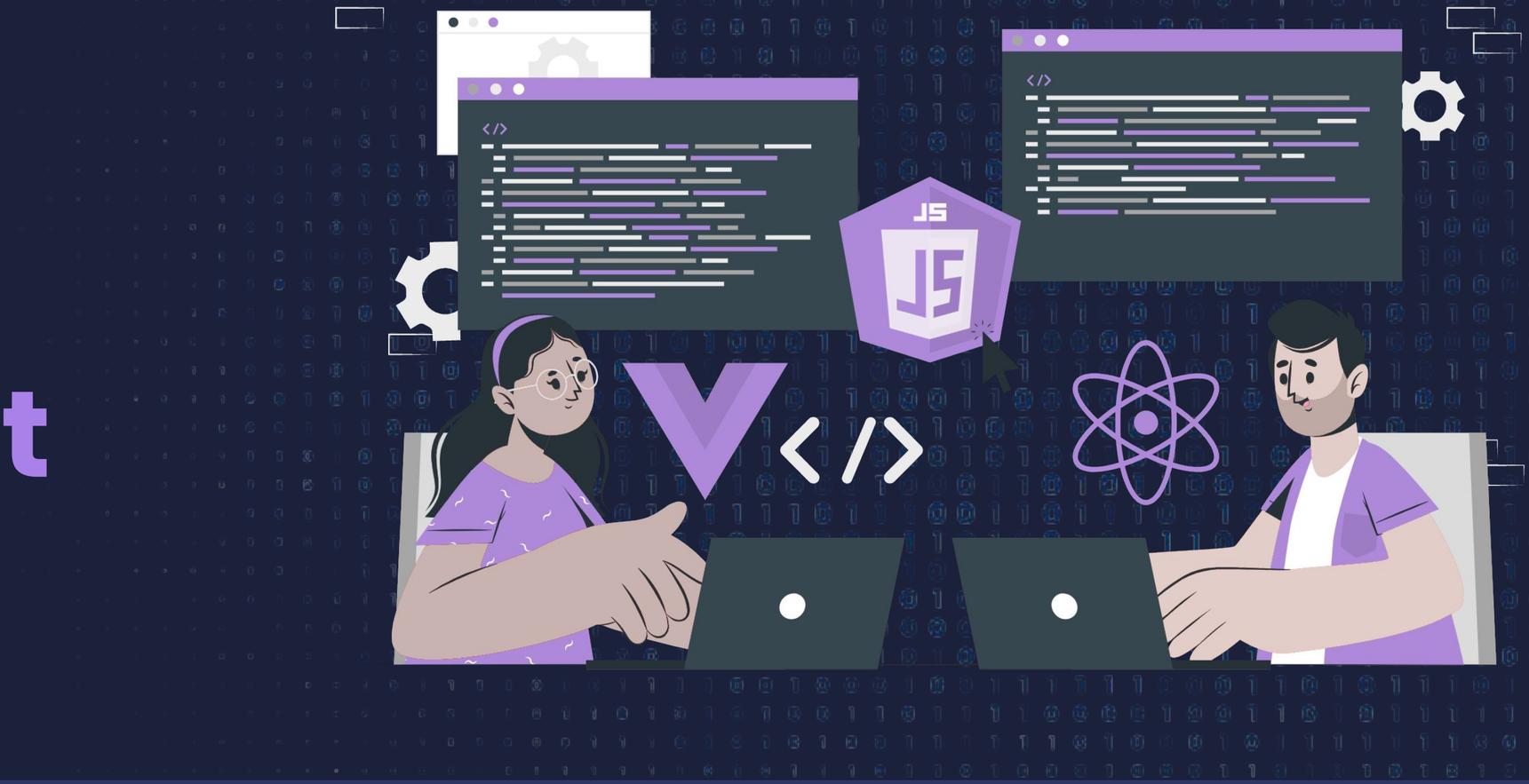
PW SKILLS

every, find, sort



Lecture CheckList

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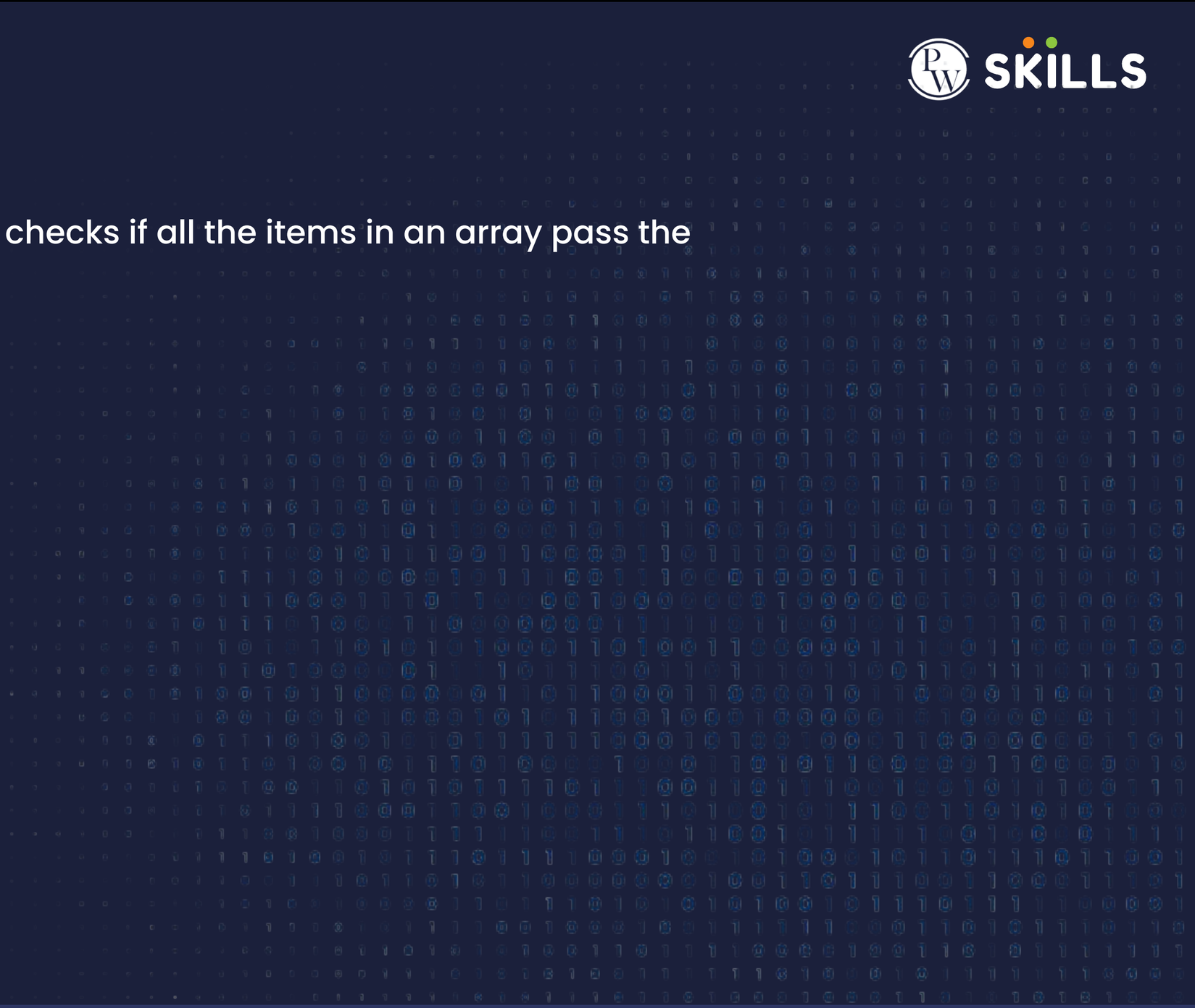
Introduction.

The every method in javascript checks if all the items in an array pass the specified condition or not.



Features of reduce.

1. The condition specified in every method is checked for all the items in the array.
2. If all the array items satisfies the condition, every method returns true.
3. If an of the array items doesn’t satisfy the condition, every method returns false.
4. The every method is not valid for an empty array.
5. The every method doesn’t change the original array.

