**Cheat Sheet-Java Script**

# Chapter 3: Multiple Values (Arrays)

Single Dimensional Array:

* Arrays are lists of values. These values can be of all data types and one array can even contain different data types. It is often very useful to store multiple values inside one variable.
* Array start with index 0, the first index of an array is always 0.
* Arrays can be grown dynamically in JavaScript, although it will be creating confusions later in the code.
* Array is an object, so couple of properties and functions are associated with an array.
* Values in an Array can be retrieved via Index Values, Syntax is arr[index\_value]. If the index value doesn’t exists, Undefined is returned.
* Common Properties and Methods are
  + Length: Total number of element spaces in an array.
  + Push: Push a value at the end of an array
  + Pop: Retrieves a value from the end of an array and removes it from the array index
    - Push and Pop Methods made array to behave like a Stack Data structure
    - Stacks are Last in First Out (LIFO) Data Structures.
  + Splice: Splice is used to extract specific no of elements from an array and create a new array from original array. The splice also removes the elements extracted in the new array from original.
  + Shift: Used to remove the first element of the array
  + Find: use to find and element in the array
  + IndexOf: to get the index of a particular value in array
  + Sort:
    - For Sorting Numeric Arrays (based on numeric value order)
    - For Sorting String Arrays (based on Alphabetic value order)
* Concat: You can add 2 arrays by using concat, it will return a new array combining all elements from array 1 and array 2. You can also use + to concatenate 2 arrays, although the last element of first array and first element of 2nd array will be concatenate is sort of string. So adviced to use concat instead of +.

Multi-Dimensional Arrays

Earlier, we established already that arrays can contain any data type. This means that arrays can also contain other arrays (which, in turn, can contain… other arrays!). This is called a multidimensional array. It sounds complicated, but it is just an array of arrays: a list of lists: