

The Simple Rules to 'this'

in Javascript

Rule 1 → If new keyword is used when calling function, this inside the fn is brand new object.

Eg ⇒

```
function abc () {  
  console.log (this);    // { }  
  this.value = 10;  
  console.log (this);    // {value: 10}  
}  
new abc();
```

Rule 2: If apply, call, or bind are used to call a fn, this inside function is object that is passed as argument.

Eg → Function fn() {
 console.log (this);

}

var obj = { value: 5 }

var boundFn = fn.bind (obj);

boundFn (); // { value: 5 }

fn.call (obj); // { value: 5 }

Rule 3 → If fn is called as a method
then this is object that function
is a property of.

Eg → var obj = { value: 5,

printThis: function () {

console.log (this);

};

}

obj.printThis (); // { value: 5,

printThis: f }

Rule 4: If fn is invoked as free function invocation, meaning it was invoked without any conditions present above, this is global object. In browser it's window.

For eg -

```
function fn() {  
  console.log(this);  
}
```

// If called in browser;
fn(); // window { stop: f,
open: f, ... }

Function that is not declared as a method automatically becomes a property of global object, window.

When we call fn(), it is interpreted as window.fn().

Rule 5: If multiple of above rules apply, the rule that is higher wins.

Rule 6: If function is ES6 arrow function, it ignores all rules above and receive the this value of its surrounding scope at time it's created.

To determine • this, go one line above arrow function's creation and see what value of this is there

For eg -

```
const obj = {  
  value: 'abb'  
  create Arrow fn: function() {  
    return () => console.log(this);  
  }  
};
```

```
const arrow fn = obj.create Arrow fn(),  
  arrow fn(); // { value: 'abc',  
               create Arrow fn: { } }
```