Destructuring

To illustrate destructuring, we'll make a sandwich. Do you take everything out of the refrigerator to make your sandwich? No, you only take out the items you would like to use on your sandwich.

Destructuring is exactly the same. We may have an array or object that we are working with, but we only need some of the items contained in these.

Destructuring makes it easy to extract only what is needed.

JavaScript Destructuring

The destructuring assignment introduced in ES6 makes it easy to assign array values and object properties to distinct variables. For example,

Before ES6:

```
// assigning object attributes to variables
const person = {
    name: 'Sara',
    age: 25,
    gender: 'female'
}

let name = person.name;
let age = person.age;
let gender = person.gender;

console.log(name); // Sara
console.log(age); // 25
console.log(gender); // female
```

From ES6:

```
// assigning object attributes to variables
const person = {
    name: 'Sara',
    age: 25,
    gender: 'female'
}

// destructuring assignment
let { name, age, gender } = person;

console.log(name); // Sara
console.log(age); // 25
console.log(gender); // female
```

> **Note:** The order of the name does not matter in object destructuring.

For example, you could write the above program as:

```
let { age, gender, name } = person;
console.log(name); // Sara
```

> **Note:** When destructuring objects, you should use the same name for the variable as the corresponding object key.

For example,

```
let {name1, age, gender} = person;
console.log(name1); // undefined
```

If you want to assign different variable names for the object key, you can use:

```
const person = {
    name: 'Sara',
    age: 25,
    gender: 'female'
}

// destructuring assignment
// using different variable names
let { name: name1, age: age1, gender:gender1 } = person;

console.log(name1); // Sara
console.log(age1); // 25
console.log(gender1); // female
```

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Array Destructuring

You can also perform array destructuring in a similar way. For example,

```
const arrValue = ['one', 'two', 'three'];

// destructuring assignment in arrays
const [x, y, z] = arrValue;

console.log(x); // one
console.log(y); // two
console.log(z); // three
```

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