

# Difference Between

## ***FOREACH & MAP***

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In JavaScript, '**map**' and '**forEach**' are both array methods used for iterating over arrays and performing operations on their elements. However, they differ in their usage and return values.

## **'map()'** Method:

The '**map()**' method creates a new array by calling a provided function on every element in the original array. It does not mutate the original array but returns a new one with the results of applying the function to each element.

## Syntax

```
● ● ●  
1 const newArray = array.map((currentValue, index, array) => {  
2   // Return new element value  
3 });
```

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## Example

```
● ● ●  
1 const numbers = [1, 2, 3, 4, 5];  
2  
3 const doubled = numbers.map(num => num * 2);  
4  
5 console.log(doubled); // Output: [2, 4, 6, 8, 10]  
6
```

## 'forEach' Method:

The '**forEach()**' method executes a provided function once for each array element. It does not return anything (`undefined`). It simply iterates over the array and executes the callback function for each element.

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## Syntax

```
● ● ●  
1 array.forEach((currentValue, index, array) => {  
2   // Perform some action for each element  
3 });  
4
```

## Example

```
● ● ●  
1 const numbers = [1, 2, 3, 4, 5];  
2  
3 numbers.forEach(num => {  
4   console.log(num * 2);  
5 });  
6 // Output:  
7 // 2  
8 // 4  
9 // 6  
10 // 8  
11 // 10  
12
```

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## Differences:

- **Return Value:**

`map()`: Returns a new array containing the results of applying a function to each element.

`forEach()`: Does not return anything (returns `undefined`).

- **Mutability:**

`map()`: Does not mutate the original array; it creates a new array.

`forEach()`: Does not mutate the array either; it's simply used for iteration.

- **Usage:**

`map()`: Typically used when you want to transform each element of an array and create a new array with the transformed elements.

`forEach()`: Used when you want to perform a side effect (like logging, updating variables outside the loop) for each element in the array without necessarily creating a new array.

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Thanks for Watching