**Task 3**

**0.Playing with JSON object Values:**

**Fluffy sorry, Fluffyy is my fav cat and it has 2 catFriends**

**Write a code to get the below details of Fluffyy so that**

**I can take him to vet**

var cat = {

name: 'Fluffy',

activities: ['play', 'eat cat food'],

catFriends: [

{

name: 'bar',

activities: ['be grumpy', 'eat bread omblet'],

weight: 8,

furcolor: 'white'

},

{

name: 'foo',

activities: ['sleep', 'pre-sleep naps'],

weight: 3

}

]

}

//**Add height and weight to Fluffy**

cat.height=3.5;

cat.weight=30;

//**Fluffy name is spelled wrongly. Update it to Fluffyy**

cat.name="Fluffyy";

//**List all the activities of Fluffyy’s catFriends.**

for(let catF of cat.catFriends){

console.log(catF.activities);

}

//**Print the catFriends names**.

for(let catF of cat.catFriends){

console.log(catF.name);

}

//**Print the total weight of catFriends**

var totalWeight=cat.catFriends.reduce((acc,w)=>{

return acc+w.weight;

},0)

console.log(totalWeight);

//**Print the total activities of all cats**

let t= cat.activities.length;

var totalAct=cat.catFriends.reduce((acc,a)=>{

return acc+a.activities.length;

},t);

console.log(totalAct);

//**Add 2 more activities to bar & foo cats**

for(let i of cat.catFriends){

i.activities.push('drink water','bath');

}

console.log(cat.catFriends[0].activities);

//**Update the fur color of bar**

cat.catFriends[0].furcolor="black";

console.log(cat.catFriends[0].furcolor);

**1.Parsing an JSON object’s Values:**

**Write a function called printAllValues which returns a newArray of all the input object’s values.**

var obj = {name : "RajiniKanth", age : 33, hasPets : false};

function printAllValues(obj) {

// your code here

var newArray=[]

for(var i in obj){

newArray.push(obj[i]);

}

return newArray;

}

var arr=printAllValues(obj);

console.log(arr);

**Output**

[ 'RajiniKanth', 33, false ]

**2.Parsing an JSON object’s Keys:**

**Write a function called printAllValues which returns a newArray of all the input object’s keys.**

var obj = {name : "RajiniKanth", age : 33, hasPets : false};

function printAllValues(obj) {

// your code here

var newArray=[]

for(var i in obj){

newArray.push(i);

}

return newArray;

}

var arr=printAllValues(obj);

console.log(arr);

**Output**

[ 'name', 'age', 'hasPets' ]

**3.Parsing an JSON object and convert it to a list:**

**Write a function called convertObjectToList which converts an object literal into an array of arrays.**

var obj = {name: "ISRO", age: 35, role: "Scientist"};

function convertObjectToList(obj) {

// your code here

var myarr=[];

for(var i in obj){

myarr.push([i,obj[i]])

}

return myarr;

}

var arr=convertObjectToList(obj);

console.log(arr);

**Output**

[ [ 'name', 'ISRO' ], [ 'age', 35 ], [ 'role', 'Scientist' ] ]

**4.Parsing a list and transform the first and last elements of it:**

**Write a function transformFirstAndLast that takes in an array and returns an object with:**

**1.First element of array as object key and**

**2.Last element of array as the key’s value**

var arr = [‘GUVI’ , ‘I’ , ‘am’ , ‘a geek’];

function transformFirstAndLast(arr) {

// your code here

var newObject={};

newObject[arr[0]]=arr[arr.length-1];

return newObject;

}

var obj=transformFirstAndLast(arr)

console.log(obj);

**Output**

{GUVI : ‘a geek’}

**5.Parsing a list of lists and convert into a JSON object:**

**Writing a function fromListToObject which takes in an array of arrays, and returns an object with each pair of elements in the array as a key value pair.**

var arr = [['make', 'Ford'], ['model', 'Mustang'], ['year', 1964]];

function fromListToObject(arr) {

var newObject = {};

for(var i=0;i<arr.length;i++){

newObject[arr[i][0]]=arr[i][1];

}

return newObject;

}

var obj=fromListToObject(arr);

console.log(obj);

