Javascript Fundamentals

Justice Reskill

Understanding Objects

Objects are similar to arrays. They can store an unlimited amount of items ranging from variables to functions. Objects differ from array in that the items inside an object are accessed via key value pairs.

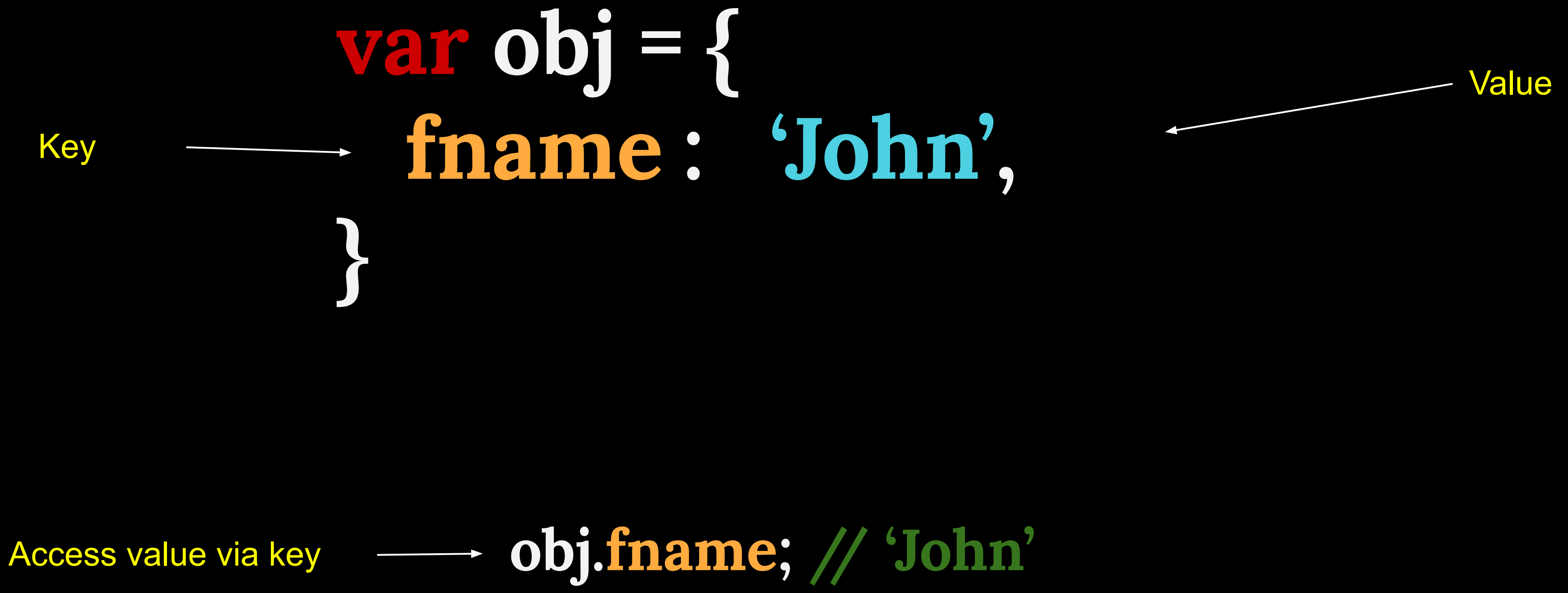
Defining An Object

```
var obj = {}
```

What Are Key Value Pairs

A key value pair is when a string of text, known as a key, references another item. That item could be anything: a string, integer, function, array or even another object!

