



# let and const

 js-let-const-demo.zip 13.2KB

## reviewing *var*

### *var*

- We use the ***var*** keyword to declare variables
- When defined in a function, the ***var*** keyword scopes a variable to that function
- ***var*** will hoist to the top of the scope it is defined in
- You can redeclare and reassign values with ***var***

```
var instructor = "Colt"; // accessible everywhere! function greet(){ var message =  
"Hello!"; // scoped to the greet function }
```

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## *let*

The *let* keyword creates a **block-scoped** variable: a variable that only exists inside a code block.

### What Is A Code Block?

Essentially any pair of curly braces (outside of object syntax).

```
{ // this is a code block let x = 5; var y = 10; } console.log(x); // ReferenceError: x is not defined console.log(y); // 10
```

### Where Are Code Blocks Commonly Used?

You'll mostly use code blocks in *for* loops and *if* statements.

```
if (x > 10) { let happy = true; // happy lives ONLY in this code block } // can't use it outside the block console.log(happy); // ReferenceError: happy is not defined
```

### An Example

```
for (var i = 1; i < 4; i++) { console.log(i); } // 1 // 2 // 3 console.log(i); // 4
```

```
for (let i = 1; i < 4; i++) { console.log(i); } // 1 // 2 // 3 console.log(i); //  
ReferenceError: i is not defined
```

## More About *let*

It can be reassigned but not redeclared (unlike *var*).

```
let z = 5; z = 25; let z = 10; // SyntaxError: Identifier 'z' has already been declared
```

## *const*

The *const* keyword prevents a variable from ever being reassigned or redeclared.

```
const PI = 3.14; PI = 15; // TypeError: Assignment to constant variable  
const PI = 5; //  
SyntaxError
```

*const* is also block-scoped, like *let*.

```
{ const x = 10; } console.log(x); // ReferenceError: x is not defined
```

## Comparison of Variable Declaration Keywords

Keyword	Can Reassign	Can Redeclare	Can Mutate	Scope Rules
<i>var</i>	yes	yes	yes	function scope
<i>let</i>	yes	no	yes	block scope
<i>const</i>	no	no	yes	block scope

## What about *var*?

- There's really no need to use it
- Just be careful of block scoping with *let*