

JavaScript Programming

1. How to sort a number Array in ascending order?

```
<script type="text/javascript">
  const unsortedArr=[10,4,29,34,63,3,87,72];
  const sortedArr=unsortedArr.sort((a,b)=>{
    return a-b;
  })
  document.write(unsortedArr);
</script>
```

Output

← → ↻ ⓘ File | D:/programming.html

3,4,10,29,34,63,72,87

2. How to sort a number Array in descending order?

```
<script type="text/javascript">
  const unsortedArr=[10,4,29,34,63,3,87,72];
  const sortedArr=unsortedArr.sort((a,b)=>{
    return b-a;
  })
  document.write(unsortedArr);
</script>
```

Output

```
← → ↻ ⓘ File | D:/programming.html  
87,72,63,34,29,10,4,3
```

3.How to sort a given array of strings?

```
<script type="text/javascript">  
  const months=['jan','fed','march','april','may','june','july'];  
  const result=months.sort();  
  document.write(result);  
</script>
```

Output

```
← → ↻ ⓘ File | D:/programming.html  
april,fed,jan,july,june,march,may
```

4.How to find unique values in an array?

To find unique values in an array we are going to use the array filter method and check if the value is present using index of method.

```
<script type="text/javascript">  
  const Ids=[10,4,5,65,34,23,85,10,34,4,5];  
  const uniqueValues=Ids.filter((ele,index,arr)=>arr.indexOf(ele)==index);  
  document.write(uniqueValues);  
</script>
```

Output

```
← → ↻ ⓘ File | D:/programming.html  
10,4,5,65,34,23,85
```

5.How to find unique values from an array in sorted order?

We will be using the array filter method first and check if element is present using the index of and then we will use the sort method to sort the array elements

```
<script type="text/javascript">
  const Ids=[23,45,64,67,23,45,98,75,69];
  const uniqueValues=Ids.filter((ele,index,arr)=>arr.indexOf(ele)===index);
  const sortedUniqueValues=uniqueValues.sort((a,b)=>{
    return a-b;
  });
  document.write(sortedUniqueValues);
</script>
```

Output

← → ↻ ⓘ File | D:/programming.html

23,45,64,67,69,75,98

6.How to find maximum value in a numbered array?

To find maximum value in a numbered array. We are implementing a method which will find max value.

Inside the method, we are making use of array reduce method and for each element, we will check if the value is greater than the previous.

```
<script type="text/javascript">
  const numberArr=[5,45,154,163,87,72,98,12,10];
  function findMaxvalue(arr) {
    return arr.reduce(function(prev,curr){
      return prev>curr ? prev:curr;
    })
  }
  document.write(findMaxvalue(numberArr));
</script>
```

Output

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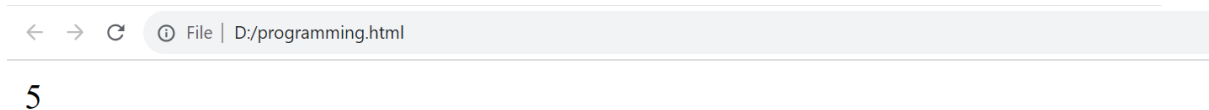
7.How to find minimum value in a numbered array?

To find minimum value in a numbered array. We are implementing a method which will find minimum value.

Inside the method, we are making use of the array reduce method and for each element , we will check if the value is less than the previous one.

```
<script type="text/javascript">
  const numberArr=[5,45,154,163,87,72,98,12,10];
  function findMaxvalue(arr) {
    return arr.reduce(function(prev,curr){
      return prev<curr ? prev:curr;
    })
  }
  document.write(findMaxvalue(numberArr));
</script>
```

Output



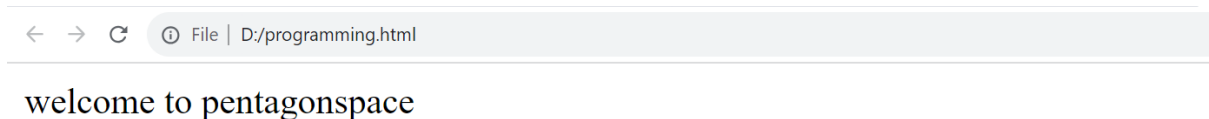
5

8.How to make a sentence out of a given array?

We need to use Array join method to combine elements from a given array.

```
<script type="text/javascript">
  const elementTojoin=["welcome","to","pentagonspace"];
  var findOutput=elementTojoin.join(' ');
  document.write(findOutput);
</script>
```

Output



welcome to pentagonspace

9.Given an array of strings reverse each word in the sentence?

