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1 **at(): This method returns the element at the specified index in the array. It takes one argument: the index.**

```
const arr = ['apple', 'banana', 'cherry'];
console.log(arr.at(1)); // Output: 'banana'
```

2 **concat(): method is used to merge two or more arrays. This method does not change the existing arrays, but instead returns a new array.**

```
let fruits = ['apple', 'banana'];
let moreFruits = ['cherry', 'orange'];
let allFruits = fruits.concat(moreFruits);
console.log(allFruits); // Output: ['apple', 'banana', 'cherry', 'orange']
```

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3 **copyWithin(): method shallow copies part of an array to another location in the same array and returns the modified array without modifying its length. [Synatx : .copyWithin(target, start, end)]**

```
let numbers = [1, 2, 3, 4, 5];
numbers.copyWithin(2, 0, 2);
console.log(numbers); // Output: [1, 2, 1, 2, 5]
```

4 **entries(): This method returns a new Array Iterator object that contains the key/value pairs for each index in the array.**

```
const arr = ["a", "b", "c"];
const iterator = arr.entries();
console.log(iterator.next().value); // [0, "a"]
console.log(iterator.next().value); // [1, "b"]
console.log(iterator.next().value); // [2, "c"]
```

5 **every(): This method checks if all elements in an array pass a test (provided as a function). It returns true if all elements pass the test; otherwise, it returns false.**

```
const arr = [2, 4, 6, 8];
const isEven = (num) => num % 2 === 0;
const result = arr.every(isEven);
console.log(result); // true
```

6 **fill(): This method fills all the elements of an array from a start index to an end index with a static value. [Synatx : .fill(value, startIndex, endIndex)]**

```
const arr = ['apple', 'banana', 'cherry'];
arr.fill('orange', 1, 2);
console.log(arr); // Output: ['apple', 'orange', 'cherry']
```

7 **filter():** This method creates a new array with all elements that pass the test implemented by the provided function.

```
const numbers = [10, 20, 30, 40];
const filteredNumbers = numbers.filter(number => {
  return number > 20;
});
console.log(filteredNumbers); // Output: [30, 40]
```

8 **find():** This method returns the value of the first element in an array that passes a test (provided as a function). If no element passes the test, it returns undefined.

```
const arr = [10, 20, 30, 40, 50];
const greaterThan30 = (num) => num > 30
const result = arr.find(greaterThan30);
console.log(result); // 40
```

9 **findIndex(): This method returns the index of the first element in an array that passes a test (provided as a function). If no element passes the test, it returns -1.**

```
const arr = [10, 20, 30, 40, 50];
const greaterThan30 = (num) => num > 30;
const index = arr.findIndex(greaterThan30)
console.log(index); // 3
```

10 **flat(): This method creates a new array with all sub-array elements concatenated into it recursively up to the specified depth.**

```
const numbers = [1, [2, [3]], 4];
const flatNumbers = numbers.flat(Infinity);
console.log(flatNumbers); // Output: [1, 2, 3, 4]
```

11 **flatMap(): This method maps each element using a mapping function, then flattens the result into a new array.**

```
const arr = [1, 2, 3];
const result = arr.flatMap(x => [x * 2])
console.log(result); // [2, 4, 6]
```

12 **forEach(): method executes a provided function once for each array element. It doesn't return anything, it just executes the callback function on each element of the array.**

```
let fruits = ['apple', 'banana', 'cherry']
fruits.forEach(function (item) {
  console.log(item);
}); // Output: apple, banana, cherry
```

13 **from(): This method creates a new array from an array-like object or an iterable object. It can take up to two arguments: the object to convert to an array, and a mapping function to apply to each element of the new array.**

```
const obj = { 0: 'apple', 1: 'banana', 2: 'cherry', length: 3 }
const arr = Array.from(obj);
console.log(arr); // Output: ['apple', 'banana', 'cherry']
```

14 **groupBy(): that groups elements of an array based on a specified criterion, creating an object where keys represent unique groupings.**

```
const inventory = [
  { name: "asparagus", type: "vegetables" },
  { name: "bananas", type: "fruit" },
  { name: "cherries", type: "fruit" },
];
const result = Object.groupBy(inventory, ({ type }) =>
type);
console.log( " OutPut :",result);
// OutPut : {
vegetables: [{ name: 'asparagus', type: 'vegetables' }],
fruit: [ { name: 'bananas', type: 'fruit' }, { name:
'cherries', type: 'fruit' } ]
}
```

15 **includes(): This method determines whether an array includes a certain value among its entries, returning true or false as appropriate.**

```
const arr = [10, 20, 30, 40, 50];
const has20 = arr.includes(20);
console.log(has20); // true
```

16 **isArray():** This method determines whether the passed value is an array or not.

```
const fruits = ['apple', 'banana', 'mango'];
console.log(Array.isArray(fruits)); // Output: true

const number = 123;
console.log(Array.isArray(number)); // Output: false
```

17 **join():** This method joins all the elements of an array into a string using a specified separator. It takes one optional argument: the separator to use.

```
const arr = ['apple', 'banana', 'cherry'];
const str = arr.join(', ');
console.log(str); // Output: 'apple, banana, cherry'
```

