



**NodeJS**  
LA BA

# ARRAYS

# ARRAYS

An array is a container for many elements.

They usually are filled with related data, but they could be inserted with any arbitrary type or javascript object. They can also contain nothing.

You can create an array in a few different ways.



```
// with "array literal" syntax
const myArray = [];

// with "array constructor" syntax
const anotherArray = new Array();
```

# ARRAY OPERATIONS

You can access elements of an array by “indexing” into it.

Javascript is 0 base index, which means the first item on an array is located at index 0. The last item of the array is equivalent to `array.length - 1`.



```
const languages = ["HTML", "CSS", "JS"];

console.log(languages[0]);
// Output: HTML

console.log(languages[1]);
// Output: CSS
```

# LAST ITEM OF ARRAY



```
const languages = ["HTML", "CSS", "JS"];  
  
console.log(languages[languages.length - 1]);  
// Output: JS
```

# MODIFYING ARRAY ITEMS



```
const languages = ["HTML", "CSS", "JS"];
console.log(languages);
// Output: ['HTML', 'CSS', 'JS']
```

```
languages[1] = "Bootstrap";
console.log(languages);
// Output: ['HTML', 'Bootstrap', 'JS']
```

# ADDING ITEMS TO ARRAY



```
const languages = ["HTML", "CSS", "JS"];
console.log(languages);
// Output: ['HTML', 'CSS', 'JS']
```

```
languages.push("NodeJS")
console.log(languages);
// Output: ['HTML', 'Bootstrap', 'JS', 'NodeJS']
```

```
languages.unshift("Rust");
console.log(languages);
// Output: ['Rust', 'HTML', 'Bootstrap', 'JS', 'NodeJS']
```

# MOVING ITEMS FROM ARRAY

```
const languages = ["HTML", "CSS", "JS"];
console.log(languages);
// Output: ['HTML', 'CSS', 'JS']

languages.pop();
console.log(languages);
// Output: ['HTML', 'CSS']

languages.shift("Rust");
console.log(languages);
// Output: ['CSS']

languages.splice(1, 2);
console.log(languages);
// Output: ['CSS']
```

# ARRAY LENGTH



```
const languages = ["HTML", "CSS", "JS"];
console.log(languages);
// Output: ['HTML', 'CSS', 'JS']
```

```
console.log(languages.length);
// Output: 3
```

```
languages.length = 10;
console.log(languages);
// Output: ['HTML', 'CSS', 'JS', empty × 7]
```

```
languages.length = 2;
console.log(languages);
// Output: ['HTML', 'CSS']
```

# ITERATING OVER ARRAY



```
const languages = ["HTML", "CSS", "JS"];
console.log(languages);
// Output: ['HTML', 'CSS', 'JS']

for (let i = 0; i < languages.length; i++) {
  console.log(languages[i]);
}

// Outputs:
HTML
CSS
JS
```

# ITERATING OVER ARRAY



```
const languages = ["HTML", "CSS", "JS"];
console.log(languages);
// Output: ['HTML', 'CSS', 'JS']
```

```
languages.forEach(item => console.log(item));
```

```
// Outputs:
HTML
CSS
JS
```

# CONCATENATING ARRAYS



```
const languages = ["HTML", "CSS", "JS"];
const otherLanguages = ["Rust", "C"];
console.log(languages);
// Output: ['HTML', 'CSS', 'JS']
console.log(otherLanguages);
// Output: ['Rust', 'C']
```

```
const concatenated = languages.concat(otherLanguages);
console.log(concatenated)
// Output: ['HTML', 'CSS', 'JS', 'Rust', 'C']
```

# CONVERTING ARRAYS TO STRING



```
const languages = ["HTML", "CSS", "JS"];
console.log(languages);
// Output: ['HTML', 'CSS', 'JS']
```

```
console.log(languages.toString());
// Output: HTML,CSS,JS
```

```
console.log(languages.join(" - "));
// Output: HTML - CSS - JS
```

# CHECKING IF ARRAY CONTAINS ITEM



```
const languages = ["HTML", "CSS", "JS"];
console.log(languages);
// Output: ['HTML', 'CSS', 'JS']
```

```
console.log(languages.includes("Rust"));
// Output: false
```

# TRANSFORMING ARRAY



```
const languages = ["HTML", "CSS", "JS"];
console.log(languages);
// Output: ['HTML', 'CSS', 'JS']
```

```
const newArray = languages.map(item => item + ".");
console.log(newArray);
// Output: ['HTML.', 'CSS.', 'JS.']
```

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