**GUVI : Zen Code-Sprint : JavaScript Practice problems in JSON(Objects) and List**

# Problem 0 : Part A (15 mins):

## Playing with JSON object’s 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  
 }  
 ]  
}console.log(cat);

**Basic Tasks to play with JSON**

1. **Add height and weight to Fluffy**

var cat = {

name: ‘Fluffy’,

activities: [‘play’, ‘eat cat food’],

weight:7,

height:90,

catFriends: [

{

name: ‘bar’,

activities: [‘be grumpy’, ‘eat bread omblet’],

weight: 8,

furcolor: ‘white’

},

{

name: ‘foo’,

activities: [‘sleep’, ‘pre-sleep naps’],

weight: 3

}

]

}

var cat.name = "fluffyy"

console.log(cat);

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

var cat={

name: ‘Fluffy’,

activities: [‘play’, ‘eat cat food’],

weight:7,

height:90,

catFriends: [

{

name: ‘bar’,

activities: [‘be grumpy’, ‘eat bread omblet’],

weight: 8,

furcolor: ‘white’

},

{

name: ‘foo’,

activities: [‘sleep’, ‘pre-sleep naps’],

weight: 3

}

]

}

var cat.name = "fluffyy"

console.log(cat);

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

**var cat = {**

**name: ‘Fluffy’,**

**activities: [‘play’, ‘eat cat food’],**

**weight:7,**

**height:90,**

**catFriends: [**

**{**

**name: ‘bar’,**

**activities: [‘be grumpy’, ‘eat bread omblet’],**

**weight: 8,**

**furcolor: ‘white’**

**},**

**{**

**name: ‘foo’,**

**activities: [‘sleep’, ‘pre-sleep naps’],**

**weight: 3**

**}**

**]**

**}**

**var cat.name = "fluffyy"**

**console.log(catfriends.activities);**

1. **Print the catFriends names.**

**var cat = {**

**name: ‘Fluffy’,**

**activities: [‘play’, ‘eat cat food’],**

**weight:7,**

**height:90,**

**catFriends: [**

**{**

**name: ‘bar’,**

**activities: [‘be grumpy’, ‘eat bread omblet’],**

**weight: 8,**

**furcolor: ‘white’**

**},**

**{**

**name: ‘foo’,**

**activities: [‘sleep’, ‘pre-sleep naps’],**

**weight: 3**

**}**

**]**

**}**

**var cat.name = "fluffyy"**

**console.log(catfriends.name);**

1. **Print the total weight of catFriends**

**var cat = {**

**name: ‘Fluffy’,**

**activities: [‘play’, ‘eat cat food’],**

**weight:7,**

**height:90,**

**catFriends: [**

**{**

**name: ‘bar’,**

**activities: [‘be grumpy’, ‘eat bread omblet’],**

**weight: 8,**

**furcolor: ‘white’**

**},**

**{**

**name: ‘foo’,**

**activities: [‘sleep’, ‘pre-sleep naps’],**

**weight: 3**

**}**

**]**

**}**

**var cat.name = "fluffyy"**

**var totalWeight = 7 + 8 + 3;**

**console.log(totalweight);**

**6 . Print the total activities of all cats (op:6)**

**var cat = {**

**name: ‘Fluffy’,**

**activities: [‘play’, ‘eat cat food’],**

**weight:7,**

**height:90,**

**catFriends: [**

**{**

**name: ‘bar’,**

**activities: [‘be grumpy’, ‘eat bread omblet’],**

**weight: 8,**

**furcolor: ‘white’**

**},**

**{**

**name: ‘foo’,**

**activities: [‘sleep’, ‘pre-sleep naps’],**

**weight: 3**

**}**

**]**

**}**

**var cat.name = "fluffyy"**

**console.log(cat.activities);**

1. **Add 2 more activities to bar & foo cats**

**var cat = {**

**name: ‘Fluffy’,**

**activities: [‘play’, ‘eat cat food’],**

**weight:7,**

**height:90,**

**catFriends: [**

**{**

**name: ‘bar’,**

**activities: [‘be grumpy’, ‘eat bread omblet’],**

**weight: 8,**

**furcolor: ‘white’**

**},**

**{**

**name: ‘foo’,**

**activities: [‘sleep’, ‘pre-sleep naps’],**

**weight: 3**

**}**

**]**

**}**

**var cat.name = "fluffyy"**

**var catfriends.activities: "sleepy", "nappy";**

1. **Update the fur color of bar**

