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//second largest element in a array
let numbers = [7, 8, 9, 6, 4, 2, 3, 1];
numbers.sort((a, b) => a - b);

let secondLargest = numbers[numbers.length - 2];

console.log(secondLargest);

//remove duplicates from an array
let arr=[1,2,1,3,1,2,3]
unique_element=[]
for(number of arr){
    if(!unique_element.includes(number)){
        unique_element.push(number)
    }
}
console.log(unique_element)

//Count Occurrences of Each Element
let array = ['apple', 'banana', 'apple', 'orange',
'banana', 'apple'];
let count_ele = {};

for (let arr of array) {
    if (count_ele[arr]) {
        count_ele[arr] += 1;
    } else {
        count_ele[arr] = 1;
    }
}

console.log(count_ele);
```

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// Merge Two Sorted Arrays
let arr1 = [1, 3, 5, 7];
let arr2 = [2, 4, 6, 8];

let mergedArray = arr1.concat(arr2);

mergedArray.sort((a, b) => a - b);

console.log(mergedArray);

//Find the Intersection of Two Arrays
let arr3 = [1, 2, 3, 4];
let arr4 = [2, 4, 6, 8];

let intersection = arr3.filter(value =>
arr4.includes(value));

console.log(intersection);

//Remove the second and third elements from an array.
let arr5=[1,2,3,4,5,6]
arr5.splice(1,2)
console.log(arr5)

//Find the average of the array
let arr6 = [1, 4, 6, 7, 8, 9, 2];
let sum = 0;

for (i = 0; i < arr6.length; i++) {
    sum += arr6[i];
}
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let res = sum / arr6.length;
console.log(`The average of the array is
${res.toFixed(2)}`);

//Calculate the sum of all elements in a 2D array.

let arr7 = [[1, 2, 3], [4, 5, 6], [7, 8, 9]];
let sum = 0;

for (let i = 0; i < arr7.length; i++) {
    for (let j = 0; j < arr7[i].length; j++) {
        sum += arr7[i][j];
    }
}

console.log(`The sum of all elements in the 2D array is
${sum}.`);

// Find the missing number in an array containing numbers
from 1 to n.
let arr8=[1,2,3,4,5,8,7]
let n=arr8.length+1
let total_sum =(n*(n+1)/2)
let sum=0
for (i=0;i<arr8.length;i++){
    sum+=arr8[i]
}
res=total_sum-sum
console.log(res)

// Find the First Non-Repeating Character in a String
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let str = "swiss";
let charCount = {};
for (i = 0; i < str.length; i++) {
    if (charCount[str[i]]) {
        charCount[str[i]] += 1;
    } else {
        charCount[str[i]] = 1;
    }
}

let fnr=null
for (i=0;i<str.length;i++){
    if (charCount[str[i]]==1){
        fnr=str[i];
        break;
    }
}

if(fnr){
    console.log(`first non-repeating character in a
string is ${fnr}`)
}
else{
    console.log("there is no non-repeating character in a
string")
}
```