

# JavaScript Arrays

## Storing lots of data at once

- The variables I have used to this point store a single piece of information
  - Number, String, Boolean, or Object
- What do you do if you want multiple, *related* pieces of information?
- Store them in arrays

# Declaring An Array

- Declaring an array

```
var grades= [80, 87, 94, 82, 62, 98, 81, 81, 74, 91]
```

```
var foods = ['bananas', 'apples', 'pizza']
```

```
var images= document.getElementsByClassName['imgs']
```

```
var listItems = document.getElementsByTagName['li']
```



# Arrays

- An *array* is a collection of values

grades

array name

80	87	94	82	62	98	81	81	74	91
0	1	2	3	4	5	6	7	8	9

The diagram illustrates an array named 'grades' containing 10 elements. Each element is represented by a yellow box with a black border. Below each box is its corresponding numeric index, ranging from 0 to 9. A red arrow points from the label 'grades' to the first element (80). Another red arrow points from the label 'array name' to the first element (80). A third red arrow points from the label 'element' to the last element (91). A fourth red arrow points from the text 'Each element has a numeric index' to the index 4 (62).

element

Each element has a numeric *index*

# Accessing An Array

- Each value is called an element
- Elements are referenced by index

`grades[0]` refers to the value 80 (1<sup>st</sup> value)

`grades[4]` refers to the value 62 (5<sup>th</sup> value)

80	87	94	82	62	98	81	81	74	91
0	1	2	3	4	5	6	7	8	9

# Arrays

- The elements in the array DON'T have to be all the same type

```
var info= ["Colleen", 1715, "Walnut", 44004]
```



# JavaScript Arrays are Objects

- They have attributes and methods
- `grades.length`
- `grades.sort()`
- `grades.push(element)`
  - `grades[grades.length] = element`

# Review

- Learning to declare and manipulate arrays will make your code more powerful
- We can now play with new API methods:
  - `getElementsByTagName('t')`
  - `getElementsByClassName('c');`



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