

Let and Const

let and const

Hoisting problem

let -- allows block scoping and **hoisting** problem in ES5 is solved in ES6. Variables declared with the var keyword can not have Block Scope. Variables declared inside a block {} can be accessed from outside the block.

When we use a undeclared variable with **var** keyword in ES5 we get **undefined** variable name error. This is the example for hoisting problem.

const -- It does NOT define a constant value. It defines a constant reference to a value. Because of this, we cannot change constant primitive values, but we can change the properties of constant objects.

Whereas when we use **let** keyword, hoisting problem is solved in ES6. We get the Error as **Reference Error <variable name> not defined.**

This keyword

The JavaScript this keyword refers to the object it belongs to. It has different values depending on where it is used: In a method, this refers to the owner object. Alone, this refers to the global object

The 4 rules of finding out the value of this keyword

Rule 1 : When the **keyword this** is not inside the declared object then it refers to the **global object**

Rule 2 : When the **keyword this** is inside the declared object, then it refers to the closest parent object

Rule 3 : whenever the context of the object changes, we use **call**, **apply** and **bind** to set the value of this explicitly.

Rule 4 : Whenever we create a object using **new** keyword inside the function definition, the **this** keyword refers to the new object that is being created

Arrow Functions

Arrow function or fat arrow function -- shorter version of syntax when compared to the normal function

We cannot manipulate the value of **this** keyword inside the arrow function when we use **call**, **apply** or **bind**

We do not have access to the **prototype** field when we declare the function using **fat arrow symbol**

Default function parameters

when we set up default function parameters we get access to the functions and the variables in the context

```
data=( price, cost=0.07 )=>{ console.log(data(5.00))}
```

Rest and spread operator

Rest

It allows to convert the no of parameters into an array

It is denoted by "..." in the function definition or function expression

```
a = (...data) =>{ console.log(data)}
a(2,3,3,3,3,3) {2,3,3,3,3,3}
```

The rest parameters must be at the end

Ref -- <https://javascript.info/rest-parameters-spread-operator>

Object Literal

It is shorthand for initializing the object properties and also method

Ref -- https://dev.to/sarah_chima/enhanced-object-literals-in-es6-a9d

Prototype

All JavaScript objects inherit properties and methods from a prototype.

When we create the constructor function, **prototype** property is created for that constructor function

The only inconvenience of using prototypes is that there is no easy way to create private methods or variables.

Ref -- <https://stackoverflow.com/questions/8433459/what-s-the-purpose-of-prototype>

Ref -- <https://idiallo.com/javascript/why-use-prototypes>

for of loop

```
( price* cost) }
//for of loop is used in
iterable
var a = [1,2,2,2,2];
for ( let i of a) {
  console.log(i);
}
```

Octal and binary Literals

```
var a=0o1234567890 {2,3,3,3,3,3,3,3,3,3}
either 0 or o is allowed
console.log(a//12)
var f = 0b111;
console.log(f);
```

Template literals

It can create the multiline strings

new.target

The new.target property lets you detect whether a function or constructor was called using the new operator. In constructors and functions instantiated with the new operator, new.target returns a reference to the constructor or function. In normal function calls, new.target is undefined.

Ref -- <https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Operators/new.target>

Example

```
class A{
  constructor(){
    this.data = 55;
```

```
console.log("Inside the base")
console.log(new.target.dumm())
}
}

class B extends A{
  constructor(){
    super()
    console.log(new.target)
    console.log(typeof B)
    this.data = 66;
    console.log(this.data)
  }
  static dumm(){
    return 57;
  }
}
```



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