```
/*
1. write a JavaScript program to print difference between biggest and smallest number of an
array

let arr = [3, 8, 1, 9, 5];
let diff = Math.max(...arr) - Math.min(...arr);
console.log(diff);

*/

"-------------------------------------------------------------------------------------"

/*
2. Write a JavaScript program to find the average of elements in an array of numbers.

let arr = [10, 20, 30, 40, 50];
let avg = arr.reduce((a, b) => a + b, 0) / arr.length;
console.log("Average:", avg);

*/

"-----------------------------------------------------------------------"
/*
3. Write a JavaScript program to print sum of even numbers from given array

var sum=0;
for(let i=0;i<10;i++){
   if(i%2==0)
```

```
        sum=sum+i;
}
console.log(sum);

*/
"--------------------------------------------------------------------------------"
/*
5. Write a JavaScript program to create array of even numbers from give array

let arr = [1, 2, 3, 4, 5, 6];
let evens = arr.filter(n => n % 2 === 0);
console.log("Even numbers array:", evens);

*/
"--------------------------------------------------------------------------------"
/*
6. Write a JavaScript program to print running time

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <h1 id="myh1">HELLO</h1>
    <script>
```

```
        function display(){
            var d=new Date();
            document.getElementById("myh1").innerHTML=d.toLocaleTimeString();
        }
        setInterval(display,1000)
    </script>
</body>
</html>

*/
"--------------------------------------------------------------------------------"
/*

7. Write a JavaScript program to print student details who got highest marks, create objects using class

class Student {
  constructor(name, marks) {
    this.name = name;
    this.marks = marks;
  }
}
let students = [new Student("shravs", 85), new Student("priya", 92), new Student("pooji", 78)];
let top = students.reduce((a, b) => a.marks > b.marks ? a : b);
console.log(top);

*/
```

"--"

/*

8. Write a JavaScript program to add colors to all h1 tags when the button is clicked

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Document</title>

</head>

<body>

<button onclick="changeColor()">Click</button>

<h1>Heading 1</h1>

Lorem ipsum dolor, sit amet consectetur adipisicing elit. Saepe vitae modi quae officia nemo. Accusantium, iure ad. Ipsam, incidunt ea delectus, architecto dicta perferendis quam quasi consectetur nemo aut distinctio.

<h1>Heading 2</h1>

<script>

function changeColor() {

document.querySelectorAll("h1").forEach(h => h.style.color = "blue");

}

</script>

</body>

</html>

*/

"--"

/*

9. write a JavaScript program to check given number is palindrome number or not

```
let num = 121;
let rev = Number(num.toString().split('').reverse().join(''));
console.log(num === rev ? "Palindrome" : "Not Palindrome");
```

*/

"--"

/*

10. write a JavaScript program to check given string is palindrome or not

```
let str="cat";
let rev = str.split('').reverse().join('');
console.log(str === rev ? "Palindrome" : "Not Palindrome");
```

*/

"--"

/*

13. write a JavaScript program to print prime numbers between 1 to 100

```
for (let i = 2; i <= 100; i++) {
  let isPrime = true;
```

```
  for (let j = 2; j <= Math.sqrt(i); j++)
    if (i % j === 0) isPrime = false;
  if (isPrime) console.log(i);
}
*/

"--------------------------------------------------------------------------------"

/*
14. Write a JavaScript program to find the second largest element in an array.

var arr = [2, 4, 6, 8]
arr.sort((a, b) => b - a);
console.log("Second largest:", arr[1]);

*/
"--------------------------------------------------------------------------------"
/*
15. write a JavaScript program to check given number is strong number or not

var num = 145;
var dup = num;
var sum = 0;
while (num != 0) {
    var rem = num % 10;
    var fact = 1;
    for (var i = 1; i <= rem; i++) {
        fact = fact * i;
```

```
    }
    sum = sum + fact;
    num = parseInt(num / 10);
}
if (sum == dup) {
    console.log("Strong number");
} else {
    console.log("Not a strong number");
}
*/

"--------------------------------------------------------------------------------"

/*

16. write a JavaScript program to remove odd numbers from given array

let arr = [1,2,3,4,5,6];
let evenArr = arr.filter(n => n % 2 === 0);
console.log(evenArr);

*/

"--------------------------------------------------------------------------------"

/*
18. Write a JavaScript program to print GCD of given two numbers
```

```
function findGCD(a, b) {
    while (b !== 0) {
        let temp = b;
        b = a % b;
        a = temp;
    }
    return a;
}

let num1 = 56;
let num2 = 98;

let gcd = findGCD(num1, num2);
console.log(`The GCD of ${num1} and ${num2} is ${gcd}`);

*/

"-----------------------------------------------------------------------------------------------"

/*
19. write a JavaScript program to check given number is armstrong number or not

var num=153;
var count=0;
var dup=num;
while(num!=0){
    num=parseInt(num/10)
    count++;
```

```
}
num=dup;var rem,sum=0;
while(num!=0){
   rem=num%10;
   sum+=rem**count;
   num=parseInt(num/10);
}
if(sum==dup){
   console.log(`${dup} is armstrong`)
}
else{
   console.log(`${dup} is not a strong number`)
}

*/

"--------------------------------------------------------------------------------"
/*
20. write a JavaScript program to second smallest number from given array

var arr=[2, 4, 6, 8,1]
arr.sort((a, b) => a-b);
console.log("Second Smallest:", arr[1]);

*/

"--------------------------------------------------------------------------------"
/*
```

