**Level-01:**

**Question1:**

How will you access the third position of the following array?

let arr = [5, 10, 15]

Ans:

We can access the third position element by using **arr[2].**

**Question2:**

How will you access the second element, degree from the following object?

let obj = { name: "Maimoona", degree: "MBBS" }

**Ans:**

We can access the second element degree by using **obj.degree**.

**Question3:**

How will you access all elements of the following array using loops?

let arr = [1, 2, 3, 4, 5, 6, 7]

**Ans:**

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

**console.log(arr[i]);**

**}**

**Question4:**

How will you access all elements of the following object using loops?

let obj = { name: "Maimoona", degree: "MBBS", age: 25 }

**Ans:**

**for(objs in obj){**

**console.log(objs + ': ' + obj[objs]);**

**}**

**Level-2:**

**Question1:**

Students' Names and Hobbies Data

Given an array of students:

let students = [

{

name: "Amna",

hobbies: ["eating", "cooking"]

},

{

name: "Daniyal",

hobbies: ["arts", "shopping"]

},

{

name: "Fahad",

hobbies: ["coding", "cooking"]

},

{

name: "Hajra",

hobbies: ["sleep", "reading"]

}

];

Print the following to the console:

**Ans:**

for(let i=0;i<students.length;i++){

    console.log("hobbies of " +students[i].name);

    for(let j=0;j<students[i].hobbies.length;j++){

    console.log(j+1 +". " + students[i].hobbies[j]);

    }

    }

**Question2:**

Given this array of Students

let students = [

{

name: "Amna",

gender: "f",

dob: new Date("02-04-1990"),

address: {

ilaqa: "Gulistan-e-Johar",

city: "Karachi",

country: "Pakistan",

postalCode: 47114

},

phoneNo: "0331-2324243",

admissionTestScore: 56,

hasInternet: true,

hasComputer: false,

hasJob: true,

hasSchoolBefore: false

},

{

name: "Hadia",

gender: "f",

dob: new Date("05-15-1984"),

address: {

ilaqa: "Lyari",

city: "Karachi",

country: "Pakistan",

postalCode: 75660

},

phoneNo: "0345-3452953",

admissionTestScore: 48,

hasInternet: false,

hasComputer: false,

hasJob: false,

hasSchoolBefore: true

},

{

name: "Ahmed",

gender: "m",

dob: new Date("06-27-2002"),

address: {

ilaqa: "University Road",

city: "Quetta",

country: "Pakistan",

postalCode: 82215

},

phoneNo: "0333-0124325",

admissionTestScore: 33,

hasInternet: true,

hasComputer: false,

hasJob: false,

hasSchoolBefore: false

},

{

name: "Fariha",

gender: "f",

dob: new Date("09-13-1998"),

address: {

ilaqa: "University Road",

city: "Karachi",

country: "Pakistan",

postalCode: 82215

},

phoneNo: "0331-9432532",

admissionTestScore: 33,

hasInternet: true,

hasComputer: false,

hasJob: false,

hasSchoolBefore: false

},

{

name: "Abdullah",

gender: "m",

dob: new Date("01-24-1972"),

address: {

ilaqa: "Bazar Colony",

city: "Lahore",

country: "Pakistan",

postalCode: 32212

},

phoneNo: "0345-9912121",

admissionTestScore: 33,

hasInternet: false,

hasComputer: false,

hasJob: true,

hasSchoolBefore: true

}

];

1. Print each student in this format:

for(let i=0;i<students.length;i++){

    console.log("name: "+ students[i].name);

    console.log("Gender: "+ students[i].gender);

    console.log("City: "+ students[i].address.city);

    console.log("Score " + students[i].admissionTestScore);

    }

1. Print names of female students only.

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

if (students[i].gender === "f") {

    console.log("Name: " + students[i].name);

}};

1. Print name of male students only.

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

if (students[i].gender === "m") {

    console.log("Name: " + students[i].name);

}};

1. Print names of students who have passed the admission test. Passing marks are 50.

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

if (students[i]. admissionTestScore >= 50) {

    console.log("Name: " + students[i].name);

}};

1. Print names of eligible students only (students who have internet and live in Karachi are eligible)

for(let i=0;i<students.length; i++){

   if (students[i].hasInternet==true && students[i].address.city=="Karachi"){

     console.log("Name: " + students[i].name);

   }};

1. Print address of each student in this format:

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

    console.log(students[i].name  + "'s address");

   console.log(students[i].address.ilaqa + " in " + students[i].address.city + ", "

    + students[i].address.country);

 }

1. Print names and phone number of students who have Ufone.

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

    if (students[i].phoneNo.includes("0331") || students[i].phoneNo.includes("0332") ||

     students[i].phoneNo.includes("0333") || students[i].phoneNo.includes("0334") ||

      students[i].phoneNo.includes("0335")) {

       console.log("Name: " + students[i].name + ", " + "Phone Number: " + students[i].phoneNo);

}};

1. Students who have a job or a class are placed in Group B. Print the names of students in Group A, and in Group B, in the below format:

let groupOfA =[];

let groupOfB=[] ;

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

    if (students[i].hasJob === true && students[i].hasSchoolBefore ===true) {

        groupOfB.push(students[i].name)

    } else {

        groupOfA.push(students[i].name)

    }

};

console.log("Group A: " + groupOfA.join(", "));

console.log("Group B: " + groupOfB.join(", "));

