

Var:

The scope is global when a `var` variable is declared outside a function. This means that any variable that is declared with `var` outside a function block is available for use in the whole window.

`var` is function scoped when it is declared within a function. This means that it is available and can be accessed only within that function.

Example:

```
var greeter = "hey hi";
```

```
function newFunction() {  
    var hello = "hello";  
}
```

var variables can be re-declared and updated

Hoisting is a JavaScript mechanism where variables and function declarations are moved to the top of their scope before code execution.

Problem with var:

```
var greeter = "hey hi";  
var times = 4;
```

```
if (times > 3) {  
    var greeter = "say Hello instead";  
}
```

```
console.log(greeter) // "say Hello instead"
```

So, since `times > 3` returns true, `greeter` is redefined to "say Hello instead". While this is not a problem if you knowingly want `greeter` to be redefined, it becomes a problem when you do not realize that a variable `greeter` has already been defined before.

If you have used `greeter` in other parts of your code, you might be surprised at the output you might get. This will likely cause a lot of bugs in your code. This is why `let` and `const` are necessary.

Let:

A block is a chunk of code bounded by { }. A block lives in curly braces. Anything within curly braces is a block.

So a variable declared in a block with `let` is only available for use within that block.

```
let greeting = "say Hi";  
let times = 4;  
  
if (times > 3) {  
  let hello = "say Hello instead";  
  console.log(hello); // "say Hello instead"  
}  
console.log(hello) // hello is not defined
```

let can be updated but not re-declared.

Just like `var`, a variable declared with `let` can be updated within its scope. Unlike `var`, a `let` variable cannot be re-declared within its scope. So while this will work:

Hoisting of let

Just like `var`, `let` declarations are hoisted to the top. Unlike `var` which is initialized as `undefined`, the `let` keyword is not initialized. So if you try to use a `let` variable before declaration, you'll get a Reference Error

Const:

Variables declared with the const maintain constant values. const declarations share some similarities with let declarations.

const declarations are block scoped

Like let declarations, const declarations can only be accessed within the block they were declared.

const cannot be updated or re-declared

This means that the value of a variable declared with const remains the same within its scope. It cannot be updated or re-declared.

```
const greeting = "say Hi";  
greeting = "say Hello instead";// error: Assignment to constant variable.  
const greeting = "say Hi";  
const greeting = "say Hello instead";// error: Identifier 'greeting' has already  
been declared
```

Every const declaration, therefore, must be initialized at the time of declaration. This behavior is somehow different when it comes to objects declared with const. While a const object cannot be updated, the properties of this objects can be updated.