21. Write a JavaScript program to print N digits in fibonacci series

```
let n = 10, a = 0, b = 1;
console.log(a);
console.log(b);
for (let i = 2; i < n; i++) {
  let c = a + b;
  console.log(c);
  a = b;
  b = c;
}
*/

"--------------------------------------------------------------------------------"

/*
31. Given an array of objects representing students, use the map method to create a new array
of objects where each object has an additional property isAdult that is true if the student's age
is 18 or above, and false otherwise.
var students = [
 { name: 'John', age: 17 },
 { name: 'Jane', age: 19 },
 { name: 'Jack', age: 18 },
];

var adult = students.map
    ((i)=>{
        return{
```

```
        ...i,


         isAdult: i.age>18?"true":"false"
        };
    });
console.log(adult);


*/


"--------------------------------------------------------------------------------"


/*
32. Given an array of objects representing books, use the findIndex method to find the index of
the book with a specific title given by the user.


const books = [
  { title: 'Book A', author: 'Author 1' },
  { title: 'Book B', author: 'Author 2' },
  { title: 'Book C', author: 'Author 3' },
];


function findBookIndex(title) {
  return books.findIndex(book => book.title === title);
}


const userTitle = 'Book B';
const index = findBookIndex(userTitle);
```

```
if (index !== -1) {
  console.log(`Book "${userTitle}" found at index: ${index}`);
} else {
  console.log(`Book "${userTitle}" not found`);
}

*/
"--------------------------------------------------------------------------------"

/*
33.  Given an array of employee objects, each with name and salary properties, print the names
of employees in ascending order who earn more than a specified amount given by the user.

const employees = [
 { name: 'Alice', salary: 50000 },
 { name: 'Bob', salary: 60000 },
 { name: 'Charlie', salary: 40000 },
];

var Names = employees.filter((i)=>i.salary>=40000)
                .sort((a,b)=>a.salary-b.salary)
                 .map((e)=>e.name)
                 console.log(Names)

*/
```

"--"

/*

34. Given an array of movie objects, each with properties movieName, movieHero, movieGenre,

and releaseDate, write a function to sort the array in ascending order of the releaseDate

movies = [

{ movieName: 'Movie A', movieHero: 'Hero A', movieGenre: 'Action', releaseDate: '2020-01-15' },

{ movieName: 'Movie B', movieHero: 'Hero B', movieGenre: 'Drama', releaseDate: '2019-06-10' },

{ movieName: 'Movie C', movieHero: 'Hero C', movieGenre: 'Comedy', releaseDate: '2021-12-25' },

{ movieName: 'Movie D', movieHero: 'Hero D', movieGenre: 'Horror', releaseDate: '2018-04-05'},];

var movies = [

{ movieName: 'Movie A', movieHero: 'Hero A', movieGenre: 'Action', releaseDate: '2020-01-15' },

{ movieName: 'Movie B', movieHero: 'Hero B', movieGenre: 'Drama', releaseDate: '2019-06-10' },

{ movieName: 'Movie C', movieHero: 'Hero C', movieGenre: 'Comedy', releaseDate: '2021-12-25' },

{ movieName: 'Movie D', movieHero: 'Hero D', movieGenre: 'Horror', releaseDate: '2018-04-05' }

];

let releaseDates = movies

```
  .map(movie => movie.releaseDate)
  .sort((a, b) => new Date(a) - new Date(b));

console.log(releaseDates);

*/

"--------------------------------------------------------------------------------"

/*

35. Write a function that takes an object and a list of keys, and returns a new object that only
contains the properties from the list of keys.

const obj = { a: 1, b: 2, c: 3, d: 4 };
const keys = ['b', 'c'];

var Result={}
for(let key of keys){
    if(key in obj){
        Result[key]=obj[key];
    }
}
console.log(Result)

*/
```

"--END---"