1. Print age of each student in the below format.

**Video task:**



let videos = [

                {

                title: "Photoshop tutorial",

                lengthInMinutes: 70,

                category: "Education",

                uploadDate: new Date("07-22-2019"),

                tags: "design, digital, photoshop, creativity",

                features: ["Live", "360°", "HDR"],

                viewCount: 4700,

                rating: 4.3

                },

                {

                title: "Episode # 01 - The Best Comedy Show",

                lengthInMinutes: 19,

                category: "Entertainment",

                uploadDate: new Date("07-03-2019"),

                tags: "comedy, funny",

                features: ["Subtitles/CC", "3D", "HD"],

                viewCount: 145615,

                rating: 3.9

                },

                {

                title: "How to use FOR EACH loop - tutorial by Tech Karo",

                lengthInMinutes: 6,

                category: "Education",

                uploadDate: new Date("11-10-2018"),

                tags: "javascript, loops, web development",

                features: ["Purchased", "HD"],

                viewCount: 9004,

                rating: 4.5

                },

                {

                title: "How to use FOR loop - tutorial by Tech Karo",

                lengthInMinutes: 6,

                category: "Education",

                uploadDate: new Date("11-10-2019"),

                tags: "javascript, loops, web development",

                features: ["Purchased","3D", "HD"],

                viewCount: 904504,

                rating: 2.5

                },

               {

                title: "How to use while loop - tutorial by Tech Karo",

                lengthInMinutes: 2,

                category: "Education",

                uploadDate: new Date("11-12-2019"),

                tags: "javascript, loops, web development",

                features: ["Purchased","3D", "HD"],

                viewCount: 9000504,

                rating: 3.5

                },

                {

                title:" effect in javascript ",

                lengthInMinutes: 5,

                category: "Education",

                uploadDate: new Date("11-12-2019"),

                tags: " web development",

                features: ["Purchased","3D", "HD"],

                viewCount: 9077504,

                rating: 3.3

                },

                {

                title:"VS Code tutorial",

                lengthInMinutes: 7,

                category: "Education",

                uploadDate: new Date("11-12-2019"),

                tags: " web development",

                features: ["Purchased","3D", "HD"],

                viewCount: 9077804,

                rating: 3.9

                },

                {

                title:"comedy",

                lengthInMinutes: 167,

                category: "entertainment",

                uploadDate: new Date("11-12-2019"),

                tags: " film",

                features: ["Purchased","3D"],

                viewCount: 9077884,

                rating: 4.9

                },

                {

                title:"khatro ky khalari",

                lengthInMinutes: 60,

                category: "entertainment",

                uploadDate: new Date("11-12-2019"),

                tags: " show",

                features: ["Purchased","3D"],

                viewCount: 9027884,

                rating: 3.9

                },

                {

                title:"tera gum or hum",

                lengthInMinutes: 60,

                category: "entertainment",

                uploadDate: new Date("11-12-2019"),

                tags: " drama",

                features: ["Purchased","3D"],

                viewCount: 9079884,

                rating: 4.0

                },

                {

                title:"tum he ho",

                lengthInMinutes: 11,

                category: "entertainment",

                uploadDate: new Date("11-12-2019"),

                tags: " song",

                features: ["Purchased","3D"],

                viewCount: 9079184,

                rating: 4.0

                },

                {

                title:"tammna",

                lengthInMinutes: 11,

                category: "entertainment",

                uploadDate: new Date("11-12-2019"),

                tags: " drama",

                features: ["Purchased","3D"],

                viewCount: 9072184,

                rating: 4.0

                },

                {

                title:"raaz",

                lengthInMinutes: 11,

                category: "entertainment",

                uploadDate: new Date("11-12-2015"),

                tags: "movie",

                features: ["Purchased","3D","4D"],

                viewCount: 9072884,

                rating: 4.6

                },

            ];

1. Print each video in this format:

**Level3:**

**Question1:**

* Create an object to hold information on your favorite recipe. It should have properties for title (a string), servings (a number), and ingredients (an array of strings).
* On separate lines (one console.log statement for each), log the recipe information so it looks like:
  + Mole
  + Serves: 2
  + Ingredients:
  + cinnamon
  + cumin
  + cocoa

**Ans:**

let recipe = {

title: 'Mole',

servings: 2,

ingredients: ['cumin', 'cinnamon', 'cocoa']

};

console.log(recipe.title);

console.log('Servings: ' + recipe.servings);

console.log('Ingredients:');

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

console.log(recipe.ingredients[i]);

}

**Question2:**

Keep track of which books you read and which books you want to read!

* Create an array of objects, where each object describes a book and has properties for the title (a string), author (a string), and alreadyRead (a boolean indicating if you read it yet).
* Iterate through the array of books. For each book, log the book title and book author like so: "The Hobbit by J.R.R. Tolkien".
* Now use an if/else statement to change the output depending on whether you read it yet or not. If you read it, log a string like 'You already read "The Hobbit" by J.R.R. Tolkien', and if not, log a string like 'You still need to read "The Lord of the Rings" by J.R.R. Tolkien.'

**Ans:**

let books = [

{

title: 'The Design of EveryDay Things',

author: 'Don Norman',

alreadyRead: false

},

{

title: 'The Forty Rules of Loves',

author: 'Alaph',

alreadyRead: true

}];

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

let bookLet = books[i];

let bookInfo = book.title + '" by ' + bookLet.author;

if (bookLet.alreadyRead) {

console.log('You already read "' + bookInfo);

} else {

console.log('You still need to read "' + bookInfo);

}

}