# Python Arrays

**Note:** Python does not have built-in support for Arrays, but [Python Lists](https://www.w3schools.com/python/python_lists.asp) can be used instead.

## Arrays

**Note:** This page shows you how to use LISTS as ARRAYS, however, to work with arrays in Python you will have to import a library, like the [NumPy library](https://www.w3schools.com/python/numpy_intro.asp).

Arrays are used to store multiple values in one single variable:

### Example

Create an array containing car names:

cars = ["Ford", "Volvo", "BMW"]

## What is an Array?

An array is a special variable, which can hold more than one value at a time.

If you have a list of items (a list of car names, for example), storing the cars in single variables could look like this:

car1 = "Ford"  
car2 = "Volvo"  
car3 = "BMW"

However, what if you want to loop through the cars and find a specific one? And what if you had not 3 cars, but 300?

The solution is an array!

An array can hold many values under a single name, and you can access the values by referring to an index number.

## Access the Elements of an Array

You refer to an array element by referring to the index number.

### Example

Get the value of the first array item:

x = cars[0]

### Example

Modify the value of the first array item:

cars[0] = "Toyota"

## The Length of an Array

Use the len() method to return the length of an array (the number of elements in an array).

### Example

Return the number of elements in the cars array:

x = len(cars)

**Note:** The length of an array is always one more than the highest array index.

## Looping Array Elements

You can use the for in loop to loop through all the elements of an array.

### Example

Print each item in the cars array:

for x in cars:  
  print(x)

## Adding Array Elements

You can use the append() method to add an element to an array.

### Example

Add one more element to the cars array: cars = ["ford","volvo","bmw"]

cars.append("honda")

print(cars)

## Removing Array Elements

You can use the pop() method to remove an element from the array.

### Example

Delete the second element of the cars array:

cars.pop(1)

You can also use the remove() method to remove an element from the array.

### Example

Delete the element that has the value "Volvo":

cars.remove("Volvo")

**Note:** The list's remove() method only removes the first occurrence of the specified value.