

JavaScript and [Java](#) are completely different languages, both in concept and design.

JavaScript was invented by Brendan Eich in 1995, and became an ECMA standard in 1997.

ECMA-262 is the official name of the standard. ECMAScript is the official name of the language.

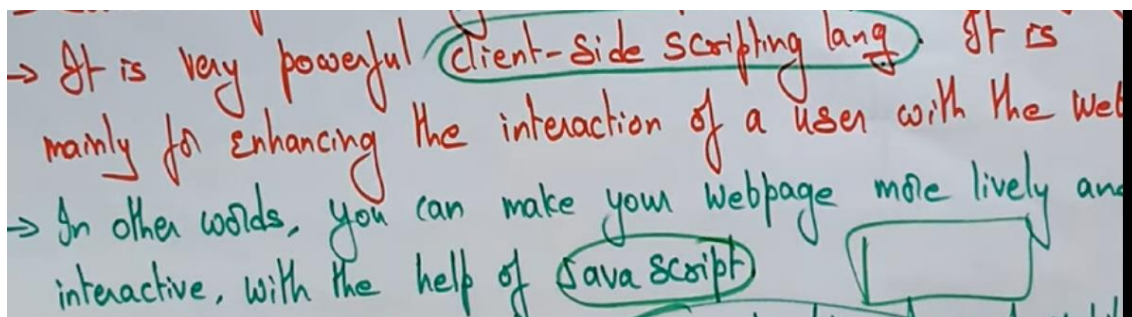
What is JavaScript

JavaScript is an *object-based scripting language* which is *lightweight, cross-platform single-threaded*, and *interpreted compiled programming language*.

JavaScript is used to create *client-side dynamic pages*. JavaScript is a weakly typed language (dynamically typed).

It can be used for both *Client-side* as well as *Server-side* developments. JavaScript also known as a *scripting language* for *web pages*.

JavaScript is not a *compiled language*, but it is a *translated language*. The *JavaScript Translator* (embedded in the *browser*) is responsible for *translating the JavaScript code* for the web browser.



It is an interpreted, full-fledged programming language that enables dynamic interactivity on websites when applied to an HTML document. With JavaScript, users can build modern web applications to interact directly without reloading the page every time. The traditional website uses js to provide several forms of interactivity and simplicity.

In addition to web browsers, databases such as CouchDB and MongoDB uses JavaScript as their scripting and query language.

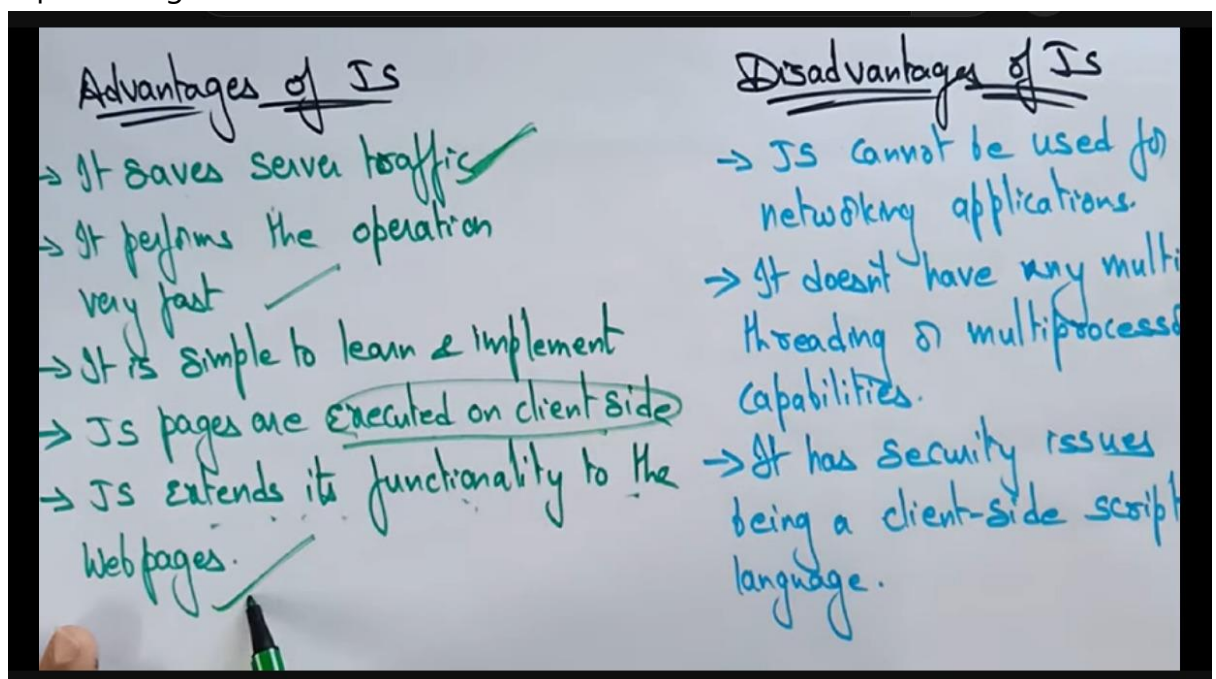
JavaScript contains a standard library of objects, like [Array](#), [Date](#), and [Math](#), and a core set of language elements like [operators](#), **control structures**, and [statements](#).

