

ES6: What is the difference between Rest and Spread?



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ES6

Rest Parameter [...rest]

It is a collection of all remaining elements (*hence, the name rest, as in “the rest of the elements”*) into an array.

```
var myName = ["Marina" , "Magdy" , "Shafiq"] ;  
const [firstName , ...familyName] = myName ;  
console.log(firstName); // Marina ;  
console.log(familyName); // [ "Magdy" , "Shafiq" ] ;
```

As shown on line 2 in the above example , those three dots collected the rest of the

elements of `myName` into a new sub array , this is something called **destructuring** which is breaking my array or object into smaller pieces.

Destructuring using rest parameter helped us to break our array into a main parameters that can be called directly such as *firstName* and collecting the rest into another array such as *familyName* .

Where can we find rest parameter again ?

If you are going to call a function and send a number of arguments , you will receive them into rest parameter in the function implementation .

```
function myData(...args){  
  console.log(args) ; // ["Marina",24,"Front-End Developer"]  
}  
myData("Marina",24,"Front-End Developer") ;
```

as shown in the above example , `myData` received parameters in `...args` which will be an array containing all the sent arguments from function's call.

Spread Operator [...spread]

It's the opposite to rest parameter , where rest parameter collects items into an array, the spread operator unpacks the collected elements into single elements.

```
var myName = ["Marina" , "Magdy" , "Shafiq"];  
var newArr = [...myName , "FrontEnd" , 24];  
console.log(newArr) ; // ["Marina" , "Magdy" , "Shafiq" ,  
  "FrontEnd" , 24 ] ;
```

Can you see what happened?

Yes it concatenated between 2 arrays and unpacked `myName` into single elements and, unlike the rest parameter, the spread operator can be the first element, but rest parameter needs to be the last to collect the rest elements .

It can be used to copy one array into another or to concatenate 2 arrays together.

Summary

- Rest Parameter is collecting all remaining elements into an array .
- Spread Operator is unpacking collected elements such as arrays into single elements .

This Rest Parameter and Spread Operator , I hope you enjoyed and learned .

“TELL ME AND I FORGET. TEACH ME AND I REMEMBER. INVOLVE ME AND I LEARN.”
–BENJAMIN FRANKLIN

Don't just read about it , try it !

Happy learning ..

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