Syntax.

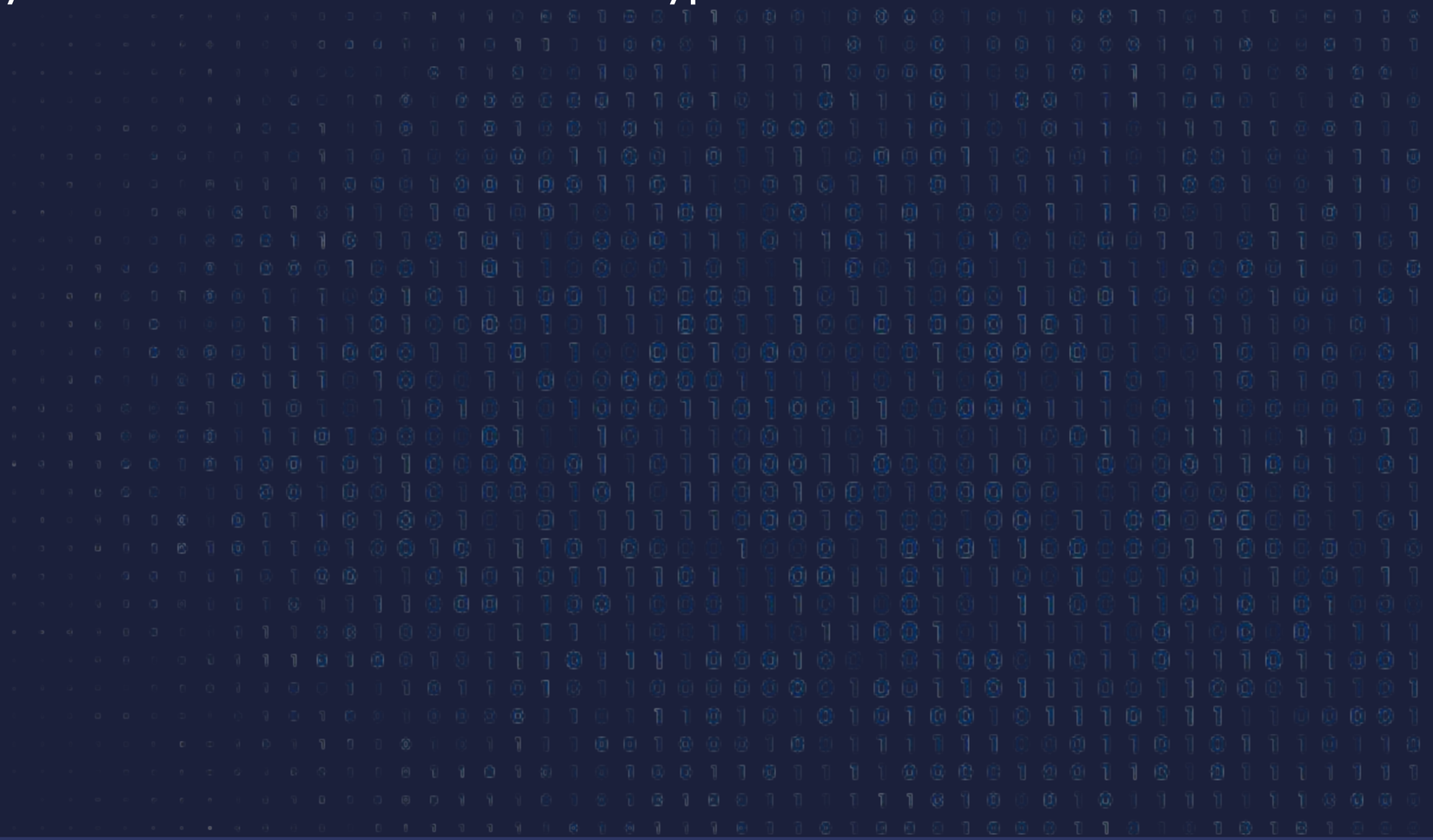
```
// Syntax

array.every(function(currentValue, currentIndex, array))
```

The parameters passed:

1. **currentValue:** It is a required parameter and is used to specify the value of the current element.
2. **currentIndex:** It is an optional parameter and is used to specify the array index of the current element.
3. **array:** It is an optional parameter and is used to specify the array the current element belongs to.

