

A decorative graphic on the left side of the slide consisting of two overlapping parallelograms. The front one is blue and the back one is a light green color. They are positioned diagonally, with the blue one in front of the green one.

Array Functions

`Array.sort()`



What is the array method?

- `array.sort()` sorts elements of an array
- A function can be passed into this method to produce a different sorting order, this is called a compare function
- If no compare function is passed into it, `.sort()` will convert the elements to strings and compare their UTF code, sorting by default in ascending order



How is it used?

The syntax for this function is:

```
Array.sort(function (a, b) { return a - b })
```

for ascending order, and

```
Array.sort(function (a, b) { return b - a })
```

for descending order

Where `Array` is the name of the array being sorted.



What does it return?

The `array.sort()` function mutates the array and returns it sorted rather than creating a new array to store the values.

An example on how to use it.

```
1  const months = ['March', 'Jan', 'Feb', 'Dec'];
2  months.sort();
3  console.log(months);
4  // expected output: Array ["Dec", "Feb", "Jan", "March"]
5
6  const array1 = [1, 30, 4, 21, 100000];
7  array1.sort();
8  console.log(array1);
9  // expected output: Array [1, 100000, 21, 30, 4]
10
```

Another Example

```
1 var numbers = [4, 2, 5, 1, 3];  
2 numbers.sort(function(a, b) {  
3   | return a - b;  
4   |});  
5 console.log(numbers);
```

```
7 // [1, 2, 3, 4, 5]
```

```
let numbers = [4, 2, 5, 1, 3];  
numbers.sort((a, b) => a - b);  
console.log(numbers);
```

```
// [1, 2, 3, 4, 5]
```



Some key things to remember about this method

- Mutates the original Array
- Sorts by default in ascending
- Converts elements into strings by default and compares their UTF-16 code values
 - **16-bit Unicode Transformation Format**
 - Must specify a compare function for numbers
- If a compare function is applied, any undefined element in the array will be sorted to the end of the array