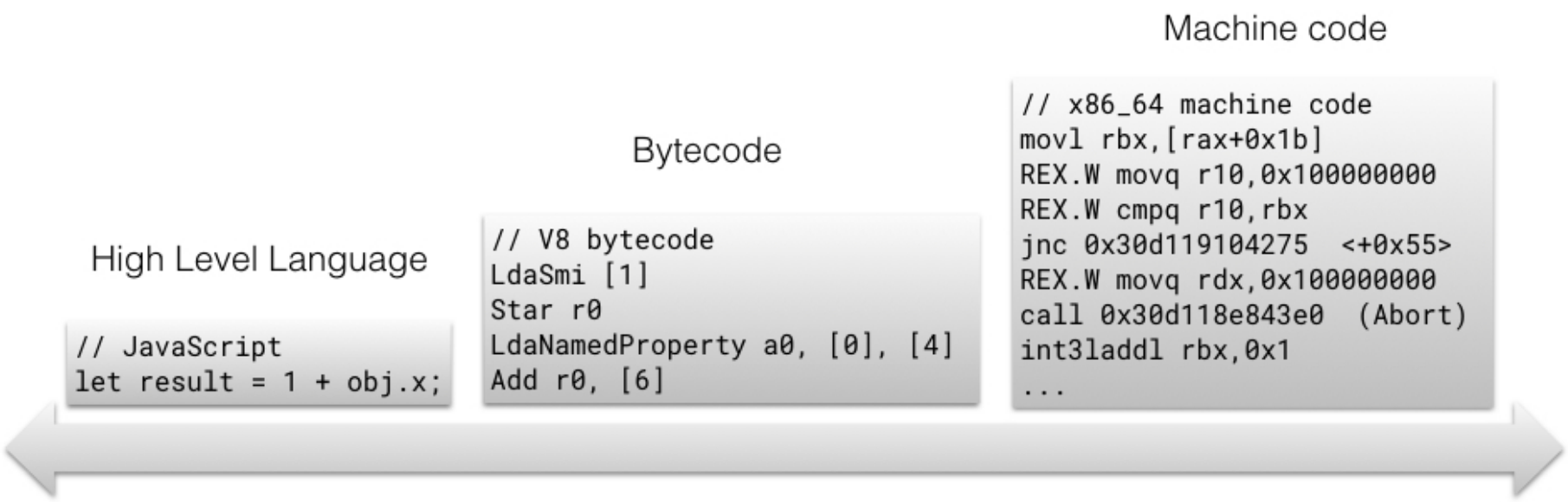
1. The engine (embedded if it's a browser reads ("parses") the script.

2. Then it converts ("compiles") the script the machine language.

3. And then the machine code runs, pretty fast.



Javascript

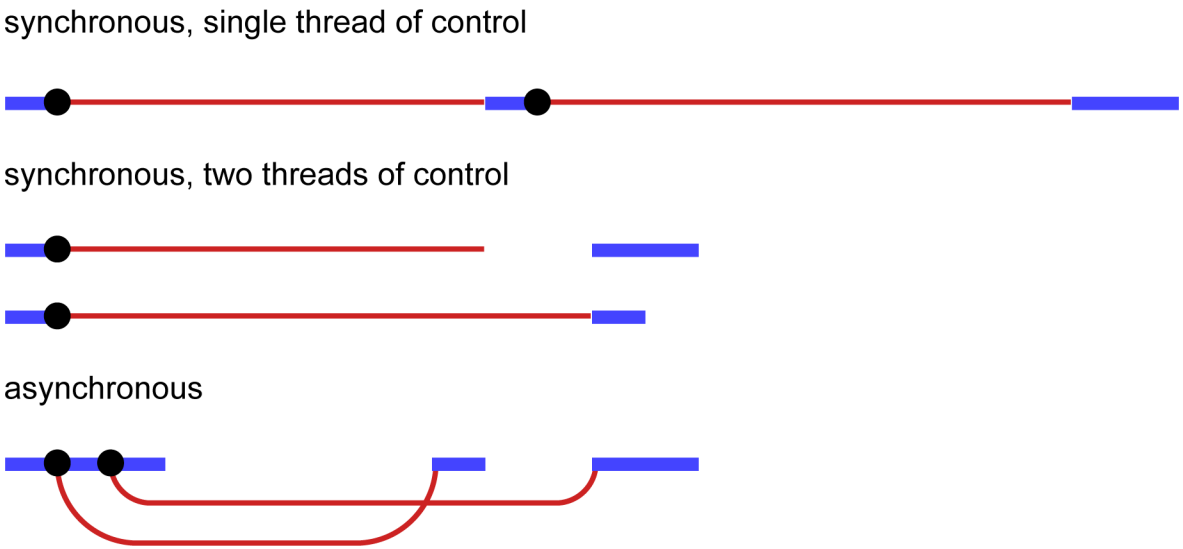


Google

@fhinkel

Javascript

JavaScript is always synchronous and single-threaded. If you're executing a JavaScript block of code on a page then no other JavaScript on that page will currently be executed.



Security

SQL Injection

Cosa è:

SQL injection è una tecnica di *code injection* dove si inietta del codice SQL

```
# Define POST variables
uname = request.POST['username']
passwd = request.POST['password']

# SQL query vulnerable to SQLi
sql = "SELECT id FROM users WHERE username='" + uname + "' AND password='" + passwd + "'"

# Execute the SQL statement
database.execute(sql)
```

https://www.acunetix.com/websitesecurity/sql-injection/

Come si combatte?

Semplicemente usando: **prepared statements and parameterized queries**

```
$stmt = $dbConnection->prepare('SELECT * FROM employees WHERE name = ?');
$stmt->bind_param('s', $name);
```

Oppure pulendo tutti gli input:

```
mysqli_real_escape_string ( mysqli $link , string $escapestr ) : string
```

This function is used to create a legal SQL string that you can use in an SQL statement. The given string is encoded to an escaped SQL string, taking into account the current character set of the connection.

```
$unsafe_variable = $_POST["user-input"];
$safe_variable = mysql_real_escape_string($unsafe_variable);
mysql_query("INSERT INTO table (column) VALUES ('" . $safe_variable . "')");
```