BASIC ARRAY TECHNIQUE

Ultimate JavaScript arrays

CREATING ARRAYS

- JavaScript has handy array literal syntax which looks like this:
  `[1,2,3,4]`
- Arrays can also be created with the new keyword
- Arrays can be created by copying other arrays (advanced)

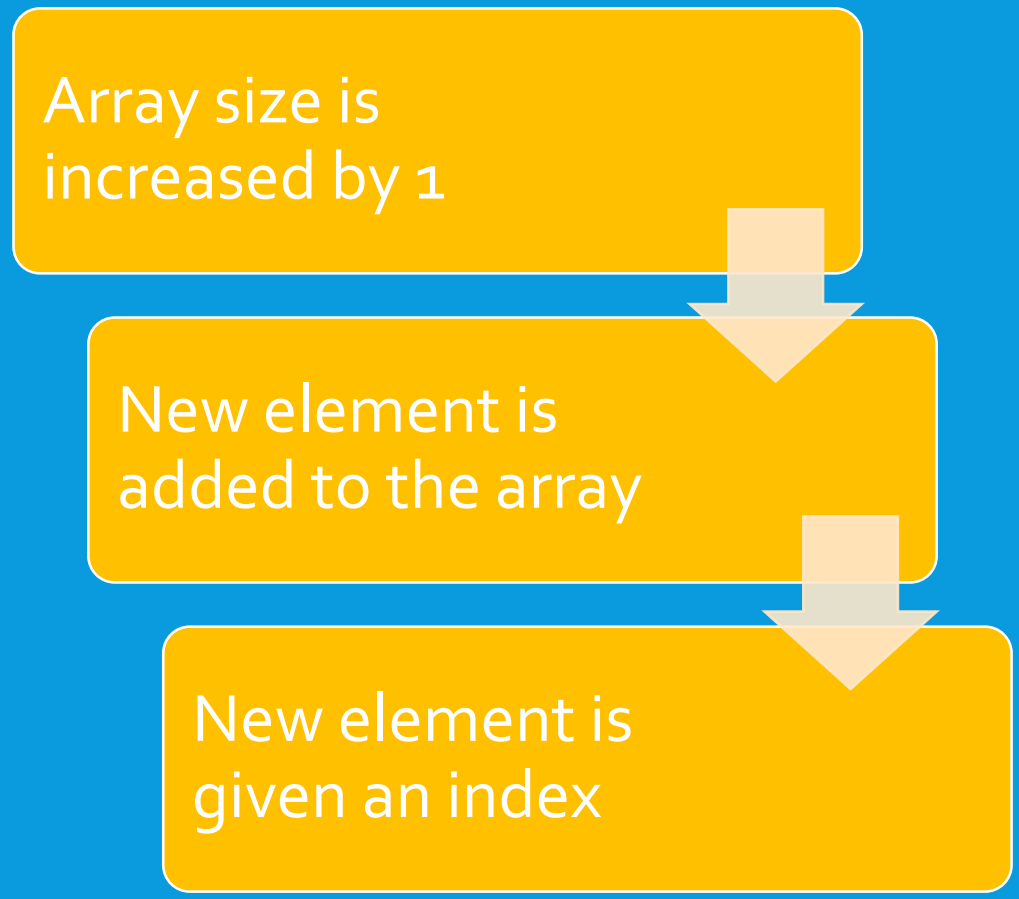
REFERRING TO ARRAY ELEMENTS

```
let array = [`a`,`b`,`c`]

array[0]; // "a"

array[1]; // "b"

array[2]; // "c"
```

- Array elements are accessed with square brackets
- Each element of the array is numbered with a consecutive integer, starting at 0
- The first element of an array has the index 0, the second element has the index 1, and so forth

ADDING ELEMENTS TO ARRAYS

- Elements can be added to end of arrays using the *push* keyword
- Add to the middle with *splice* keyword
- All the elements in an array can be added to another array with *concat*
- Elements can also be added by referring to a specific index (See next video)



MODIFYING ARRAY ELEMENTS

- Array elements can be replaced by setting a new value to their index
- Strings and numbers removed in this way are lost forever
- Objects removed in this way remain in memory unless no other references to them exist
- This method does not affect other array elements or change their index

USING STRINGS AS INDEXES

- Arrays can have properties accessed by strings, but these are not technically elements of the array
- Loops cannot access elements with string indexes (see next chapter for more on loops)
- Can lead to puzzling behaviour
- Using strings as indexes: not recommended

REMOVING ELEMENTS FROM ARRAYS

- Index of removed item can be set to undefined
  - Does not affect indexes of other items
  - Leaves a hole in the array
- Element can be removed with *splice* operator
  - Reduces the index of all subsequent elements by 1
  - Leaves no hole in the array
  - Previous array elements remain unchanged

CONCLUSION

- Arrays should be created with the array literal syntax (image left)
- Functions exist to add, remove and modify array elements
- Resizing of array is largely handled automatically
- Basic functionality a necessary compliment to looping techniques in next chapter

BASIC ARRAY TECHNIQUE CHEAT SHEET

Technique	Code
Create an array	let array = []
Add to an array	array.push(`a`)
Remove last element of array	array.pop()
Remove third element of array	array.splice(2, 1);
Replace element of array	array[3] = `e`
Get reference to second element of array	array[1]