Objects and Key Value Pairs



```
var obj = {
  fname :   'John',
}
```

Key

Value

Access value via key

```
obj.fname; // 'John'
```

Commas Separate Multiple Key Value Pairs

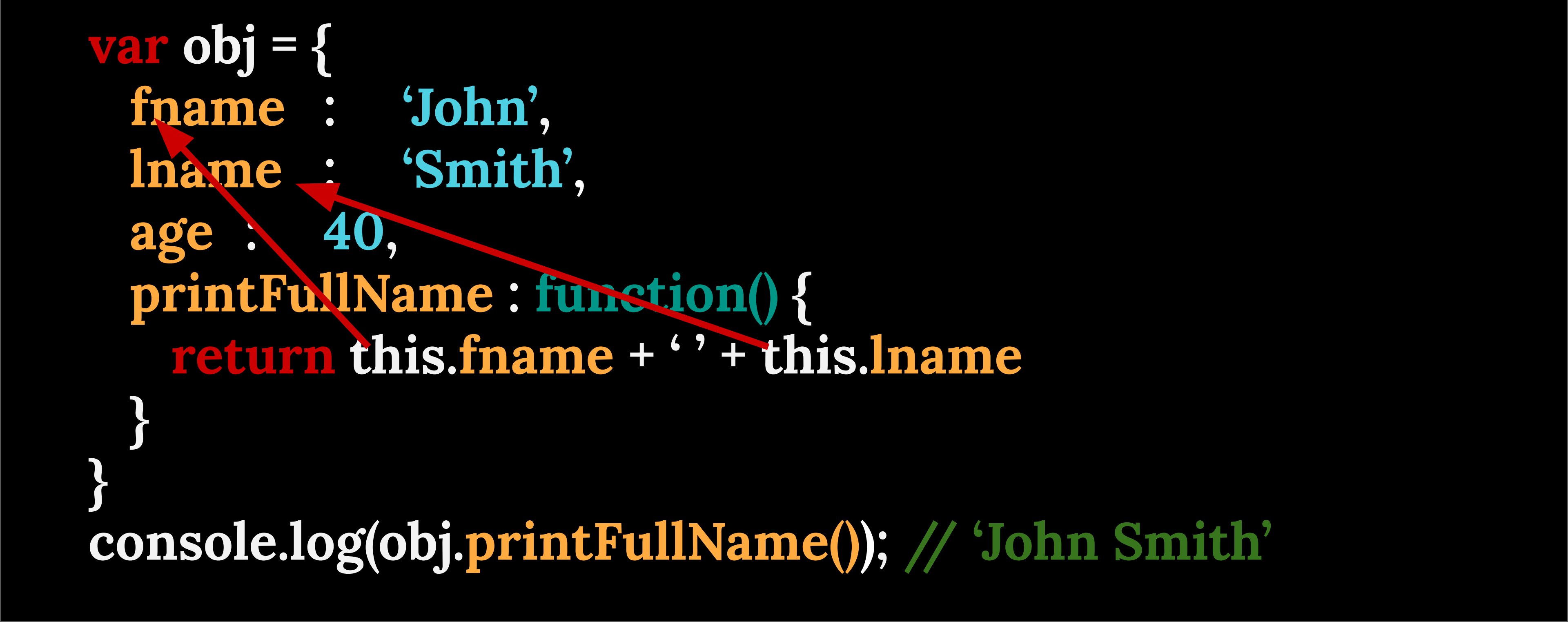
```
var obj = {
   fname :   ‘John’,
   lname :   ‘Smith’
}

console.log(obj.fname + ‘ ’ + obj.lname); // ‘John Smith’
```

commas

Object Can Contain Functions

```
var obj = {
  fname   :    ‘John’,
  lname   :    ‘Smith’,
  age  :    40,
  printFullName : function() {
    return this.fname + ‘ ’ + this.lname
  }
}
console.log(obj.printFullName()); // ‘John Smith’
```

this keyword references key value pairs inside the object



```
var obj = {
   fname   :    ‘John’,
   lname   :    ‘Smith’,
   age   :    40,
   printFullName : function() {
      return this.fname + ‘ ’ + this.lname
   }
}
console.log(obj.printFullName()); // ‘John Smith’
```

Object Can Also Contain Arrays!

```
var obj = {
  fname   :    ‘John’,
  lname   :    ‘Smith’,
  printFullName : function() {
    return this.fname + ‘ ’ + this.lname
  },
  kids :    [‘Nick’, ‘Sarah’]
}
```

Object Can Also Contain Other Objects!

```
var obj = {
  fname      :     ‘John’,
  lname      :     ‘Smith’,
  attributes : {
          age :  30,
          height :  ‘5-9’,
          weight :  150
      }
}
console.log(obj.attributes.age);
```

Updating A Value

```
var obj = {
   fname   :    ‘John’,
   lname   :    ‘Smith’
}

obj.fname = ‘Jane’;
console.log(obj.fname);
```

Updating Or Adding A New Key Value Pair

```
var obj = {
  fname  :   ‘John’,
  lname  :   ‘Smith’
}

obj[‘age’] = 50;
console.log(obj.age);
```

Updating A Value via A Function and this

```
var obj = {
   fname      :      ‘John’,
   lname      :      ‘Smith’,
   updateName: function(first, last) {
             this.fname = first;
             this.lname = last;
   }
}
obj.updateName(‘Jane’, ‘Doe’);
console.log(obj.fname + ‘ ’ + obj.lname);
```

While Loop

The while loop is a special kind. It uses conditionals to determine if the loop should stop.

While Loop Syntax

```
while (conditional) {
   //body of code to execute
}
```

While Loop Syntax Example

```
var x=10;

while (x>0) {
   //decrements x by 1 each loop
   console.log(x);
   x--;
}
```

Infinite While Loop

```
while (true) {
    //Will console log forever
    console.log(“Infinite Loop”);
}
```