JavaScript Const

- description : JavaScript Let
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ECMAScript 2015

ES2015   let   const   JavaScript   .

, const   let   .

```html
<!DOCTYPE html>
<html lang="en">
<body>
    <h2>JavaScipt const</h2>
    <p>You cannot change a primitive value.</p>
    <p id="demo"></p>
    <script>
        try {
            const PI = 3.141592653589793;
            PI = 3.14;
        }
        catch (err) {
            document.getElementById("demo").innerHTML = err;
        }
    </script>
</body>
</html>
```

Block Scope

const   **(Block Scope)**   let   .

                                   x   x   .

```html
<!DOCTYPE html>
<html lang="en">
<body>
  <h2>Declaring a Variable Using const</h2>
  <p id="demo"></p>
```

```html
<script>
  var x = 10;
  // Here x is 10
  {
    const x = 2;
    // Here x is 2
  }
  // Here x is 10
  document.getElementById("demo").innerHTML = x;
</script>
</body>
</html>
```

Assigned when Declared

JavaScript const   :

Incorrect

```javascript
const PI;
PI = 3.14159265359;
```

Correct

```javascript
const PI = 3.14159265359;
```

Not Real Constants

const   .

                                .   .

            ,   (primitive)   ,
      .

Primitive Values

      (constant)   ,   .

```javascript
const PI = 3.141592653589793;
PI = 3.14;      // This will give an error
```

```
PI = PI + 10;    // This will also give an error
```

Constant Object can Change

.

```html
<!DOCTYPE html>
<html>
<body>
  <h2>JavaScript const</h2>
  <p>Declaring a constant object does NOT make the objects properties
unchangeable:</p>
  <p id="demo"></p>
  <script>
    // Create an object:
    const car = { type: "Flat", model: "500", color: "white" };
    // Change a property:
    car.color = "red";
    // Add a property:
    car.owner = "Johnson";
    // Display the property:
    document.getElementById("demo").innerHTML = "Car owner is " + car.owner;
  </script>
</body>
</html>
```

.

```html
<!DOCTYPE html>
<html>
<body>
  <h2>JavaScript const</h2>
  <p>But you can NOT reassign a constant object:</p>
  <p id="demo"></p>
  <script>
    try {
      const car = { type: "Fiat", model: "500", color: "white" };
      car = { type: "Volvo", model: "EX60", color: "red" };   /* Error */
    }
    catch (err) {
      document.getElementById("demo").innerHTML = err;
    }
  </script>
</body>
</html>
```

Constant Arrays can change

.

```
<!DOCTYPE html>
<html>
<body>
  <h2>JavaScript const</h2>
  <p>Declaring a constant array does NOT make the elements unchangeable:</p>
  <p id="demo"></p>
  <script>
    // Create an Array:
    const cars = ["Saab", "Volvo", "BMW"];
    // Change an element:
    cars[0] = "Toyota";
    // Add an element:
    cars.push("Audi");
    // Display the Arrays:
    document.getElementById("demo").innerHTML = cars;
  </script>
</body>
</html>
```

,   .

```
<!DOCTYPE html>
<html>
<body>
  <h2>JavaScript const</h2>
  <p>You cna NOT reassign a constant array:</p>
  <p id="demo"></p>
  <script>
    try {
      const cars = ["Saab", "Volvo", "BMW"];
      cars = ["Toyota", "volvo", "Audi"];   /* Error */
    }
    catch (err) {
      document.getElementById("demo").innerHTML = err;
    }
  </script>
</body>
</html>
```

const   Internet Explorer 10   .

Redeclaring

JavaScript `var` 　　　　　　　　　　　　　　　　　　　　　　　　　　.

```
var x = 2;      // Allowed
var x = 3;      // Allowed
x = 4;          // Allowed
```

　　　　　　　　　　　　, 　　var 　　let 　　　const

　　　　　.

```
var x = 2;      // Allowed
const x = 2;    // Not Allowed
{
  let x = 2;      // Allowed
  const x = 2;    // Not Allowed
}
```

　　　　　　　　　, 　　const

.

```
const x = 2;    // Allowed
const x = 3;    // Not Allowed
x = 3;          // Not Allowed
var x = 3;      // Not Allowed
let x = 3;      // Not Allowed

{
  const x = 2;    // Allowed
  const x = 3;    // Not Allowed
  x = 3;          // Not Allowed
  var x = 3;      // Not Allowed
  let x = 3;      // Not Allowed
}
```

　　　　　　　　　const 　　　　　　　　　　　　　.

```
const x = 2;    // Allowed

{
  const x = 3;    // Allowed
}

{
  const x = 4;    // Allowed
}
```

Hoisting

var   .

     :   .

```
carName = "Volvo";
alert(carName);
var carName;
```

const   ,   .

     :   .

                              "TDZ (Temporal Dead Zone)"   .

         const   ,   .

This code will not run

```
carName = "Volvo";
const carName;
```

     ,, Javascript, Const