We will make use of the string reverse, split and join method to reverse each word in the sentence.

```
<script type="text/javascript">
  var input="I Love JavaScript"
  function reverseString(data) {
    const result=data.split("").reverse().join('');
    return result;
  }
  document.write(reverseString(input));
</script>
```

Output

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10.How can you combine two arrays into a third array using spread operator?

To combine two or more arrays, we will use the spread operator.

```
<script type="text/javascript">
const firstArr=[1,2,3,4,5];
const secondArr=[10,20,30,40,50];

const thirdArr=[...firstArr,...secondArr];
document.write(thirdArr);
</script>
```

Output

← → ↻ ⓘ File | D:/programming.html

1,2,3,4,5,10,20,30,40,50

11. How do you sort and reverse an array without changing the original array?

We can use slice () to make copy then reverse () it.

```
<script type="text/javascript">
  let alphabets=['a','b','c','d','e','f'];
  const newAlphabets=alphabets.slice().reverse();
  document.write("new array ",newAlphabets);
  document.write(" original array ",alphabets);
</script>
```

Output

← → ↻ ⓘ File | D:/programming.html

new array f,e,d,c,b,a original array a,b,c,d,e,f

12. How to find duplicate elements in a given array?

To find duplicate in an array, we can make use of the array filter method.

Filter method takes 3 parameters, element, index and array on which filter is applied.

Then we check for the index of each element and return which ever does not match with the index.

```
<script type="text/javascript">
const duplicateArray=[14,13,6,6,14,56,87,14];
const duplicates=duplicateArray.filter((ele,index,arr)=>arr.indexOf(ele)!==index
);
document.write(duplicates);
</script>
```

Output

← → ↻ ⓘ File | D:/programming.html

6,14,14

13. Given two strings how can you check if the strings are anagram for each other?

Anagram is a word, phrase, or name formed by rearranging letters of another, such as cinema from iceman.

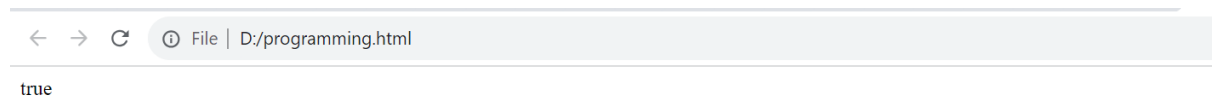
To check if the given strings are anagram or not, we will implement a custom method and write the logic as given below.

1. First we will make them lowercase
2. Then we will sort the strings
3. And finally we will join them back
4. The only thing then pending will be to compare the string

```
<script type="text/javascript">
  const string1="mary";
  const string2="army";
  function checkAnagram(str1,str2) {
    var a=str1.toLowerCase();
    var b=str2.toLowerCase();

    a=a.split("").sort().join('');
    b=b.split("").sort().join('');
    return a==b;
  }
  document.write(checkAnagram(string1,string2));
</script>
```

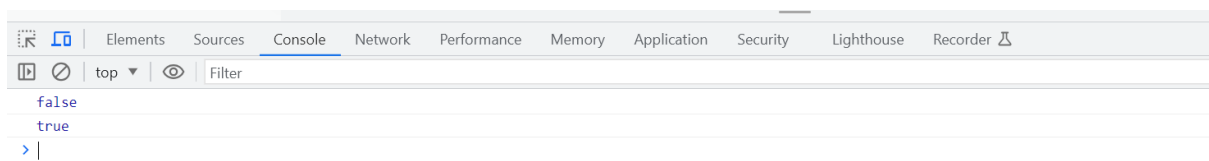
Output



14. Write a program to find palindrome number or not?

```
<script type="text/javascript">
function isPlaindromeNumber(num) {
    // convert the number to a string
    var str=num.toString();
    var result=str.split("").reverse().join('');
    return str== result;
}
console.log(isPlaindromeNumber(12345));
console.log(isPlaindromeNumber(121));
</script>
```

