Introduction to JavaScript

JavaScript

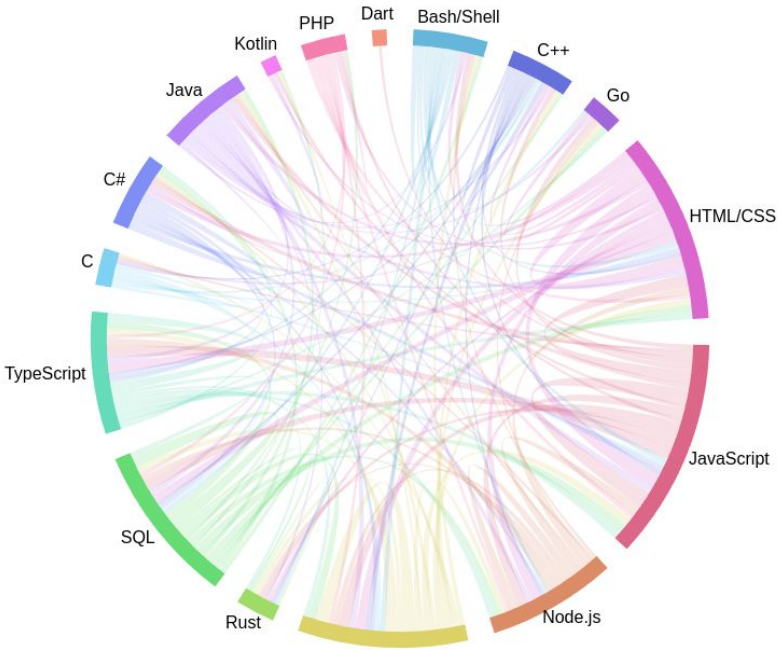
JavaScript is the most popular language in web.

JavaScript was invented by Brendan Eich in 1995.

JavaScript was initially created to make web pages alive.

The programs in this language are called *scripts*. They can be written right in a web page's HTML and run automatically as the page loads.

JavaScript Popularity



Application of JavaScript

- Web Development
- Mobile Application
- Smart Watches
- AR/VR
- Game Development
- Machine Learning

Why it is called JavaScript

When JavaScript was created, it initially had another name: “LiveScript”. But Java was very popular at that time, so it was decided that positioning a new language as a “younger brother” of Java would help.

But as it evolved, JavaScript became a fully independent language with its own specification called **ECMASCRIPT**, and now it has no relation to Java at all.

Where JavaScript Executes

- Browser
- Server
- Mobile

Any device that has a special program called JavaScript Engine

Some JS Engine

- V8(Chrome, Opera and Edge)
- SpiderMonkey (Firefox).
- Chakra for IE
- JavaScriptCore, Nitro and SquirrelFish for Safari

What can JavaScript do in Browser

- Add new HTML to the page, change the existing content, modify styles.
- React to user actions, run on mouse clicks, pointer movements, key presses.
- Send requests over the network to remote servers, download and upload files (so-called AJAX technologies).
- Get and set cookies, ask questions to the visitor, show messages.
- Remember the data on the client-side (“local storage”).

What JavaScript can’t do in browser

- It has no direct access to OS functions.
- Different tabs/windows generally do not know about each other.

Language over JavaScript

Recently a plethora of new languages appeared, which are *transpiled* (converted) to JavaScript before they run in the browse.

Examples of such languages:

- CoffeeScript is a “syntactic sugar” for JavaScript. It introduces shorter syntax, allowing us to write clearer and more precise code. Usually, Ruby devs like it.
- TypeScript is concentrated on adding “strict data typing” to simplify the development and support of complex systems. It is developed by Microsoft.
- Dart is a standalone language that has its own engine that runs in non-browser environments (like mobile apps), but also can be transpiled to JavaScript. Developed by Google..