**var cat = {**

**name: ‘Fluffy’,**

**activities: [‘play’, ‘eat cat food’],**

**weight:7,**

**height:90,**

**catFriends: [**

**{**

**name: ‘bar’,**

**activities: [‘be grumpy’, ‘eat bread omblet’],**

**weight: 8,**

**furcolor: ‘white’**

**},**

**{**

**name: ‘foo’,**

**activities: [‘sleep’, ‘pre-sleep naps’],**

**weight: 3**

**}**

**]**

**}**

**var cat.name = "fluffyy"**

**var catfriends.activities: "sleepy", "nappy";**

**console.log(cat.activities);**

**var furcolor:"blue";**

# Problem 0 : Part B (15 mins):

## Iterating with JSON object’s Values

Above is some information about my car. As you can see, I am not the best driver.  
I have caused a few accidents.  
Please update this driving record so that I can feel better about my driving skills.

var myCar = {  
 make: ‘Bugatti’,  
 model: ‘Bugatti La Voiture Noire’,  
 year: 2019,  
 accidents: [  
 {  
 date: ‘3/15/2019’,  
 damage\_points: ‘5000’,  
 atFaultForAccident: true  
 },  
 {  
 date: ‘7/4/2022’,  
 damage\_points: ‘2200’,  
 atFaultForAccident: true  
 },  
 {  
 date: ‘6/22/2021’,  
 damage\_points: ‘7900’,  
 atFaultForAccident: true  
 }  
 ]  
}

1. Loop over the accidents array. Change atFaultForAccident from true to false.

2. Print the dated of my accidents

**Solutions:**

1. Loop over the accidents array. Change atFaultForAccident from true to false

**var myCar = {**

**make: ‘Bugatti’,**

**model: ‘Bugatti La Voiture Noire’,**

**year: 2019,**

**accidents: [**

**{**

**date: ‘3/15/2019’,**

**damage\_points: ‘5000’,**

**atFaultForAccident: true**

**},**

**{**

**date: ‘7/4/2022’,**

**damage\_points: ‘2200’,**

**atFaultForAccident: true**

**},**

**{**

**date: ‘6/22/2021’,**

**damage\_points: ‘7900’,**

**atFaultForAccident: true**

**}**

**]**

**}**

**var myCar.atFaultAccidents=false;**

2. Print the dated of my accidents

**var myCar = {**

**make: ‘Bugatti’,**

**model: ‘Bugatti La Voiture Noire’,**

**year: 2019,**

**accidents: [**

**{**

**date: ‘3/15/2019’,**

**damage\_points: ‘5000’,**

**atFaultForAccident: true**

**},**

**{**

**date: ‘7/4/2022’,**

**damage\_points: ‘2200’,**

**atFaultForAccident: true**

**},**

**{**

**date: ‘6/22/2021’,**

**damage\_points: ‘7900’,**

**atFaultForAccident: true**

**}**

**]**

**}**

**var myCar.atFaultAccidents=false;**

**console.log(myCar.accidents(date));**

# ****Problem 1 (5 mins):****

## ****Parsing an JSON object’s Values:****

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

Input (Object):

var object = {name: “RajiniKanth”, age: 33, hasPets : false};  
Output:

[“RajiniKanth”, 33, false]

**Sample Function proto:**

var obj = {name : “RajiniKanth”, age : 33, hasPets : false};function printAllValues(obj) {  
 // your code here  
}

**function printAllValues(object)**

**{**

**var arr = [];**

**for(var i in object)**

**{**

**arr.push(object[i]);**

**}**

**return arr;**

**}**

**console.log(printAllValues(object));**

# Problem 2(5 mins) :

## Parsing an JSON object’s Keys:

Write a function called “printAllKeys” which returns an newArray of all the input object’s keys.

