# Filter()

The filter() method **creates a new array** with all elements that pass the test implemented by the provided function.

var newArray = arr.filter(callback(element[, index[, array]])[, thisArg])

### **Parameters**

**callback**

Function is a predicate, to test each element of the array. Return true to keep the element, false otherwise. It accepts three arguments:

**element**

The current element being processed in the array.

**index**Optional

The index of the current element being processed in the array.

**array**Optional

The array filter was called upon.

**thisArg**Optional

Value to use as this when executing callback.

### **Return value**

A new array with the elements that pass the test. If no elements pass the test, an empty array will be returned.

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const companies= [

  {name: "Company One", category: "Finance", start: 1981, end: 2004},

  {name: "Company Two", category: "Retail", start: 1992, end: 2008},

  {name: "Company Three", category: "Auto", start: 1999, end: 2007},

  {name: "Company Four", category: "Retail", start: 1989, end: 2010},

  {name: "Company Five", category: "Technology", start: 2009, end: 2014},

  {name: "Company Six", category: "Finance", start: 1987, end: 2010},

  {name: "Company Seven", category: "Auto", start: 1986, end: 1996},

  {name: "Company Eight", category: "Technology", start: 2011, end: 2016},

  {name: "Company Nine", category: "Retail", start: 1981, end: 1989}

];

// filter() returns a new array, here we stored the returned array in 'res'

// \_1st Example: show list of companies founded over 1990

let res = companies.filter((company)=> company.start > 1990);

console.log(res); // outputs list of companies founded over 1990

// \_2nd Example: show list of retail companies

let res2 = companies.filter(company=>company.category=='Retail');

console.log(res2);

// **\_3rd Example:** show list of companies that lasted more than 10 years

let res3 = companies.filter(company=> (company.end - company.start) >= 10);

console.log(res3);