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Variable declaration

Variable declaration

Variable use, may be before declaration

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

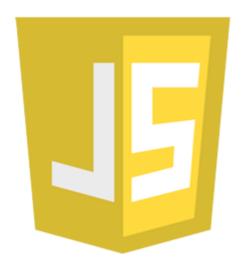
Variable may be declared twice

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

Variables are function scoped

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

Block scoped variables



Since ES2015 we can use block scoped variables with let

```
let w = 3;
```

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Use before declaration now breaks

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

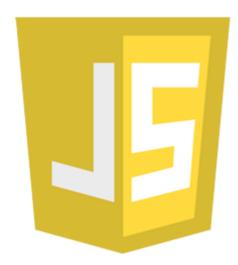
No re-declaration

```
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
```

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;
```

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

const person = { name: 'Foo' };

person.name = 'bar';

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