# **PYTHON TO JAVASCRIPT!!! - PART 2**

Instruction

* You need to complete the **XXXXX** part with the JAVASCRIPT equivalent code
* You can work in team or by yourself –
  + Search on internet
  + or read the **1-Javascript Cheat Sheet.pdf**
  + <https://www.w3schools.com/js/default.asp>
* **IMPORTANT** : you need to test the code before writing it !!!

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|  | **PYTHON** | **JAVASCRIPT** |
| **BOOLEAN**  **OPERATORS** | **IS EQUAL, IS GREATER**  x = 5  y = 5  print (x == y)  >True  **AND / OR / NOT**  x = 5  y = 5  print (not (x == y and ( x>5 or y<10) ))  >false | **IS EQUAL, IS GREATER**  let x = 5;  let y = 5;  console.log(x===y);  **AND / OR / NOT**  let x = 5;  let y = 5;  result = (!((x===y) && (x>5||y<10)));  console.log(result); |
| **TYPES** | CONVERT A STRING TO INTEGER  **int**(<**STRING>)**  n = ‘5’  print (int(n) + int(n))  >10  CONVERT A INTEGER TO STRING  **str**(<**INTEGER>)**  n = 5  print (str(n) + str(n))  >55 | CONVERT A STRING TO INTEGER  let n = '5';  let nToInteger = parseInt(n);  console.log(nToInteger + nToInteger);  CONVERT A INTEGER TO STRING  let n = 5;  console.log(n.toString() + n.toString()); |
| **FUNCTION** | DEFINE A FUNCTION  def sum(n1, n2):  total = n1 + n2  return total  print(sum(100,200)) -> 300 | DEFINE A FUNCTION  function sum (n1,n2) {      let total = n1 + n2;      return total;  }  console.log(sum(100,200));  DEFINE AN ARRAY FUNCTION  function sumNums(array) {      let sum = 0;      for (let index in array) {          sum += array[index];      }      return sum;  }  let arrayOfNums = [1,2,3,4]  console.log(sumNums(arrayOfNums)); |
| **DATA**  **STRUCTURES** | **ARRAY**  # Create empty array  array = []  fruits = [“apple”, “banana”]  # Create array with values  array = [12, 13, 15, 16]  # Access using index  value = array[2]  # Insert value at index  array.insert(1, 20)  # Insert value at the end  array.append(20)  # Remove using index  array.pop(2)  # Get a sub array  subarray = array[2:25]  **ARRAY 2D**  # Create array2D with values  array2D = [ [12, 13, 15, 16], [4, 5, 6, 7]]  # Access using index  value = array2D[2][0]  **DICTIONARY**  # Create empty dictionary  dic = {}  # Create array with values  dic = { **key1**:**value1**, **key2**:**value2** … }  # Access using **key**  value = dic[**key1**]  # Add value for a new key  dic[**key3**] = **value3**  # Update value from existing key  dic[**key2**] = **value2New**  # Remove using key  dic. pop(**key2**) | **ARRAY**  # Create empty array  let array = [];  # Create array with values  let array = [12,13,15,16];  # Access using index  let array = [12,13,15,16];  console.log(array[2]);  # Insert value at index  let array = [12,13,14,16];  let index = 1;  let result = array.splice(index,0,20);  console.log(array);  # Insert value at the end  let array = [12,13,15,16];  let resutl = array.push(20);  console.log(array);  # Remove using index  let array = [12,13,14,16];  let result = array.shift(2)  console.log(array);  # Get a sub array  let array = [12,13,14,16];  let result = array.slice(1,3);  console.log(result);  **ARRAY 2D**  # Create array2D with values  let array2D = [      [12,13,15,16],      [4,5,6,7]  ];  # Access using index  let array2D = [      [12,13,15,16],      [4,5,6,7]  ];  for (let index in array2D) {      result = array2D[1][0];  }  console.log(result);  **DICTIONARY**  # Create empty dictionary  let object = {};  # Create array with values  let object = {      key1: 'value1',      key2: 'value2'  };  # Access using **key**  let object = {      key1: 'value1',      key2: 'value2'  };  console.log(object["key1"]);  # Add value for a new key  let object = {      key1: 'value1',      key2: 'value2'  };  let result = object.key3="value3";  console.log(object);  # Update value from existing key  let object = {      key1: 'value1',      key2: 'value2'  };  let result = object.key2="value2New";  console.log(object);  # Remove using key  let object = {      key1: 'value1',      key2: 'value2'  };  delete object.key2;  console.log(object); |

**Q2 The 3 ways to declare a variable in JS**

var a = 4

Let a = 4

const a = 4

* Can you explain what the differences?

The difference of var let and const

* Var: it is common variable which can be reassign but only access within a function. Variable will move to the top when code is executed.
* Let: it similar to const, but let variable can be reassign but not redeclare.
* Const: it cannot be reassign and cannot accessible before they appear within the code.