Example Input:  
{name : ‘RajiniKanth’, age : 25, hasPets : true}  
Example Output:  
[‘name’, ‘age’, ‘hasPets’]

**function printAllValues(object)**

**{**

**var arr = [];**

**for(var i in object)**

**{**

**arr.push(i);**

**}**

**return arr;**

**}**

**console.log(printAllValues(object));**

# Problem 3( 7–9 mins):

## 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.  
Input (Object):  
var object = {name: “ISRO”, age: 35, role: “Scientist”};  
Output:  
[[“name”, “ISRO”], [“age”, 35], [“role”, “Scientist”]]

**Sample Function proto:**

var obj = {name: “ISRO”, age: 35, role: “Scientist”};  
function convertListToObject(obj) {  
 // your code here  
}

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

**function printAllValues(object)**

**{**

**var arr = [];**

**for(var i in object)**

**{**

**arr.push([i],object[i]);**

**}**

**return arr;**

**}**

**console.log(printAllValues(object));**

# Problem 5 ( 7 -9 mins):

## Parsing a list of lists and convert into a JSON object:

Write 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.  
Input (Array):  
var array = [[“make”, “Ford”], [“model”, “Mustang”], [“year”, 1964]];  
Output:  
var object = {  
make : “Ford”  
model : “Mustang”,  
year : 1964  
}

**Sample Function proto:**

var arr = [[“make”, “Ford”], [“model”, “Mustang”], [“year”, 1964]];function fromListToObject(arr) {  
 var newObject = {};  
   
 return newObject;  
}

**var object = [["make", "Ford"], ["model", "Mustang"], ["year", 1964]];**

**function printAllValues(object)**

**{**

**var arr = [];**

**for(var i in object)**

**{**

**arr.push(i,object[i]);**

**}**

**return arr;**

**}**

**console.log(printAllValues(object));**

# Problem 6 (10 mins):

## 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.

Input (Array):  
var array = [[[“firstName”, “Vasanth”], [“lastName”, “Raja”], [“age”, 24], [“role”, “JSWizard”]], [[“firstName”, “Sri”], [“lastName”, “Devi”], [“age”, 28], [“role”, “Coder”]]];  
Output:  
[  
{firstName: “Vasanth”, lastName: “Raja”, age: 24, role: “JSWizard”},  
{firstName: “Sri”, lastName: “Devi”, age: 28, role: “Coder”}  
]

**Sample Function proto:**

var arr= [[[“firstName”, “Vasanth”], [“lastName”, “Raja”], [“age”, 24], [“role”, “JSWizard”]], [[“firstName”, “Sri”], [“lastName”, “Devi”], [“age”, 28], [“role”, “Coder”]]];function transformEmployeeData(arr) {  
 var tranformEmployeeList = [];  
   
 //Your code  
   
 return tranformEmployeeList;  
}

# var array = [[[“firstName”, “Vasanth”], [“lastName”, “Raja”], [“age”, 24], [“role”, “JSWizard”]], [[“firstName”, “Sri”], [“lastName”, “Devi”], [“age”, 28], [“role”, “Coder”]]];

# function printAllValues(object)

# {

# var arr = [];

# for(var i in object)

# {

# arr.push(i,object[i]);

# }

# return arr;

# }

# console.log(printAllValues(object));

# Problem 7 (10 — 20 min)

# Problem 9(20 mins):

## Parsing JSON objects and Compare:

Write a function to return the list of characters below 20 age

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)  
{}console.log(returnMinors(students));

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)

if(students.age>20)

console.log(returnMinors(students));