**Output**

{ make: 'Ford', model: 'Mustang', year: 1964 }

**6**.**Parsing a list of lists and convert into a JSON object:**

**Write a function called transformGeekData that transforms some set of data from one format to another.**

var arr= [[['firstName', 'Vasanth'], ['lastName', 'Raja'], ['age', 24], ['role', 'JSWizard']], [['firstName', 'Sri'], ['lastName', 'Devi'], ['age', 28], ['role', 'Coder']]];

function transformEmployeeData(arr) {

var tranformEmployeeList = [];

let len=arr.length;

let n,obj;

for(let i=0;i<len;i++){

n=arr[i].length;

obj={};

for(let j=0;j<n;j++){

obj[arr[i][j][0]]=arr[i][j][1];

}

tranformEmployeeList.push(obj);

}

return tranformEmployeeList;

}

console.log(transformEmployeeData(arr));

**Output**

[ { firstName: 'Vasanth', lastName: 'Raja', age: 24, role: 'JSWizard' },

{ firstName: 'Sri', lastName: 'Devi', age: 28, role: 'Coder' } ]

**7.Parsing two JSON objects and Compare:**

**Write an assertObjectEqual function from scratch. Assume that the objects in question contain only scalar values**

var expected = {foo: 5, bar: 6};

var expected1 = {foo: 6, bar: 5};

var actual = {foo: 5, bar: 6};

function assertObjectsEqual(actual, expected, testName){

actualStr = JSON.stringify(actual)

expectedStr = JSON.stringify(expected)

if(actualStr == expectedStr){

return "Passed"

} else{

return "FAILED ["+testName+"] Expected "+actualStr+", but got "+expectedStr

}

}

console.log(assertObjectsEqual(actual, expected, 'test1'))

// Output: Passed

console.log(assertObjectsEqual(actual, expected1, 'test2'))

// Output : FAILED [test2] Expected {"foo":5,"bar":6}, but got {"foo":6,"bar":5}

**Output**

Passed

FAILED [test2] Expected {"foo":5,"bar":6}, but got {"foo":6,"bar":5}

**8.Parsing JSON objects and Compare:**

**I have a mock data of security Questions and Answers. You function should take the object and a pair of strings and should return if the quest is present and if its valid answer**

var securityQuestions = [

{

question: 'What was your first pet’s name?',

expectedAnswer: 'FlufferNutter'

},

{

question: 'What was the model year of your first car?',

expectedAnswer: '1985'

},

{

question: 'What city were you born in?',

expectedAnswer: 'NYC'

}

];

function chksecurityQuestions(securityQuestions,question, answer) {

for (var i = 0; i < securityQuestions.length; i++)

{

for (keys in securityQuestions[i]){

if(keys == "question"){

if(securityQuestions[i].question == question && securityQuestions[i].expectedAnswer == answer){

return true;

}

}

}

}

return false;

}

//Test case1:

var ques = 'What was your first pet’s name?';

var ans = 'FlufferNutter';

var status = chksecurityQuestions(securityQuestions, ques, ans);

console.log(status); // true

//Test case2:

var ques = 'What was your first pet’s name?';

var ans = 'DufferNutter';

var status = chksecurityQuestions(securityQuestions, ques, ans);

console.log(status); // false

**Output :**

true

false

**9.Parsing JSON objects and Compare:**

**I have a mock data of security Questions and Answers. You function should take the object and a pair of strings and should return if the quest is present and if its valid answer**

var students = [

{

name: 'Siddharth Abhimanyu',

age: 21

},

{

name: 'Malar',

age: 25

},

{

name: 'Maari',

age: 18

},

{

name: 'Bhallala Deva',

age: 17

},

{

name: 'Baahubali',

age: 16

},

{

name: 'AAK chandran',

age: 23

},

{

name:'Gabbar Singh',

age: 33

},

{

name: 'Mogambo',

age: 53

},

{

name: 'Munnabhai',

age: 40

},

{

name: 'Sher Khan',

age: 20

},

{

name: 'Chulbul Pandey'

,age: 19

},

{

name: 'Anthony',

age: 28

},

{

name: 'Devdas',

age: 56

}

];

function returnMinors(arr)

{

var newObj = [];

for (var i = 0; i< arr.length; i++){

if (arr[i].age < 20){

newObj.push(arr[i]);

}

}

return newObj;

}

console.log(returnMinors(students));

**Output:**

[ { name: 'Maari', age: 18 },

{ name: 'Bhallala Deva', age: 17 },

{ name: 'Baahubali', age: 16 },

{ name: 'Chulbul Pandey', age: 19 } ]