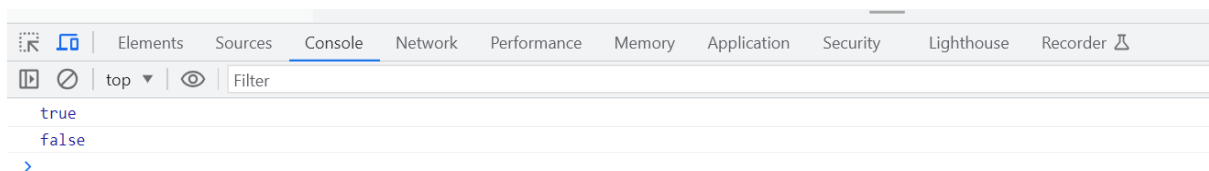
Output



15. Write a program to check given string is palindrome or not?

```
<script type="text/javascript">
function isPalindrome(str){
    // remove non-alphanumeric characters and convert to lower case
    var cleanStr=str.replace(/^[a-zA-Z0-9]/g, '').toLowerCase();
    var result=cleanStr.split('').reverse().join('');
    return result==cleanStr;
}
console.log(isPalindrome("mam"));
console.log(isPalindrome("hello"));
</script>
```

Output



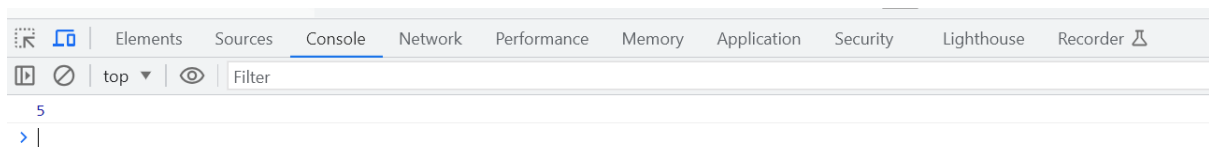
16. Write a program to find the second largest number in an array?


```

<script type="text/javascript">
var arr=[5,2,8,1,3];
function findSecondLargest(numbers){
    numbers.sort((a,b)=>{
        return b-a;
    })
    return numbers[1]
}
console.log(findSecondLargest(arr));
</script>

```

Output



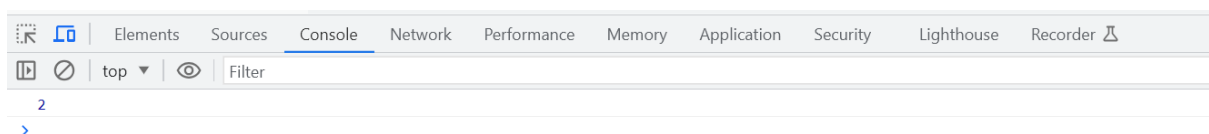
17. Write a program to find the second smallest number in an array?

```

<script type="text/javascript">
var arr=[5,2,8,1,3];
function findSecondLargest(numbers){
    numbers.sort((a,b)=>{
        return a-b;
    })
    return numbers[1]
}
console.log(findSecondLargest(arr));
</script>

```

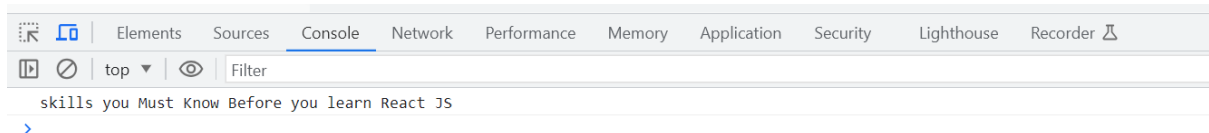
Output



18. Replace all occurrence of string using built in method?

```
<script type="text/javascript">
const input="skills I Must Know Before I learn React JS";
const result=input.split('I').join('you');
console.log(result);
</script>
```

Output



19. How to split a sentence into array?

We will use string split method to split a string into a Array.

```
<script type="text/javascript">
let str="I Love JavaScript";
const strArr=str.split(' ');
console.log(strArr);
</script>
```

Output

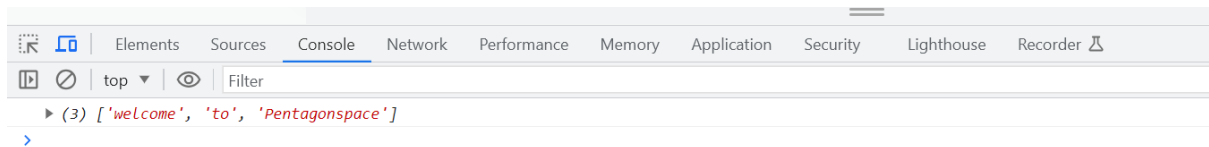


20. How to create an array out of a sentence?

We will use string split method to create an array out of a sentence.

```
<script type="text/javascript">
const sentence="welcome to Pentagonspace";
var result=sentence.split(" ");
console.log(result);
</script>
```

