**Example: Check Prime Number**

// program to check if a number is prime or not

// take input from the user

const number = parseInt(prompt("Enter a positive number: "));

let isPrime = true;

// check if number is equal to 1

if (number === 1) {

console.log("1 is neither prime nor composite number.");

}

// check if number is greater than 1

else if (number > 1) {

// looping through 2 to number-1

for (let i = 2; i < number; i++) {

if (number % i == 0) {

isPrime = false;

break;

}

}

if (isPrime) {

console.log(`${number} is a prime number`);

} else {

console.log(`${number} is a not prime number`);

}

}

// check if number is less than 1

else {

console.log("The number is not a prime number.");

}

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

Enter a positive number: 23

23 is a prime number.

|  |
| --- |
| **function** isPrime(n) {          // Check if n=1 or n=0  **if** (n <= 1)  **return** **false**;          // Check if n=2 or n=3  **if** (n == 2 || n == 3)  **return** **true**;          // Check whether n is divisible by 2 or 3  **if** (n % 2 == 0 || n % 3 == 0)  **return** **false**;          // Check from 5 to square root of n          // Iterate i by (i+6)  **for** (**var** i = 5; i <= Math.sqrt(n); i = i + 6)  **if** (n % i == 0 || n % (i + 2) == 0)  **return** **false**;    **return** **true**;      }        // Driver Code      isPrime(11)          ? console.log("true")          : console.log("false"); |

**Output:**

true

**Example: Print Prime Numbers**

// program to print prime numbers between the two numbers

// take input from the user

const lowerNumber = parseInt(prompt('Enter lower number: '));

const higherNumber = parseInt(prompt('Enter higher number: '));

console.log(`The prime numbers between ${lowerNumber} and ${higherNumber} are:`);

// looping from lowerNumber to higherNumber

for (let i = lowerNumber; i <= higherNumber; i++) {

let flag = 0;

// looping through 2 to user input number

for (let j = 2; j < i; j++) {

if (i % j == 0) {

flag = 1;

break;

}

}

// if number greater than 1 and not divisible by other numbers

if (i > 1 && flag == 0) {

console.log(i);

}

}

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

Enter lower number: 2

Enter higher number : 10

The prime numbers between 2 and 10 are:

2

3

5

7

**Example: Find Factorial**

// program to find the factorial of a number

// take input from the user

const number = parseInt(prompt('Enter a positive integer: '));

// checking if number is negative

if (number < 0) {

console.log('Error! Factorial for negative number does not exist.');

}

// if number is 0

else if (number === 0) {

console.log(`The factorial of ${number} is 1.`);

}

// if number is positive

else {

let fact = 1;

for (i = 1; i <= number; i++) {

fact \*= i;

}

console.log(`The factorial of ${number} is ${fact}.`);

}

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

Enter a positive integer: 5

The factorial of 5 is 120.

**Example 1: Fibonacci Series Up to n Terms**

// program to generate fibonacci series up to n terms

// take input from the user

const number = parseInt(prompt('Enter the number of terms: '));

let n1 = 0, n2 = 1, nextTerm;

console.log('Fibonacci Series:');

for (let i = 1; i <= number; i++) {

console.log(n1);

nextTerm = n1 + n2;

n1 = n2;

n2 = nextTerm;

}

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

Enter the number of terms: 4

Fibonacci Series:

0

1

1

2

**Example 1: Check Armstrong Number of Three Digits**

// program to check an Armstrong number of three digits

let sum = 0;

const number = prompt('Enter a three-digit positive integer: ');

// create a temporary variable

let temp = number;

while (temp > 0) {

// finding the one's digit

let remainder = temp % 10;

sum += remainder \* remainder \* remainder;

// removing last digit from the number

temp = parseInt(temp / 10); // convert float into integer

}

// check the condition

if (sum == number) {

console.log(`${number} is an Armstrong number`);

}

else {

console.log(`${number} is not an Armstrong number.`);

}

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

Enter a three-digit positive integer: 153

153 is an Armstrong number.