18 **keys():** This method returns an array containing the keys of the given object.

```
const myObj = { a: 1, b: 2, c: 3 };
const keysArray = Object.keys(myObj);
console.log(keysArray); // Output: ["a", "b", "c"]
```

19 **lastIndexOf():** This method returns the last index at which a given element can be found in the array.

```
const numbers = [1, 2, 3, 4, 5, 3];
const lastIndex = numbers.lastIndexOf(3);
console.log(lastIndex); // Output: 5
```

20 **length(): This property returns the length of the array.**

```
const arr = ['apple', 'banana', 'cherry']
console.log(arr.length); // Output: 3
```

21 **map(): This method creates a new array with the results of calling a provided function on every element in the calling array.**

```
const numbers = [1, 2, 3, 4, 5];
const squaredNumbers = numbers.map((number) => {
  return number * number;
});
console.log(squaredNumbers); // Output: [1, 4, 9, 16, 25]
```

22 **of(): This method creates a new array instance with a variable number of arguments, regardless of number or type of the arguments.**

```
const arr = Array.of(1, 2, 3, "four", true);
console.log(arr); // [1, 2, 3, "four", true]
```

23 **pop(): This method removes the last element from an array and returns that element.**

```
const arr = ['apple', 'banana', 'cherry'];
const last = arr.pop();
console.log(last); // Output: 'cherry'
console.log(arr); // Output: ['apple', 'banana']
```

24 **push():** method adds one or more elements to the end of an array and returns the new length of the array.

```
let fruits = ['apple', 'banana'];
fruits.push('cherry', 'orange');
console.log(fruits); // Output: ['apple', 'banana', 'cherry', 'orange']
```

25 **reduce():** This method applies a function to each element of an array and reduces the array to a single value.

```
const numbers = [10, 20, 30, 40];
// accumulator: It is the value returned from the previous iteration of the function.
//currentValue: It is the current element being processed in the array.
const sum = numbers.reduce((accumulator, currentValue) => {
  return accumulator + currentValue;
});
console.log(sum); // Output: 100
```

26 **reduceRight(): This method is similar to the reduce() method. However, it iterates over the array elements from right to left instead of from left to right.**

```
const numbers = [10, 20, 30, 40];
const sum = numbers.reduceRight((accumulator, currentValue) => {
  return accumulator + currentValue;
});
console.log(sum); // Output: 100
```

27 **reverse(): This method reverses the order of the elements in the array.**

```
const arr = ['apple', 'banana', 'cherry'];
arr.reverse();
console.log(arr); // Output: ['cherry', 'banana', 'apple']
```

28 **shift():** method removes the first element from an array and returns that removed element. This method changes the length of the array.

```
let fruits = ['apple', 'banana', 'cherry'];
let shiftFruit = fruits.shift();
console.log(shiftFruit); // Output: 'apple'
console.log(fruits); // Output: ['banana', 'cherry']
```

29 **slice():** This method returns a shallow copy of a portion of an array into a new array object selected from begin to end (end not included).

```
const arr = [1, 2, 3, 4, 5];
const slicedArr = arr.slice(2, 4);
console.log(slicedArr); // [3, 4]
```

30 **some():** method that checks if at least one element in the array satisfies a given condition. It returns **true** if any element passes, otherwise **false**.

```
const numbers = [1, 4, 7, 2, 9];
const hasEvenNumber = numbers.some(number => number % 2 === 0);
console.log(hasEvenNumber);
// Output: true (because 4 and 2 are even)
```

31 **sort():** This method sorts the elements of an array in place and returns the sorted array. It can take an optional compare function as an argument.

```
const arr = ['banana', 'apple', 'cherry'];
arr.sort();
console.log(arr); // Output: ['apple', 'banana', 'cherry']
```

32 **splice():** method changes the contents of an array by removing or replacing existing elements and/or adding new elements in place.

```
const fruits = ['apple', 'banana', 'cherry', 'orange'];
//Syntax : arr.splice(start, deleteCount, item1, ..., itemN)
fruits.splice(2, 1, 'mango', 'kiwi');
console.log(fruits); // Output: [ 'apple', 'banana', 'mango', 'kiwi', 'orange'
]
```

33 **toLocaleString():** method that returns a string with a language-sensitive representation of the number. It provides formatting based on the browser's default locale. **[.toLocaleString(locales, options)]**

```
const number = 1234567.89;
const formattedNumber = number.toLocaleString(); // Output:
"1,234,567.89" (formatted according to the user's locale)
```

34 **toString(): This method returns a string representing the array and its elements.**

```
const arr = ['apple', 'banana', 'cherry'];
const str = arr.toString();
console.log(str); // Output: 'apple,banana,cherry'
```

35 **unshift(): method adds one or more elements to the beginning of an array and returns the new length of the array.**

```
let fruits = ['cherry', 'orange'];
fruits.unshift('apple', 'banana');
console.log(fruits); // Output: ['apple', 'banana', 'cherry', 'orange']
```

36 **values(): This method returns an iterator that provides the values for each index in the array. It takes no arguments.**

```
const arr = ['apple', 'banana', 'cherry']
const iterator = arr.values();

for (const value of iterator) {
  console.log(value);
} // Output: apple banana cherry
```

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