Question no.1

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
2. Fluffy name is spelled wrongly. Update it to Fluffyy
3. List all the activities of Fluffyy’s catFriends.
4. Print the catFriends names.
5. Print the total weight of catFriends
6. Print the total activities of all cats (op:6)
7. Add 2 more activities to bar & foo cats
8. Update the fur color of bar

Ans.

    var cat = {name: 'fluffy',

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

               catFriends: [

                            {

                             name:'bar',

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

                             weight: 8,

                             furcolor: 'white'

                            },

                            {

                             name:'foo',

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

                             weight: 8,

                            }

                           ]

              }

              cat.height = 7;

              cat.weight = 8;

              cat.name = 'fluffyy';

              console.log(cat.catFriends[0].activities,cat.catFriends[1].activities);

              console.log(cat.catFriends[0].name,cat.catFriends[1].name);

              console.log(cat.catFriends[0].weight+cat.catFriends[1].weight);

              console.log(cat.activities,cat.catFriends[0].activities,cat.catFriends[1].activities);

              cat.catFriends[0].activities.push('catching mice','drinking milk');

              cat.catFriends[1].activities.push('sleeping','running around');

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

Question no2

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

Ans.

      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

               }

           ]

        }

        for(i=0;i<myCar.accidents.length;i++){

            myCar.accidents[i].atFaultForAccident = false;

        }

        for(i=0;i<myCar.accidents.length;i++){

            console.log(myCar.accidents[i].date);

        }

Question no.3

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]

Ans:

        var object = {name: "RajiniKanth", age: 25, hasPets : true};

        function printAllValues(a){

            console.log(Object.values(a))

        }

        printAllValues(object);

Question no.4

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’]

Ans.

        var object = {name: "RajiniKanth", age: 25, hasPets : true};

        function printAllKeys(a){

            console.log(Object.keys(a))

        }

        printAllKeys(object);

Question no.5

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”]]

Ans.

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

        var result =[]

        function convertListToObject(a){

            var keys = Object.keys(a);

            var values = Object.values(a);

            for(i=0;i<Object.keys(a).length;i++){

                result.push([keys[i],values[i]])

            }

            console.log(result)

        }

        convertListToObject(object);

Question no.6

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.  
Input (Array):  
var array = [“GUVI”, “I”, “am”, “Geek”];  
Output:  
var object = {  
GUVI : “Geek”  
}

Ans.

        var arr = ["GUVI", "I", "am", "Geek"];

         function transformFirstAndLast(a){

                var newarr = [a[0],a[a.length-1]];

                var object = {};

                object[newarr[0]] = newarr[1];

                console.log(object)

        }

        transformFirstAndLast(arr);

Question no.7

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”}  
]

Ans.

        var array = [

            [

                ["firstName", "Vasanth"],

                ["lastName", "Raja"],

                ["age", 24],

                ["role", "JSWizard"]

            ],

            [

                ["firstName", "Sri"],

                ["lastName", "Devi"],

                ["age", 28],

                ["role", "Coder"]

            ]

        ];

        function transformEmployeeData(a){

            var transformEmployeelist = [];

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

               transformEmployeelist.push(Object.fromEntries(array[i]))

            }

            return transformEmployeelist;

        }

        var result = transformEmployeeData(array);

        console.log(result);

Question no.8

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().  
Note: The examples below represent different use cases for the same test. In practice, you should never have multiple tests with the same name.  
Success Case:  
Input:  
var expected = {foo: 5, bar: 6};  
var actual = {foo: 5, bar: 6}  
assertObjectsEqual(actual, expected, ‘detects that two objects are equal’);  
Output:  
Passed  
Failure Case:  
Input:var expected = {foo: 6, bar: 5};  
var actual = {foo: 5, bar: 6}  
assertObjectsEqual(actual, expected, ‘detects that two objects are equal’);  
Output:  
FAILED [my test] Expected {“foo”:6,”bar”:5}, but got {“foo”:5,”bar”:6}

Ans.

      function assertObjectsEqual(actual, expected, testName){

      let actustring = JSON.stringify(actual)

      let expectstring = JSON.stringify(expected)

      if(actustring == expectstring){

        return "Passed"

      } else{

        return "FAILED "+testName+" Expected "+expectstring+", but got "+actustring;

    }

      }

      let actual1 = {foo:5,bar:6};

      let expected1 = {foo:5,bar:6};

      let successCase = assertObjectsEqual(actual1,expected1,"my test1");

      console.log(successCase);

      let actual2 = {foo:5,bar:6};

      let expected2 = {foo:6,bar:5};

      let failedCase = assertObjectsEqual(actual2,expected2,"my test2");

      console.log(failedCase);

Question no.9

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) {  
  
 // your code here return true or 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); // flase

Ans.

         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 checksecurityquestions(secqes,qes,ans){

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

                   if(secqes[i].question==qes&&secqes[i].expectedAnswer==ans){

                       return true;

                   }

               }

               return false;

    }

    let qes1 = "What was your first pet's name?";

    let ans1 = "FlufferNutter";

    let status1 = checksecurityquestions(securityQuestions,qes1,ans1);

    console.log(status1);

    let qes2 = "What was your first pet's name?";

    let ans2 = "DufferNutter";

    let status2 = checksecurityquestions(securityQuestions,qes2,ans2);

    console.log(status2);

Question no.10

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));

Ans.

        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 }

        ];

         const minors = students.filter((x)=>x.age<20);

         console.log(minors);