**Cheat Sheet-Java Script**

# Chapter 1: HTML Structure and Formatting

# Chap 2: Variables and Operators

1. Variable Declaration let|var|const <variable\_name>= <null|undefined|default value>
   1. let: use to declare a variable within a block scope
   2. var: use to declare the variable in the global scope (thorough out entire script file)
   3. const: used to declare a Constant Variable.
2. Naming Convention for Variable: camelCase, use $, underscores and alphanumeric characters.
   1. The variable name cannot start with a number, but can start with $ or underscore or an alphabet, remaining characters can be numeric
3. DataTypes
   1. Number: For numeric data, int and decimal, hex(0x), oct(0o), bin(0b)
   2. Boolean: Yes-No
   3. String: Character Sequence in an Array
   4. BigInt: For Large Numbers with a postfix character ‘n’
   5. Symbol: Symbol can be used when it is important that variables are not equal, even though their value and type are the same.
   6. Undefined: Special Data type assigned to a variable when no value is previously assigned
   7. Null: is used to tell the interpreter that the variable is empty (not undefined) and currently its type is unknow. TypeOf returns null as an object, although null is a primitive type.
4. typeof: use to get the type of variable (datatype)
5. Java script will automatically convert the datatype to the higher order when an arithmetic operation is performed on 2 or more variable with different data types(except addition). All must be numeric.
   1. In case of addition, since the “+” operator is overloaded for string concatenation, an addition of one string and one numeric variable will always result in a concatenated string. The string variable must be explicitly casted to a numeric datatype to perform an arithmetic addition operation. If the string is a non-numeric string, the result on conversion will produce an NaN(Not a Number).
6. Operators
   1. Arithmetic Operators: + addition, - subtraction, \* multiplication, /division, % modulus (remainder operations), \*\* exponential operations
   2. Unary Operators
      1. ++,--
      2. Postfix: a++, a-- (The postfix gets executed after sending the variable through, and then after that, the operation gets executed).
      3. Prefix: ++a, --a(//The prefix gets executed before sending the variable through)
   3. Assignment Operator (=) used to assign value to variable
   4. Comparison Operator: < Less Than, > Greater Than, <= Less than Equal to, >=Greater than Equal to, = Not Equal
   5. Logical Operator: && And, || Or, ! Not
   6. Bit Operator:
      1. & And, | Or, ^ XOR.
      2. >> Right Shift, <<Left Shit, >>> Right Shift Unsigned
      3. Require understanding of Binary Operations