**Example 2: Check Armstrong Number of n Digits**

// program to check an Armstrong number of n digits

// take an input

const number = prompt("Enter a positive integer");

const numberOfDigits = number.length;

let sum = 0;

// create a temporary variable

let temp = number;

while (temp > 0) {

let remainder = temp % 10;

sum += remainder \*\* numberOfDigits;

// removing last digit from the number

temp = parseInt(temp / 10); // convert float into integer

}

if (sum == number) {

console.log(`${number} is an Armstrong number`);

}

else {

console.log(`${number} is not an Armstrong number.`);

}

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

Enter a positive integer: 92727

92727 is an Armstrong number

**Example: Armstrong Numbers Between Two Intervals**

// program to find Armstrong number between intervals

// take an input

const lowNumber = parseInt(prompt('Enter a positive low integer value: '));

const highNumber = parseInt(prompt('Enter a positive high integer value: '));

console.log ('Armstrong Numbers:');

// looping through lowNumber to highNumber

for (let i = lowNumber; i <= highNumber; i++) {

// converting number to string

let numberOfDigits = i.toString().length;

let sum = 0;

// create a temporary variable

let temp = i;

/\* loop through a number to find if

a number is an Armstrong number \*/

while (temp > 0) {

let remainder = temp % 10;

sum += remainder \*\* numberOfDigits;

// removing last digit from the number

temp = parseInt(temp / 10); // convert float into integer

}

if (sum == i) {

console.log(i);

}

}

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

Enter a positive low integer value: 8

Enter a positive high integer value: 500

Armstrong Numbers:

8

9

153

370

371

407

**Example: Factors of Positive Number**

// program to find the factors of an integer

// take input

const num = prompt('Enter a positive number: ');

console.log(`The factors of ${num} is:`);

// looping through 1 to num

for(let i = 1; i <= num; i++) {

// check if number is a factor

if(num % i == 0) {

console.log(i);

}

}

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

Enter a positive number: 12

The factors of 12 is:

1

2

3

4

6

12

**Example 1: Check Palindrome Using for Loop**

// program to check if the string is palindrome or not

function checkPalindrome(string) {

// find the length of a string

const len = string.length;

// loop through half of the string

for (let i = 0; i < len / 2; i++) {

// check if first and last string are same

if (string[i] !== string[len - 1 - i]) {

return 'It is not a palindrome';

}

}

return 'It is a palindrome';

}

// take input

const string = prompt('Enter a string: ');

// call the function

const value = checkPalindrome(string);

console.log(value);

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

Enter a string: madam

It is a palindrome

**Example 2: Check Palindrome using built-in Functions**

// program to check if the string is palindrome or not

function checkPalindrome(string) {

// convert string to an array

const arrayValues = string.split('');

// reverse the array values

const reverseArrayValues = arrayValues.reverse();

// convert array to string

const reverseString = reverseArrayValues.join('');

if(string == reverseString) {

console.log('It is a palindrome');

}

else {

console.log('It is not a palindrome');

}

}

//take input

const string = prompt('Enter a string: ');

checkPalindrome(string);

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

Enter a string: hello

It is not a palindrome

**Example 2: Replace Character of a String Using RegEx**

// program to replace a character of a string

const string = 'Mr Red has a red house and a red car';

// regex expression

const regex = /red/g;

// replace the characters

const newText = string.replace(regex, 'blue');

// display the result

console.log(newText);

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

Mr Red has a blue house and a blue car

**Example 2: Reverse a String Using built-in Methods**

// program to reverse a string

function reverseString(str) {

// return a new array of strings

const arrayStrings = str.split("");

// reverse the new created array elements

const reverseArray = arrayStrings.reverse();

// join all elements of the array into a string

const joinArray = reverseArray.join("");

// return the reversed string

return joinArray;

}

// take input from the user

const string = prompt('Enter a string: ');

const result = reverseString(string);

console.log(result);

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

Enter a string: hello

olleh

**Example 1: Convert Object to String Using JSON.stringify()**

// program to convert an object to a string

const person = {

name: 'Jack',

age: 27

}

const result = JSON.stringify(person);

console.log(result);

console.log(typeof result);

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

{"name":"Jack","age":27}

string

**Example 2: Convert Object to String Using String()**

// program to convert an object to a string

const person = {

name: 'Jack',

age: 27

}

const result1 = String(person);

const result2 = String(person['name']);

console.log(result1);

console.log(result2);

console.log(typeof result1);

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

[object Object]

Jack

string

**Example 1: Using toUpperCase()**

// js program to perform string comparison

const string1 = 'JavaScript Program';

const string2 = 'javascript program';

// compare both strings

const result = string1.toUpperCase() === string2.toUpperCase();

if(result) {

console.log('The strings are similar.');

} else {

console.log('The strings are not similar.');

}

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

The strings are similar.

