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Higher Order Functions

---> is a functuon that accepts functuons as parameters and/or returns a finction

- Map

--- method creates a new array

--- populated with the results of calling a provided function on every element

--- in the calling array

syntax map(callbackfunction(element, Index, Array) {}, thisArg)

- element => the current element being processed in the array.

- index => the index of the current element being processed in the array.

- Array => the current array

notes

- Map Return A new Array

Examples

- Anonymous Function

- Named function

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// here it wants us to make it plus each num on itself one time so 1+1 2+2 3+3... and so on

let myNums = [1, 2, 3, 4, 5, 6];

let newArray = [];

for (let i = 0; i < myNums.length; i++) {

  newArray.push(myNums[i] + myNums[i]); // push Appends new elements to the end of an array, and returns the new length of the array.

}

console.log(newArray);

// same idea with map

// IMPORTANT!!

// let addSelf = myNums.map(function (element, index, array) {

//   // console.log(`Current Element => ${element}`); // this counts the elements which are the numbers inside displays: Current Element => 1

//   // console.log(`Current index => ${index}`); // index starts from 0 as always so at 1 the index will be 0 displays: Current index => 0

//   // console.log(`array => ${array}`); // array counts how many elements are there in the array and they are display: array => 1,2,3,4,5,6

//   // console.log(`this => ${this}`); // is the valuie that the funtion returns which is 10 display: this => 10

//   return element + element;

// }, 10); // this is the this

// console.log(addSelf);

//-------

// let addSelf = myNums.map((element) => element + element);

// // u can do what u did up there with this easier way

// console.log(addSelf);

//-------

function addition(ele) { // the addition grabs the element then retruns the result of the element adding the same amount of itself on it (ya3ni 2 + 2 = 4)

    return ele + ele;

}

let add = myNums.map(addition);

console.log(add);