# 6. Methods

1. Arrays

**array.concat(item...)**

Concat produces a new array containing a shallow copy of *this* array with the *items* appended to it. If an *item* is an array, then each of its elements is appended individually.

var a = ['a', 'b', 'c'];

var b = ['x', 'y', 'z'];

var c = a.concat(b, true);

// c is ['a', 'b', 'c', 'x', 'y', 'z', true]

**array.join(separator)**

Join method makes a string from an array. It does this by making a string of each of the array’s elements, and then concatenating them all together with a separator between them. The default separator is ','. To join without separation, use an empty string as the separator.

var a = ['a', 'b', 'c'];

var c = a.join(''); // c is 'abc';

**array.pop( )**

Pop method removes and returns the last element in this array. If the array is empty, it returns undefined.

var a = ['a', 'b', 'c'];

var c = a.pop(); // a is ['a', 'b'] & c is 'c';

**array.push(item...)**

Push method appends items to the end of an array. Unlike the concat method, it modifies the array and appends array items whole. It returns the new length of the array:

var a = ['a', 'b', 'c'];

var b = ['x', 'y', 'z'];

var c = a.push(b, true);

// a is ['a', 'b', 'c', ['x', 'y', 'z'], true]

// c is 5;

**array.reverse( )**

The reverse method modifies the array by reversing the order of the elements. It returns the array:

var a = ['a', 'b', 'c'];

var b = a.reverse();

// Both **a** and **b** are ['c', 'b', 'a']

**array.shift( )**

The shift method removes the first element from an array and returns it. If the array is empty, it returns *undefined*. Shift is usually much slower than pop:

var a = ['a', 'b', 'c'];

var c = a.shift(); // a is ['b', 'c'] & c is 'a'