**JavaScript** is a *lightweight,* *cross-platform*, *single-threaded,*and *interpreted compiled* programming language which is also known as the scripting language for webpages.

* **Client-side:** It supplies objects to control a browser and its [Document Object Model (DOM).](https://www.geeksforgeeks.org/dom-document-object-model/) Like if client-side extensions allow an application to place elements on an HTML form and respond to user events such as **mouse clicks**, **form input**, and **page navigation**. Useful libraries for the client side are [**AngularJS**](https://www.geeksforgeeks.org/introduction-to-angularjs/), **[ReactJS](https://www.geeksforgeeks.org/react-js-introduction-working/)**, **[VueJS,](https://www.geeksforgeeks.org/vue-js/)** and so many others.
* **Server-side:** It supplies objects relevant to running JavaScript on a server. For if the server-side extensions allow an application to communicate with a database, and provide continuity of information from one invocation to another of the application, or perform file manipulations on a server. The useful framework which is the most famous these days is [**node.js**](https://www.geeksforgeeks.org/introduction-to-nodejs/).
* **Imperative language –**In this type of language we are mostly concerned about how it is to be done. It simply controls the flow of computation. The procedural programming approach, object, oriented approach comes under this as async await we are thinking about what is to be done further after the async call.
* **Declarative programming –**In this type of language we are concerned about how it is to be done, basically here logical computation requires. Her main goal is to describe the desired result without direct dictation on how to get it as the arrow function does.

build powerful web applications

From basic syntax and data types to advanced topics such as object-oriented programming and DOM manipulation.

JavaScript is an interpreted language, not a compiled language. A program such as C++ or Java needs to be compiled before it is run. The source code is passed through a program called a compiler, which translates it into bytecode that the machine understands and can execute.

It can be used for both [**Client-side**](https://www.geeksforgeeks.org/server-side-client-side-programming/) as well as [**Server-side**](https://www.geeksforgeeks.org/server-side-client-side-programming/) developments. JavaScript also known as a scripting language for web pages.

JavaScript is used by many developers (65% of the total development community)

1444231 libraries and increasing day by day

**How JavaScript makes HTML build website better?**

* JavaScript is an advanced programming language that makes web pages more interactive and dynamic whereas HTML is a standard markup language that provides the primary structure of a website.
* JavaScript simply adds dynamic content to websites to make them look good and HTML work on the look of the website without the interactive effects and all.
* JavaScript manipulates the content to create dynamic web pages whereas HTML pages are static which means the content cannot be changed.
* JavaScript is not cross-browser compatible whereas HTML is cross-browser compatible.
* JavaScript can be embedded inside HTML but HTML cannot be embedded inside JavaScript.

**HTML – provides primary structure of a website**

**CSS – describes the look and formatting**

**JavaScript – makes web pages more interactive and dynamic**

**Things that makes JavaScript demanding**

* **No need for compilers:** Since JavaScript is an interpreted language, therefore it does not need any compiler for compilation.
* **Used both Client and Server Side:** Earlier JavaScript was used to build client-side applications only, but with the evolution of its frameworks namely Node.js and Express.js, it is now widely used for building server-side applications too.
* **Helps to build a complete solution:** As we saw, JavaScript is widely used in both client and server-side applications, therefore it helps us to build an end-to-end solution to a given problem.
* **Used everywhere:** JavaScript is so loved because it can be used anywhere. It can be used to develop websites, games or mobile apps, etc.
* **Huge community support:** JavaScript has a huge community of users and mentors who love this language and take it’s legacy forward.