**Differences Between JavaScript and Python**

Resources:

[Mike Danes JavaScript basics video](https://youtu.be/TLlGhogq56Y)

[In Depth explanation that includes general programming language basics (classes, structs, anonymous functions)](https://youtu.be/PkZNo7MFNFg)

[Classes manual](https://www.w3schools.com/js/js_classes.asp)

[JavaScript “Objects”](https://www.w3schools.com/js/js_json_objects.asp)

1. JavaScript does not enforce a lot of its coding syntax and tries to output something regardless if the output is wrong.

<https://www.destroyallsoftware.com/talks/wat>

2. Functions are wrapped in curly brackets and don’t rely on indentation to detect where a function starts and ends. They are also prefixed with the word function (although not in class functions)

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3. Variables are defined by prefixing the variable name by the keywords (let or var). Let is functionally the same as defining variables in python and follows the same rules. Var allows defining a variable that can be accessed outside of curly brackets if they’re still in a function. This is contrary to other languages that use curly brackets too but “scope” the variable to variables made in curly brackets.

Prefix a variable with the word “const” (short for constant) creates a variable and assigns the value first given to it. The variable can’t be modified from then on and won’t accept changes in value.

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[***(citation)***](https://stackoverflow.com/a/11444416)

4. At the end of declarations such as variables or regular commands, you must end the line with a semicolon “;”. This unfortunately is not directly enforced as JavaScript will “assume” where semicolons should be when the program is executed. This might cause unusual errors if a semicolon is missed on runtime.

5. Lists aren’t technically native to JavaScript although neither are what we associate as Arrays are either. Arrays in JavaScript are not primitive and store lots of extra data about the ValueType of each element in the array, position in memory of each element (vs the block of memory for arrays), etc. So Arrays in JavaScript function almost identically under the hood as Lists in python.

6. JavaScript crashes silently and throws exception errors in the console of your browser. Chrome/Firefox/Edge is (CTRL + SHIFT + J), Safari is (CTRL+ SHIFT + K). If you’re on mac replace CTRL with COMMAND key