

### The good ol' while loop

```
var count = 0;
while (count < 10) {
  console.log(count);
  count = count + 1;
}</pre>
```

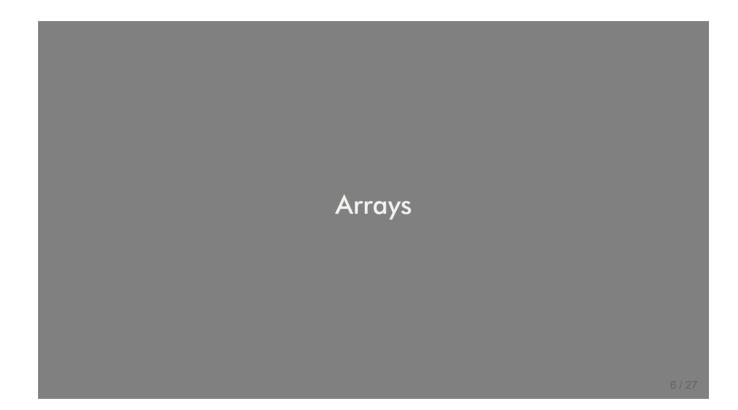
### The good ol' while loop, with post-increment

```
var count = 0;
while (count < 10) {
  console.log(count);
  // count = count + 1;
  count++;
}</pre>
```

### The for loop

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

## Collections



### A variable assigned to an empty array

var lottoNums = [];

### Adding values to an array

```
var lottoNums = [];
lottoNums.push(23);
lottoNums.push(11);
lottoNums.push(43);
lottoNums.push(19);
lottoNums.push(37);
lottoNums.push(16);
console.log(lottoNums);
// [23, 11, 43, 19, 37, 16]
```

### A variable assigned to an array of numbers

```
var lottoNums = [23, 11, 43, 19, 37, 16];
```

### Accessing an element in an array

```
var lottoNums = [23, 11, 43, 19, 37, 16];
console.log(lottoNums[0]);
// 23
console.log(lottoNums[3]);
// 19
```

### Accessing an element in an array

```
var lottoNums = [23, 11, 43, 19, 37, 16];
console.log(lottoNums[0]);
// 23
console.log(lottoNums[3]);
// 19
```

#### No error here:

```
console.log(lottoNums[30000000]);
// undefined
```

### Reassigning an element in an array

```
var lottoNums = [23, 11, 43, 19, 37, 16];
lottoNums[0] = 100
console.log(lottoNums[0]);
// 100
```

### Removing an element from the end of an array

```
var lottoNums = [23, 11, 43, 19, 37, 16];
lottoNums.pop(); // removes *and* returns
// 16

var thePoppedNumber = lottoNums.pop();
console.log(thePoppedNumber);
// 37
```

# Removing an element from the end beginning an array

```
var lottoNums = [23, 11, 43, 19, 37, 16];
var theShiftedNumber = lottoNums.shift();
console.log(theShiftedNumber);
// 23
```

# Removing an element from the middle of an array

```
var lottoNums = [23, 11, 43, 19, 37, 16];
var arrayOfSplicedValues = lottoNums.splice(2, 1);
console.log(arrayOfSplicedValues);
// [43]
```

#### Multiple values

```
var lottoNums = [23, 11, 43, 19, 37, 16];
var arrayOfSplicedValues = lottoNums.splice(2, 3);
console.log(arrayOfSplicedValues);
// [43, 19, 37]
```

### Converting a string to an array of words

```
var words = 'oh hey how is it going'.split(' ');
console.log(words);
// [ "oh", "hey", "how", "is", "it", "going" ]
```

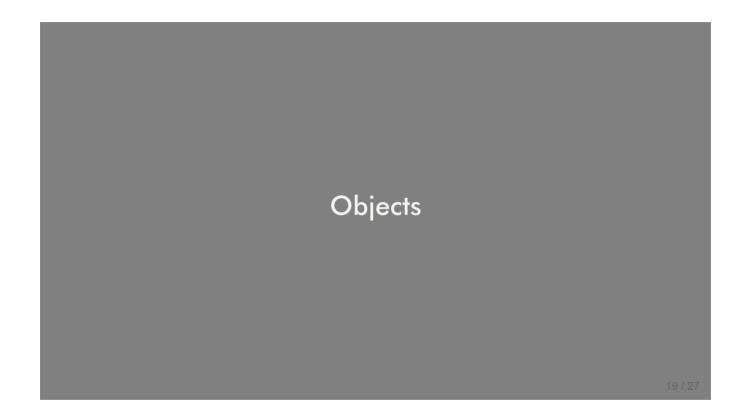
### Looping through an array

```
var words = 'oh hey how is it going'.split(' ');
for (var i=0; i<words.length; i++) {
  console.log(words[i]);
}</pre>
```

### Putting an array together into a string

```
var words = 'oh hey how is it going'.split(' ');
for (var i=0; i<words.length; i++) {
   console.log(words[i]);
}

console.log(words.join(' '));
// 'oh hey how is it going'</pre>
```



## JS Objects: like a python dictionary, only different

```
var characterSheet = {
  name: 'tim berners-lee',
  title: 'sir',
  powers: 'invent the web'
};
```

### Adding a property to an object

```
var characterSheet = {};
characterSheet['name'] = 'tim berners-lee';
characterSheet['title'] = 'sir';
characterSheet['powers'] = 'invent the web';
```

### Deleting properties from an object

```
var characterSheet = {};
characterSheet['name'] = 'tim berners-lee';
characterSheet['title'] = 'sir';
characterSheet['powers'] = 'invent the web';

delete characterSheet['title'];
```

### Dyanmic key names

```
var characterSheet = {
  name: 'tim berners-lee',
  title: 'sir',
  powers: 'invent the web'
};

var key = 'name';
console.log(characterSheet[key]);
```

### Dynamic key names in an array

```
var characterSheet = {
  name: 'tim berners-lee',
  title: 'sir',
  powers: 'invent the web'
};

var keys = ['name', 'title', 'powers'];
for (var i=0; i<keys.length; i++) {
  var keyName = keys[i];
  console.log(characterSheet[keyName]);
}</pre>
```

### Dynamic key names in an array, alternative

```
var characterSheet = {
  name: 'tim berners-lee',
  title: 'sir',
  powers: 'invent the web'
};

var keys = ['name', 'title', 'powers'];
for (var i=0; i<keys.length; i++) {
  // var keyName = keys[i];
  // console.log(characterSheet[keyName]);
  console.log(characterSheet[keys[i]]);
}</pre>
```

### Obtaining the keys programmatically

```
var characterSheet = {
  name: 'tim berners-lee',
  title: 'sir',
  powers: 'invent the web'
};

var keyNameList = Object.keys(characterSheet);
for (var i=0; i<keyNameList.length; i++) {
  console.log(characterSheet[keyNameList[i]]);
}</pre>
```

finito!