Output

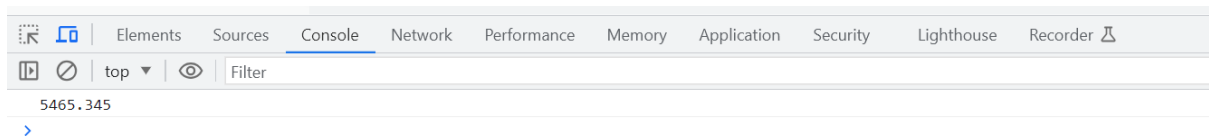


21.Convert a given number into exact decimal points to right side?

We will use toFixedmethod to convert a given number into exact decimal points

```
<script type="text/javascript">
const num=5465.3453455433
const result=num.toFixed(3);
console.log(result);
</script>
```

Output



22.How can you combine two objects?

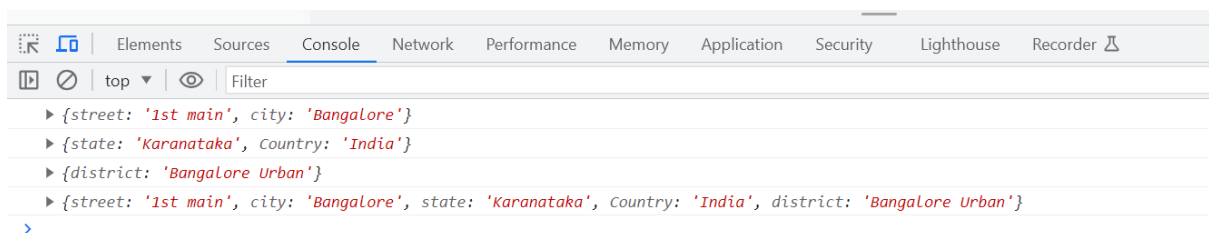
To combine two objects, we will make use of spread operator.

```

<script type="text/javascript">
const address={
  street:"1st main", city:'Bangalore'
}
console.log(address);
const extendedAddress={
  state:"Karanataka", Country:"India"
}
console.log(extendedAddress);
const optionalAddress={
  district:"Bangalore Urban"
}
console.log(optionalAddress);
const combinedAddress={
  ...address,...extendedAddress,...optionalAddress
}
console.log(combinedAddress);
</script>

```

Output



23.How can you uppercase the first character in a string array?

To capitalize the first character of every element in the array we will have to get the first character using `charAt` method.

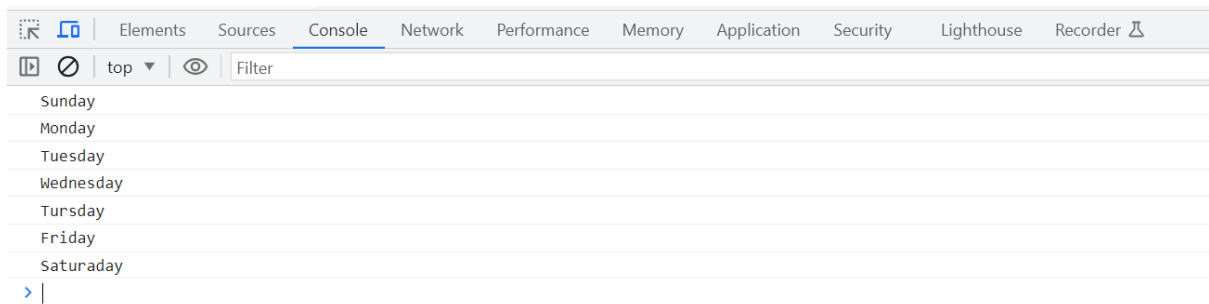
And then apply to `UpperCase` and finally we will concatenate all the other characters using `substr(1)`.

```

<script type="text/javascript">
const days=["sunday","monday","tuesday","wednesday","tuesday","friday","saturday"]
;
for(let day of days){
  day=day.charAt(0).toUpperCase()+day.substr(1);
  console.log(day);
}
</script>

