# JAVASCRIPT

## NodeJs

* Used in VS Code terminal with the keyword **node** and javascript name for running the .js file
* Type **node –version** in command prompt for ensuring nodejs is installed in the PC

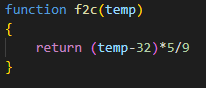
## Datatypes in Javascript

* **string:** Anything in between “ ”or ‘ ‘
* **numbers:** Any numbers
* **boolean:** Values that are either “true” or “false”
* **object:** Anything that comes between {key: value}, similar to dictionary in python
* **array:** Any values between [value1, value2], similar to list in python
* **undefined:** If a variable is declared without a value, it is mentioned as undefined
* **null:** It is a void value used to keep a variable from being undefined
* **symbols**
* **bigints**

## Operators

* **Arithematic** : + - \* / %
* **Relational** : == >= <= > < !=
* **Logical** : && || !
* **Boolean** : & | !
  + Example: 5 & 4 = ?
  + 5 in binary is 101
  + 4 in binary is 100
  + 101 & 100 is 100, it take logical AND on corresponding unit places
  + So 5 & 4 = 4
* **Assignment** : += -= \*= /= %=
* **Shift** : >> <<
  + 5>> = ?
  + 5 in binary is 101
  + So the right shift operator shifts the binary values towards the right and adds a 0 on the left
  + So 101 becomes **0**10
  + 13<<2=?
  + 13 in binary is 1101
  + Left shift operator shifts the binary operator to the left. But here its says <<2
  + So it adds two 0’s one the right making it 1101**00** which is equal to 52

## Commands in JavaScript

* **console.log(“ ”)** :
  + Used for displaying items in console section of website
  + Similar to **print(a,b)** statement in python
* **var**:
  + Variable declaration operator that affects a variable globally
* **let**:
  + Variable declaration operator that affects a variable locally
* **const**:
  + Variable declaration operator used to keep the value constant throughout the script
* **function**:
  + It is a keyword used to initiate a function inside JavaScript
  + 
* **class**:
  + It is a blueprint of an object
  + The objects in the class is created by the keyword **constructor**
  + The properties or arguments of a **constructor** is called by the syntax **this**.var\_name=argument\_name;
  + An object is declared within the body section of the script is using the keyword **const** object\_name = **new** class\_name(argument\_values);

## Conditional Statement

* **if () {…}**
* **if () {…} … else {…}**
* **if () {…} … elseif {…} … else{…}**