JavaScript Basics

# Variable Declarations:

**Const:** Short for constant can not be reassigned or redeclared.

**Let:** Can be reassigned but not redeclared.

**Var:** Can be reassigned and redeclared.

# if Statements:

if (condition) {}

if (condition) {}else{}

if (condition) {} if else {}

# Loops:

### For Loop:

for (iterator; condition; iteration) {}

**iterator** – counter variable, can be declared and assigned with in that statement using **let** etc.

**condition –** defines under what conditions the loop should run under, which usually depends on the value of the iterator

**Iteration** – defines how the iterator changes

### For of loop:

for (let <*iterator*> of *<iterable>*) {}

iterator – temporary variable that gets assigned to a single value of the iterator, the data type depends on the iterable.

iterable – This usually includes data types such as arrays and strings. Iterables are data types that contain more than one value.

* Essentially a *for of loop re*assigns the iterator to the iterable at an index(position) that is equal to the number of times the loop has run, (a  *for of loop*  does not necessarily need a counter/increment-er it knows when to go to the next value in the iterable ). Think of a *for of loop* repeating this block of code:

i(iterator) = array[j](iterable);

j++

where j starts of as 0

## While loop:

While (condition) {}

* This type of loop runs as long as the condition that was set is true once the condition changes to false the loop will end. The condition usually changes to false depending on what happens in the while loop

# Arrays:

let arrayName = [“a”,1,3.3];

* This is a data type that can store multiple values with in it and the values can be of different types
* The position of every value with the array is called it’s index
* A value in an array can be retrieved using this syntax:

arrayName[integer]

* Using that you can display the value or assign the value to another variable

### Important array methods & functions:

* arrayName.length – returns the amount of values in the array
* arrayName.pop() - removes the last value in the array and returns it is displayed or assigned
* arrayName.push() - adds a new value(which will be inserted with in the brackets) to the end array and returns the new length of the array once it has been added
* arrayName.shift() - removes the first value in the array and returns the value that was removed
* arrayName.unshift() - adds a new value(which will be inserted with in the brackets) to the beginning of the array and returns the new length of the array once it has been added.

# Strings:

Name = “Divine”;

* A sequence of characters wrapped in single or double quotes

### Important array methods & functions:

* Name.repeat(integer) – repeats the string x number of times