```

Output

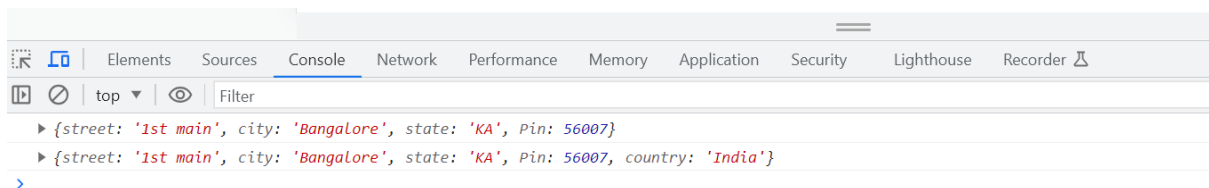


24. How can you add an element to an object?

To add an element to an existing object we will use the spread operator.

```
<script type="text/javascript">
const originalObj={
  street:"1st main",
  city:"Bangalore",
  state:"KA",
  Pin:56007
}
console.log(originalObj);
const modifiedObj={...originalObj, country:"India"}
console.log(modifiedObj);
</script>
```

Output



25. How can you combine two objects?

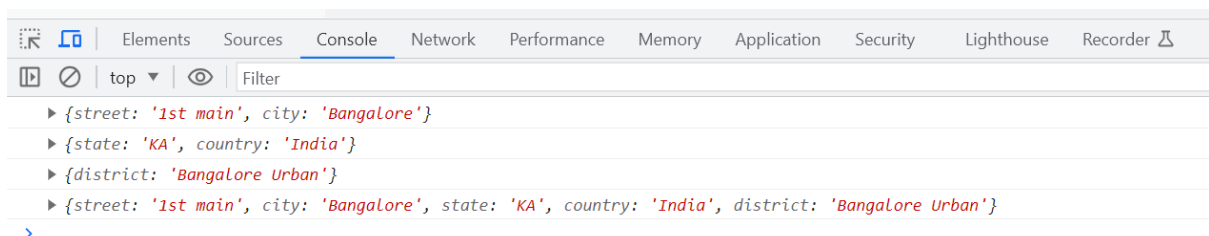
To combine two objects, we will make use of spread operator.

```

<script type="text/javascript">
  const address={
    street:"1st main",
    city:"Bangalore"
  }
  console.log(address);
  const extendAddress={
    state:"KA",
    country:"India"
  }
  console.log(extendAddress);
  const optionalAddress={
    district:"Bangalore Urban"
  }
  console.log(optionalAddress);
  const combinedAddress={
    ...address,...extendAddress,...optionalAddress
  }
  console.log(combinedAddress);
</script>

```

Output



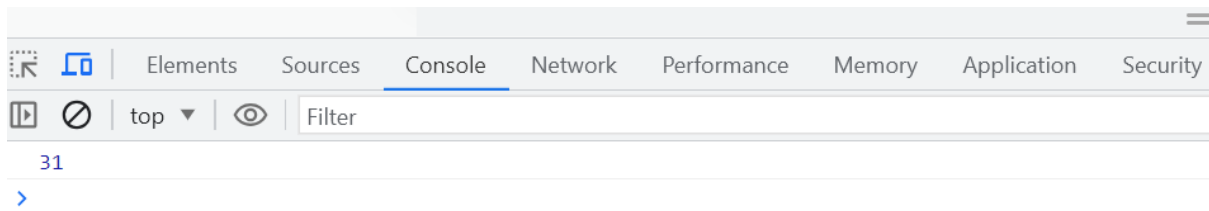
26. Write a program to generate random number?

```

<script type="text/javascript">
  function generateRandomnumber(min,max){
    return Math.floor(Math.random()*(max-min+1))+min;
  }
  let randomNumber=generateRandomnumber(1,100)
  console.log(randomNumber);
</script>

```

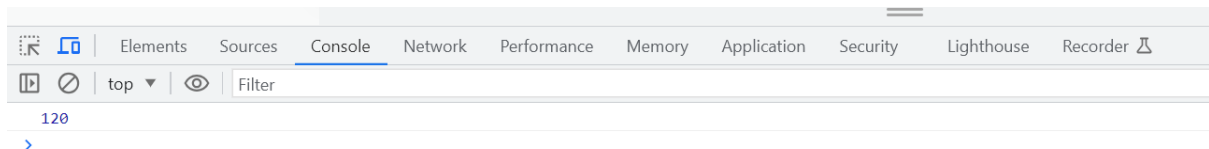
Output



27. Write a program to print factorial of a number?

```
<script type="text/javascript">
function factorial(n) {
    if(n==1 || n==0){
        return 1
    }
    else{
        res=n*factorial(n-1)
        return res
    }
}
let number=5;
let result=factorial(number);
console.log(result);
</script>
```

