

# Javascript

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- JavaScript is the preferred language for client-side scripting of web pages.
- JavaScript can programmatically access and alter HTML elements and change a web site dynamically.
- JavaScript can animate, move, transition, hide, and show parts of a page instead of refresh the entire page.
- JavaScript is object-oriented, dynamically/weakly typed(variables easily converted from one to another), lightweight, scripting language.
- JavaScript is very different from Java.
- JavaScript uses objects that have constructors, properties, and methods.
- JavaScript is dynamically instead of statically typed, meaning type checking is done at run-time instead of compile-time.

## client sides script pros and cons

### pros

- Reduces the load from the server computers.
- Browser can respond to user events faster.
- JavaScript can interact with HTML in ways that servers can't.

### cons

- No guarantee that client computer has JavaScript enabled.
- Client computers may be unpredictable depending on the operating systems, programs, configs, and browsers used.
- Web development can be difficult because of the added interactions of different languages that have to interact properly to display a web page.

## LOCATIONS

- Similar to CSS, Javascript can be inline, embedded, or external.
- It is preferred not to use inline JavaScript because of maintainability and performance reasons.

### INLINE

```
<a href = "JavaScript:OpenWindow();">more info<a/>  
<input type="button" onclick="alert('Are you sure');" />
```

### EMBEDDED

- Embedded injection is by adding Javascript inside a <script> tag inside the .html file.
- The location of this tag is very important, because if some scripts rely on previously declared variables, the page will not run if this tag is placed before those variables are declared.

- This