Implementation.

Let’s look at the implementation of the every method. The simplest example would be to check if all the array elements are of the same data type.



Implementation.

```
// Check if all the array elements are strings

// Given Array

let arr1 = ["PW Skills", "HTML", "CSS", "JavaScript"];

// Apply every method

let result = arr1.every((curr) => typeof curr == "string");

// Print the result to console

console.log(result);
```

Implementation.

```
// Check if all the array elements are strings

// Given Array

let arr1 = ["PW Skills", "HTML", "CSS", "JavaScript", 200];

// Apply every method

let result = arr1.every((curr) => typeof curr == "string");

// Print the result to console

console.log(result); // OUTPUT: false
```

Introduction.

The find() function in JavaScript is a method used to find the first element in an array that satisfies the condition specified.

It returns the value of the found element, and if no element is found that satisfies the test, it returns undefined.

Features of find.

1. The find condition is applied to every array element.
2. The find method returns the first element satisfied by the condition passed.
3. If no element satisfies the find condition, undefined is returned.
4. find method is not valid on an empty array.
5. The original array is not changed by applying the find method.

Syntax

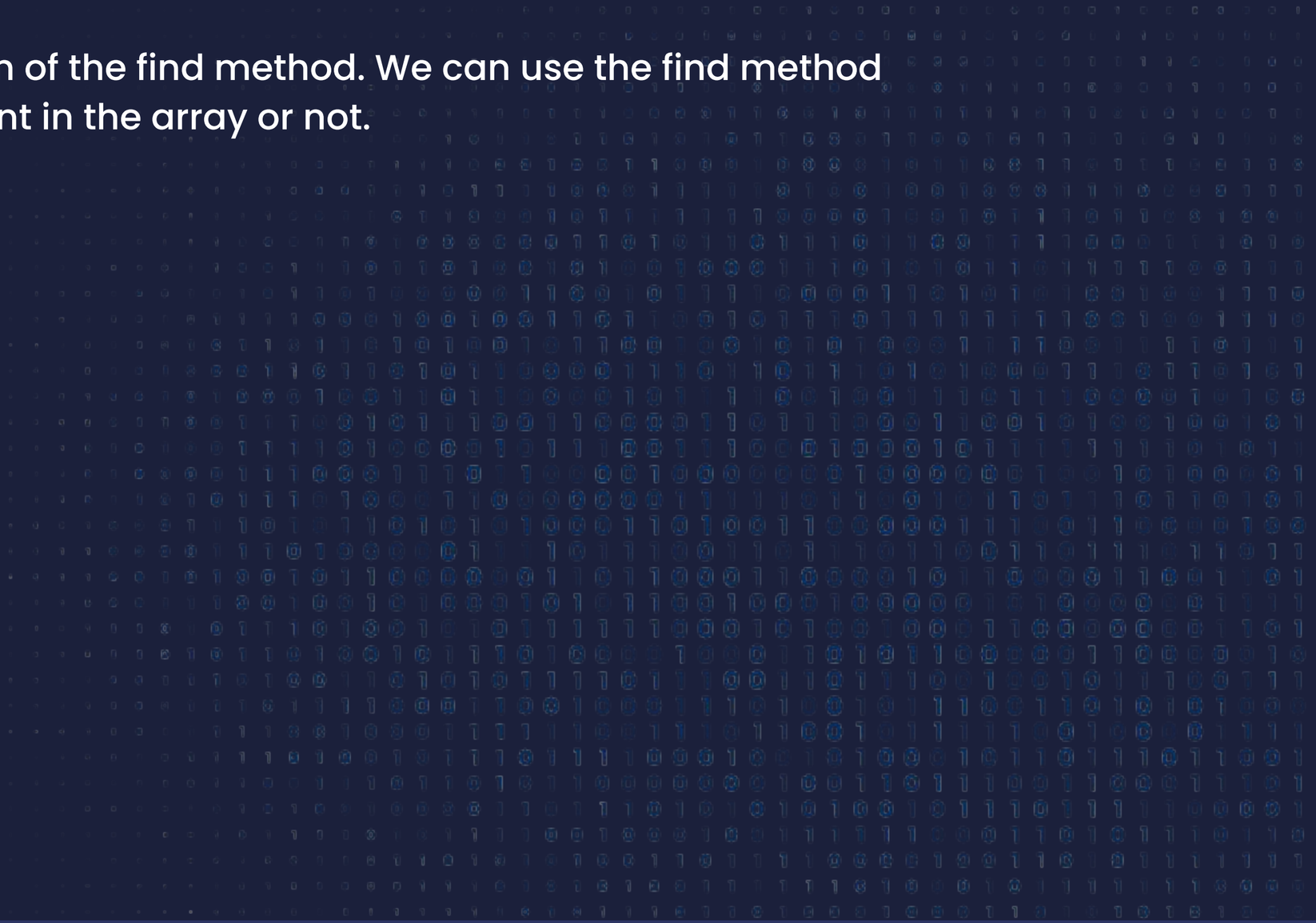
```
// Syntax

array.find(function (currentValue, currentIndex, array) {/* Function Body */});
```

