**JAVASCRIPT ASSIGNMENT**

/\**Problem 1: Complete the secondLargest function which takes in an array of numbers in input and return the second biggest number in the array. (without using sort)?*\*/

function secondLargest(array) {

// Write your code here

let first = array[0];

let second = -1;

for (let i of array) {

if (i > first) {

second = first;

first = i;

} else if (i > second && i != first) {

second = i;

}

}

return second;

}

/\* Problem 2: Complete the calculateFrequency function that takes lowercase string as input and returns frequency of all english alphabet. (using only array, no in-built function)\*/

function calculateFrequency(string) {

// Write your code here

let freq = new Array(26).fill(0);

let result = {};

for (let i = 0; i < string.length; i++) freq[string.charCodeAt(i) - 97]++;

for (let i =0;i<freq.length;i++) {

if (freq[i]>0) {

let key = String.fromCharCode(i + 97)

result[key] = freq[i];

}

}

return result;

}

/\*Problem 3: Complete the flatten function that takes a JS Object, returns a JS Object in flatten format (compressed)\*/

function flatten(unflatObject) {

// Write your code here

let result = {}

for(let i in unflatObject)

if ((typeof unflatObject[i]) == 'object' && unflatObject[i] !== null) {

var flat = flatten(unflatObject[i]);

for (var x in flat) result[i + '.' + x] = flat[x]

} else result[i] = unflatObject[i]

return result

}

/\*Problem 4: Complete the unflatten function that takes a JS Object, returns a JS Object in unflatten format\*/

function unflatten(flatObject) {

// Write your code here

var result = {}

for (var i in flatObject) {

var keys = i.split('.')

keys.reduce(function(r, e, j) {

return r[e] || (r[e] = isNaN(Number(keys[j + 1])) ? (keys.length - 1 == j ? flatObject[i] : {}) : [])

}, result)

}

return result

}