

The JavaScript Array



Use this [link](#) as main reference

The following questions are meant to introduce the JavaScript array, the only built in list type in JavaScript (pre ES6), and the functionality it offers.

Whenever you encounter a new language the very first thing you usually should focus on, is its collection framework.

All questions are one-liners, so the main task is to figure out which method to use (hints are given for each question)

a) Create the two arrays below, spelled exactly as they are given. This will form the start for all the following questions.

```
var boys = ["Peter", "lars", "Ole"];  
var girls = ["Janne", "hanne", "Sanne"];
```

The array type has a method [concat\(\)](#) to merge two or more arrays (does **concat** mutate an existing array?)

b) Create a new array called **all**, which should be a concatenation of the two arrays given above, starting with the boys and ending with the girls.

c) The array type has a cool method to reduce an array into a single string [join\(\)](#) (you will love this method)

- Create a comma separated string containing all the names from the **all**-array, separated by commas.
- Create a hyphen (-) separated string containing all the names from the **all**-array, separated by hyphens.

The array type provide methods to **add** items to the start - [unshift\(\)](#) and to the end [push\(...\)](#) of an array.

d) Add the names Lone and Gitte to the end of the array (remember, all can be done in one-liners)

e) Add the names Hans and Kurt to the start of the array

The array type provide methods to **remove** items from the start [shift\(\)](#) and from the end [pop\(...\)](#) of an array.

f) Remove the first name in the array (Hans)

g) Remove the last name from the array (Gitte)

The array type provides a method [splice\(...\)](#) which changes the array by removing existing elements and/or adding new

h) Remove Ole and Janne from the middle of the array

The array type provides a method [reverse\(\)](#) to reverse the elements of an array

i) Sanne thinks it's unfair that the boys have to come first, reverse the **all** array, so that the girls come first.

The array type provides a method [sort\(\)](#) to sort the elements of an array

j) Peter thinks that this is just as unfair and suggests that the array should be sorted. Sort the array.

k) The default sort algorithm doesn't handle the situation where name can be either capitalized or not. Write a user-defined sort method to fix this problem.

Array methods with callbacks (there are many)

The array type provides a method [map\(\)](#) which returns a new array of the return value from executing the callback on every array item.

l) Convert all the names in the array to uppercase .

The array type has a method [filter\(\)](#) that creates a new array with all elements that pass the test implemented by the provided callback

m) Create a new array containing all the names that start with either "l" or "L" (hint: use the filter function with a sufficient callback).