Features of JavaScript

There are following features of JavaScript:

1. All popular web browsers support JavaScript as they provide built-in execution environments.
2. JavaScript follows the syntax and structure of the C programming language. Thus, it is a structured programming language.
3. JavaScript is a weakly typed language, where certain types are implicitly cast (depending on the operation).
4. JavaScript is an object-oriented programming language that uses prototypes rather than using classes for inheritance.
5. It is a light-weighted and interpreted language.
6. It is a case-sensitive language.
7. JavaScript is supportable in several operating systems including, Windows, macOS, etc.
8. It provides good control to the users over the web browsers.

9.

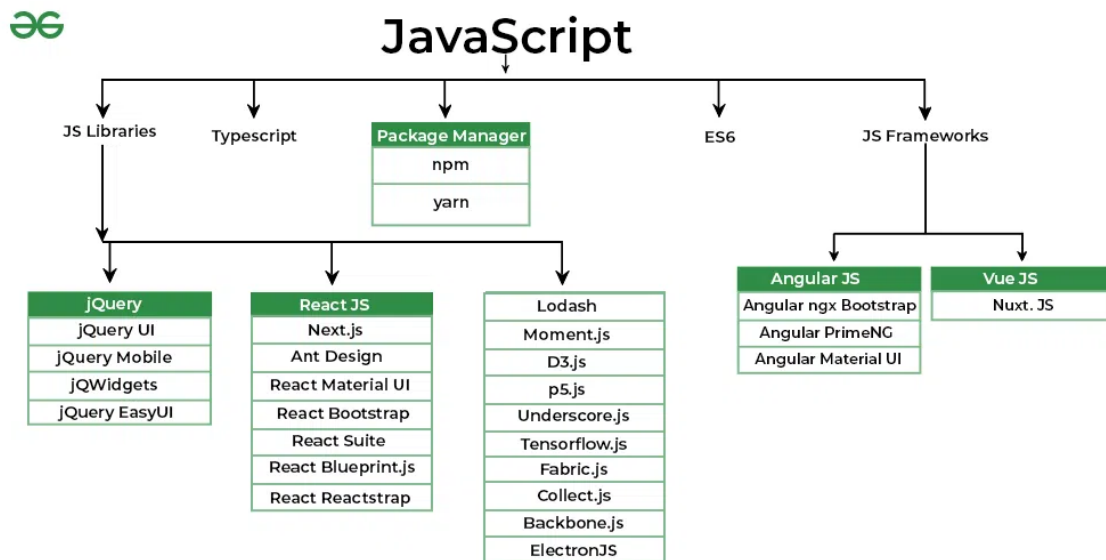


Application of JavaScript

JavaScript is used to create interactive websites. It is mainly used for:

- Client-side validation,

- Dynamic drop-down menus,
- Displaying date and time,
- Displaying pop-up windows and dialog boxes (like an alert dialog box, confirm dialog box and prompt dialog box),
- Displaying clocks etc.



How to Link JavaScript File in HTML ?

JavaScript can be added to HTML file in [two ways](#):

Internal JS: We can add JavaScript directly to our HTML file by writing the code inside the <script> tag. The <script> tag can either be placed inside the <head> or the <body> tag according to the requirement.

Example

```

<?php
echo "<script>
    alert('Hello from PHP!');
</script>";
?>
  
```

External JS: We can write JavaScript code in another files having an extension.js and then link this file inside the <head> tag of the HTML file in which we want to add this code.

Example:

```

<?php
if ($condition) {
    echo "<script src='script.js'></script>";
}
  
```

```
}  
?>
```

3) INLINE JAVASCRIPT

we can directly code Javascript into the HTML elements themselves. This is usually done to handle certain events and user actions, for example:

- `onclick` – When the user clicks on the element.
- `onhover` – As the mouse cursor hovers over the element.
- `onkeypress` – When the user presses a key.

```
<input type="button" value="Test" onclick="FUNCTION()">
```

1. Invoking JavaScript Functions from PHP: In situations where JavaScript functions need to be triggered or manipulated from the server-side, PHP can invoke JavaScript functions using JavaScript Object Notation (JSON). PHP can encode data into JSON format and send it to the client-side, where JavaScript can parse the JSON and execute the corresponding functions. For example:

PHP

```
<?php  
$data = ['message' => 'Data from PHP'];  
$json = json_encode($data);  
echo "<script>  
    processJSONData($json);  
</script>";  
?>
```

Use code with caution. [Learn more](#)

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This method allows for communication between the server-side (PHP) and client-side (JavaScript), enabling dynamic data manipulation and interaction.