# GUVI : Zen Code-Sprint : JavaScript Practice problems in JSON(Objects) and List <https://medium.com/@reach2arunprakash/guvi-zen-code-sprint-javascript-practice-problems-in-json-objects-and-list-49ac3356a8a5> 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.

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| 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

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| **cat.height=10; cat.weight=20;** |

2.Fluffy name is spelled wrongly. Update it to Fluffyy

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| **cat.name="Fluffyy";** |

3.List all the activities of Fluffyy’s catFriends.

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| var catFr\_len = cat.catFriends.length; *//getting len of catFriends*  for(let i=0;i<catFr\_len;i++) {  console.log(cat.catFriends[i].activities); } |

4. Print the catFriends names.

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| --- |
| var catFr\_len = cat.catFriends.length;  for(let i=0;i<catFr\_len;i++) {  console.log(cat.catFriends[i].name); } |

5.Print the total weight of catFriends

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| --- |
| var catFr\_len = cat.catFriends.length; var sum = 0;  for(let i=0;i<catFr\_len;i++) {  sum += cat.catFriends[i].weight; }  console.log(sum); |

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

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| --- |
| var catFr\_len = cat.catFriends.length; var arr=[]; arr.push(...(cat.activities));   for(let i=0;i<catFr\_len;i++) {  arr.push(...(cat.catFriends[i].activities)); }  console.log(arr .join()); |

7.Add 2 more activities to bar & foo cats

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| --- |
| cat.catFriends[0].activities.push("play","fighting with cats"); cat.catFriends[1].activities.push("play", "eat cat food"); |

8.Update the fur color of bar

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

# Problem 0 : Part B (15 mins):

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.

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| 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.

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| let len = myCar.accidents.length; *//length of accidents array* for(let i=0;i<len;i++) {  if(myCar.accidents[i].atFaultForAccident)  {  myCar.accidents[i].atFaultForAccident=false;  }   } |

2. Print the dates of my accidents

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| --- |
| let len = myCar.accidents.length; *//length of accidents array* for(let i=0;i<len;i++) {  console.log(myCar.accidents[i].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]

|  |
| --- |
| function printAllValues(obj) {  return Object.values(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.

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| function printAllKeys(obj) {  return Object.keys(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.

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| var obj = {name: "ISRO", age: 35, role: "Scientist"}; function convertListToObject(obj) { return Object.entries(object) } |

**Problem 4( 5 mins):**

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) the first element of the array as the object’s key, and

2) the last element of the array as that key’s value.

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| var arr = ["GUVI", "I", "am", "a geek"]; var b = transformFirstAndLast(arr); console.log(b); function transformFirstAndLast(arr) {  let a = arr[0];  let b= arr[arr.length -1];  newObject={};  newObject[a]=b;  return newObject; } |

**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.

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| var arr = [["make", "Ford"], ["model", "Mustang"], ["year", 1964]]; let a = fromListToObject(arr); console.log(a);  function fromListToObject(arr)  {  var newObject = {};  for(let i=0;i<arr.length;i++)  {  let t =arr[i];  newObject[t[0]]=t[1];  }    return newObject; } |

**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.

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| var array = [[["firstName", "Vasanth"], ["lastName", "Raja"], ["age", 24], ["role", "JSWizard"]], [["firstName", "Sri"], ["lastName", "Devi"], ["age", 28], ["role", "Coder"]]];  let res =transformEmployeeData(array); console.log(res);  function transformEmployeeData(arr) {  var transformEmployeeList = [];  for(let i=0;i<arr.length;i++)  {  temp = arr[i];  var newObject={};  for(let j=0;j<temp.length;j++)  {  let t=temp[j];  newObject[t[0]]=t[1];  }  transformEmployeeList.push(newObject);  }  return transformEmployeeList; } |

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**Problem 7 (10 — 20 mins):**

Parsing two JSON objects and Compare:

Write an “assertObjectsEqual” function from scratch.

Assume that the objects in question contain only scalar values (i.e., simple values like strings or numbers).

It is OK to use JSON.stringify().

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| var expected = {foo: 5, bar: 6}; var actual = {foo: 5, bar: 6} var res = assertObjectsEqual(actual, expected, "detects that two objects are equal"); console.log(res);  function assertObjectsEqual(actual, expected, testName){  let a =JSON.stringify(expected);  let b = JSON.stringify(actual);  if(testName=="detects that two objects are equal")  {  if(a===b)  {  return "Passed";  }  else  {  return ("FAILED test [" + testName+" ] Expected "+a+"but got "+b);  }  } } |

**Problem 8(10 mins):**

Parsing JSON objects and Compare:

I have 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

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| 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"  } ]  var ques = "What was your first pet's name?"; var ans = "FlufferNutter"; var res = chksecurityQuestions(securityQuestions, ques, ans); console.log(res);   function chksecurityQuestions(securityQuestions,ques,answer) {  for (let i=0;i<chksecurityQuestions.length;i++)  {  if(securityQuestions[i].question===ques)  {  if(answer === securityQuestions[i].expectedAnswer)  {  return true;  }  else  {  return false;  }  }  }  } |

**Problem 9(20 mins):**

Parsing JSON objects and Compare:

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

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| 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}   ];   console.log(returnMinors(students));  function returnMinors(arr) {  temp=[];  for (let i=0;i<arr.length;i++)  {  if(arr[i].age>20)  {  temp.push(arr[i].name);  }  }  return temp.join(","); } |