**Example 1: Check Leap Year Using if...else**

// program to check leap year

function checkLeapYear(year) {

//three conditions to find out the leap year

if ((0 == year % 4) && (0 != year % 100) || (0 == year % 400)) {

console.log(year + ' is a leap year');

} else {

console.log(year + ' is not a leap year');

}

}

// take input

const year = prompt('Enter a year:');

checkLeapYear(year);

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

Enter a year: 2000

2000 is a leap year

**Example 2: Check Leap Year Using newDate()**

// program to check leap year

function checkLeapYear(year) {

const leap = new Date(year, 1, 29).getDate() === 29;

if (leap) {

console.log(year + ' is a leap year');

} else {

console.log(year + ' is not a leap year');

}

}

// take input

const year = prompt('Enter a year:');

checkLeapYear(year);

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

Enter a year: 2000

2000 is a leap year

**Example 1: Add Element to Array Using unshift()**

// program to add element to an array

function addElement(arr) {

// adding new array element

arr.unshift(4);

console.log(arr);

}

const array = [1, 2, 3];

// calling the function

// passing array argument

addElement(array);

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

[4, 1, 2, 3]

In the above program, the new element is added to the array variable using the unshift() method.

The unshift() method adds a new element at the beginning of an array.

**Example 2: Add Element to Array Using splice()**

// program to add element to an array

function addElement(arr) {

// adding element to array

arr.splice(0, 0, 4);

console.log(arr);

}

const array = [1, 2, 3];

// calling the function

addElement(array);

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

[4, 1, 2, 3]

In the above program, the splice() method is used to add a new element to an array.

In the splice() method,

* The first argument is the index of an array where you want to add an element.
* The second argument is the number of elements that you want to remove from the index element.
* The third argument is the element that you want to add to the array.

**Example 3: Add Element to Array Using Spread Operator**

// program to add element to an array

function addElement(arr) {

// adding element to array

arr = [4, ...arr];

console.log(arr);

}

const array = [1, 2, 3];

// calling the function

addElement(arr);

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

[4, 1, 2, 3]

In the above program, the spread operator ... is used to add a new element to the beginning of an array.

arr = [4, ...arr]; takes first element as **4** and the rest elements are taken from array.

**Example 4: Add Element to Array Using concat()**

// program to add element to an array

function addElement(arr) {

// adding element to array

arr = [4].concat(arr);

console.log(arr);

}

const array = [1, 2, 3];

// calling the function

addElement(array);

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

[4, 1, 2, 3]

**Example 1: Using indexOf() and push()**

// program to remove duplicate value from an array

function getUnique(arr){

let uniqueArr = [];

// loop through array

for(let i of arr) {

if(uniqueArr.indexOf(i) === -1) {

uniqueArr.push(i);

}

}

console.log(uniqueArr);

}

const array = [1, 2, 3, 2, 3];

// calling the function

// passing array argument

getUnique(array);

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

[1, 2, 3]

In the above program, the duplicate elements are removed from array.

Here,

* The for...of loop is used to loop through all the elements of an arr array.
* The indexOf() method returns **-1** if the element is not in the array. Hence, during each iteration, if the element equals **-1**, the element is added to uniqueArr using push().

**Example 2: Using Set**

// program to remove duplicate value from an array

function getUnique(arr){

// removing duplicate

let uniqueArr = [...new Set(arr)];

console.log(uniqueArr);

}

const array = [1, 2, 3, 2, 3];

// calling the function

getUnique(array);

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

[1, 2, 3]

**Example 2: Using Spread Syntax and Set**

// program to merge and remove duplicate value from an array

function getUniqueAfterMerge(arr1, arr2){

// merge two arrays

let arr = [...arr1, ...arr2];

// removing duplicate

let uniqueArr = [...new Set(arr)];

console.log(uniqueArr);

}

const array1 = [1, 2, 3];

const array2 = [2, 3, 5]

// calling the function

getUniqueAfterMerge(array1, array2);

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

[1, 2, 3, 5]

**Example 1: Convert First letter to UpperCase**

// program to convert first letter of a string to uppercase

function capitalizeFirstLetter(str) {

// converting first letter to uppercase

const capitalized = str.charAt(0).toUpperCase() + str.slice(1);

return capitalized;

}

// take input

const string = prompt('Enter a string: ');

const result = capitalizeFirstLetter(string);

console.log(result);

[Run Code](https://www.programiz.com/javascript/online-compiler)

**Output**

Enter a string: javaScript

JavaScript