The parameters passed:

1. **currentValue:** It is a required parameter and is used to specify the value of the current element.
2. **currentIndex:** It is an optional parameter and is used to specify the array index of the current element.
3. **array:** It is an optional parameter and is used to specify the array the current element belongs to.

Implementation

Let’s look at the implementation of the find method. We can use the find method to check if the element is present in the array or not.

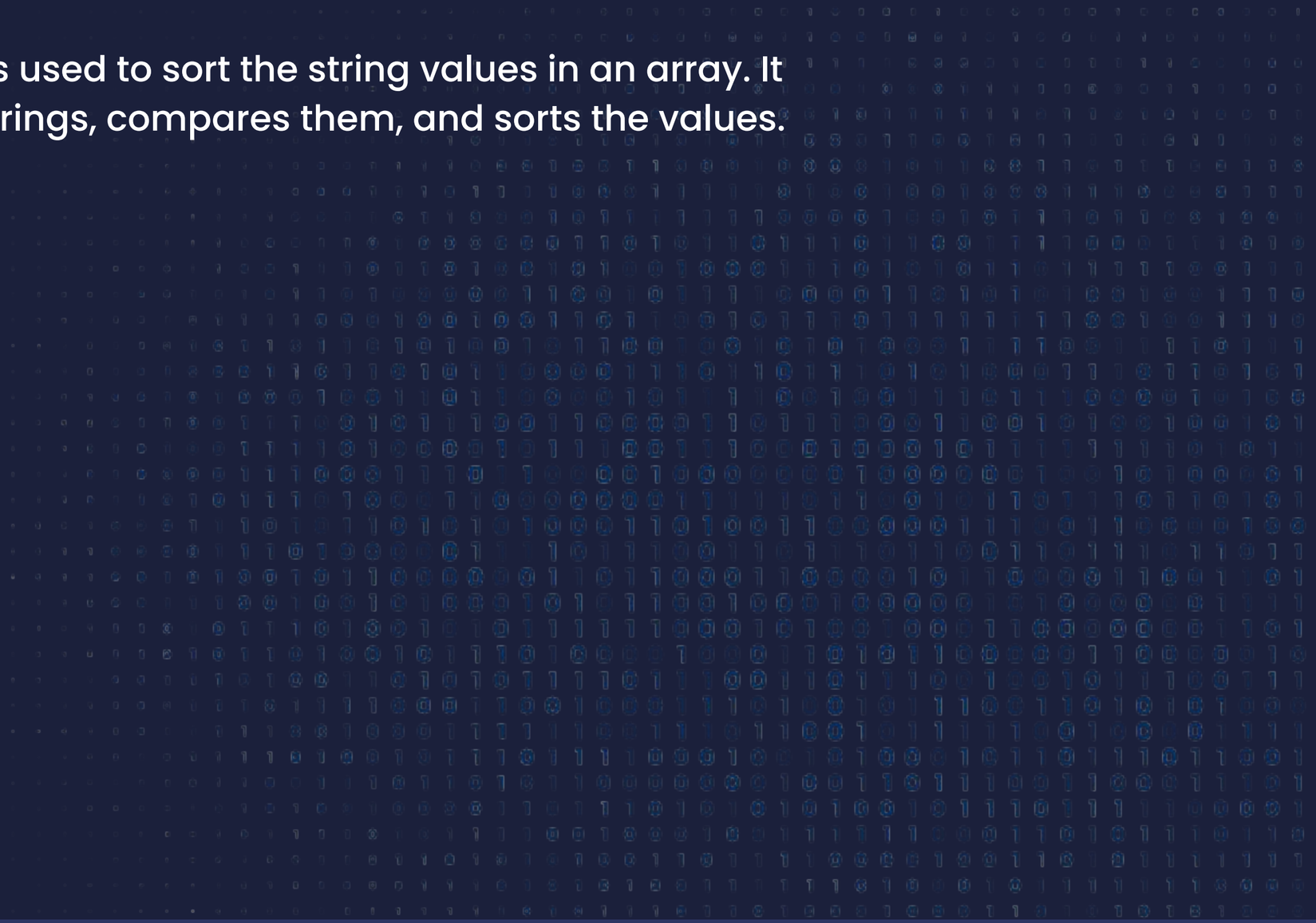


Implementation

```
// Check if the element "Javascript" present in the array.

let techStack = ["HTML", "CSS", "Javascript", "NodeJS", "React JS"];

// Apply find method.

let result = techStack.find((curr) => curr == "Javascript");

// Print the result to console.

result
  ? console.log(`The element is present in the techStack`)
  : console.log(`The element is not present in the techStack`);
```

Introduction

The sort function in javascript is used to sort the string values in an array. It converts the array items into strings, compares them, and sorts the values.



Features of the sort

1. The elements are compared according to their sequences of UTF-16 code unit values.

2. By default, the arrays are sorted in ascending order.

3. The sorting operation happens on the same array and no new array is created.

Syntax

```
// Without any parameter
arr.sort();

// Compare function method
arr.sort(compareFunc)

// Arrow function method
arr.sort((x, y) => { /* Function Body */ } )