Output

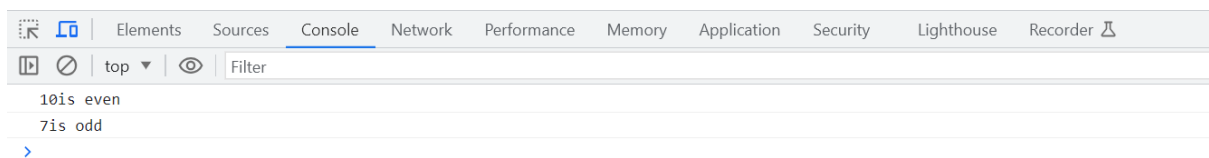


28. Write a program to find given number is odd or even?

```
</script>
<script type="text/javascript">
function checkEvenOddnumber(n) {
    if(n%2 == 0){
        console.log(n + "is even")
    }
    else{
        console.log(n + "is odd")
    }
}
let num1=10;
let num2=7;

checkEvenOddnumber(num1);
checkEvenOddnumber(num2);
</script>
```

Output



29. Write a program that takes a sentence as input and returns the longest word in it?


```

<script type="text/javascript">
function findLongestWord(sentence) {
  // Split the sentence into an array of words
  const words = sentence.split(' ');

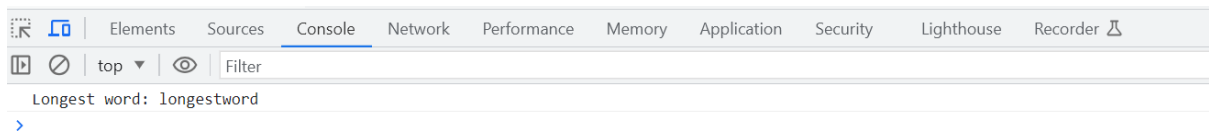
  // Initialize variables to keep track of the longest word and its length
  let longestWord = '';
  let longestLength = 0;

  // Iterate through the words in the array
  for (const word of words) {
    // Remove any non-alphanumeric characters from the word
    const cleanedWord = word.replace(/^[^A-Za-z0-9]/g, '');

    // Check if the cleaned word is longer than the current longest word
    if (cleanedWord.length > longestLength) {
      longestWord = cleanedWord;
      longestLength = cleanedWord.length;
    }
  }
  return longestWord;
}
const sentence = "This is an example sentence with a longestword.";
const longest = findLongestWord(sentence);
console.log("Longest word:", longest);
</script>

```

Output



30. Write a program an array containing n distinct numbers taken from 0, 1, 2, ..., n, find the one that is missing from the array.?

```

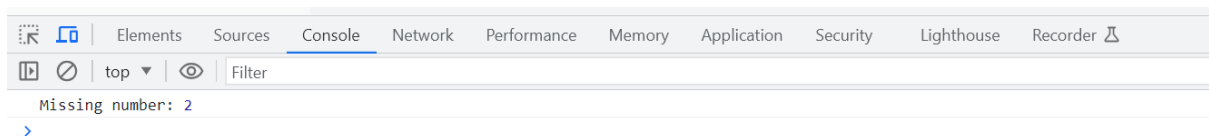
<script type="text/javascript">
function findMissingNumber(nums) {
  const n = nums.length;
  // Calculate the expected sum of numbers from 0 to n
  const expectedSum = (n * (n + 1)) / 2;

  // Calculate the actual sum of the numbers in the array
  const actualSum = nums.reduce((acc, num) => acc + num, 0);

  // The missing number is the difference between the expected and actual sums
  return expectedSum - actualSum;
}
const numbers = [0, 1, 3, 4]; // Missing number is 2
const missingNumber = findMissingNumber(numbers);
console.log("Missing number:", missingNumber);
</script>

```

Output



31. Write a program for closure is in JavaScript?

```

<script type="text/javascript">
function outerFunction() {
  // Outer function's scope
  const outerVar = "I'm from outerFunction";

  // Inner function
  function innerFunction() {
    // Inner function can access outerVar, creating a closure
    console.log(outerVar);
  }

  // Return the inner function
  return innerFunction;
}

// Create a closure by invoking outerFunction
const closure = outerFunction();

// Call the closure, and it still has access to outerVar
closure();
</script>

```

Output

Elements

Sources

Console

Network

Performance

Memory

Application

Security

Lighthouse

Recorder

top ▾

Filter

I'm from outerFunction

>