

# Variable declaration

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## Variable declaration

Variable use, may be before declaration

```
x = 3;    // bad practice  
var x;
```

Variable may be declared twice

```
var y = 3;  
var y = 5;
```

Variables are *function scoped*

```
for (var i = 0; i < 10; i++) {  
}  
console.log(i); // => 10
```

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Block scoped variables



Since ES2015 we can use block scoped variables with `let`

```
let w = 3;
```

Use before declaration now breaks

```
x = 3; // => ReferenceError: x is not defined
let x;
```

No re-declaration

```
var y = 3;
let y = 5; // => SyntaxError: Identifier 'y' has already been declared
```

Limits scope to current block

```
for (let i = 0; i < 10; i++) {
}
console.log(i); // => ReferenceError: i is not defined
```

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Constant declarations



Define a block scoped variable which cannot be reassigned using **const**

- Values cannot be changed once set
- Must be initialized on declaration

```
console.log(pi); // => ReferenceError: pi is not defined

const pi = 3.14;
pi = pi + 1;
// TypeError: Assignment to constant variable.

const a;
```

```
// SyntaxError: Missing initializer in const declaration
```

```
const person = { name: 'Foo' };
```

```
person.name = 'bar';
```

```
// Allowed, reference types are still mutable
```