// Inline compare function method
arr.sort(function compareFunc(x, y) { /* Function Body */ })
```

Compare Function

A compare function in JavaScript is a function that is used to compare two elements of an array when sorting the array using the sort() method. The function takes two arguments, which are the two elements being compared, and returns a value indicating the relative order of the elements.

The compareFunction takes two parameters a and b and returns three possible values: 0, negative or positive.

```
// Compare Function

function compareFunc(a, b) {
  if (a < b) {
    return -1;
  }
  if (a > b) {
    return 1;
  }

  // When a and b are equal
  return 0;
}
```

Implementation

First, let's sort the string elements in an array.

```
// Sort a list of string items

// Given array of strings
let names = ["Anurag", "Mithun", "Alka", "Prabir", "Vinay"];

// Apply sort method

names.sort();

// Print the result

console.log(names); // [ 'Alka', 'Anurag', 'Mithun', 'Prabir', 'Vinay' ]
```

Implementation

Let’s now sort an array of numeric values.

```
// Sort Numeric values

// Given Array

let numbers = [18, 155, 78, 97, 86];

// Apply sort

numbers.sort();

console.log(numbers); // OUTPUT: [ 155, 18, 78, 86, 97 ]
```

Implementation

We need to use a compare function to sort the numbers.

```
// Sort Numeric values

// Given Array

let numbers = [18, 155, 78, 97, 86];

// Apply sort

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

console.log(numbers); // OUTPUT: [ 18, 78, 86, 97, 155 ]
```

THANK YOU