

JavaScript Arrays

Storing Data in Arrays

JavaScript arrays are used to store **multiple values (strings, numbers, booleans, etc.)** in a **single variable**.

Empty Array

```
var cars = [ ];
```

Creating an Array

```
var cars = ["Saab", "Volvo", "BMW"];
```

3 Variables – Longer Method

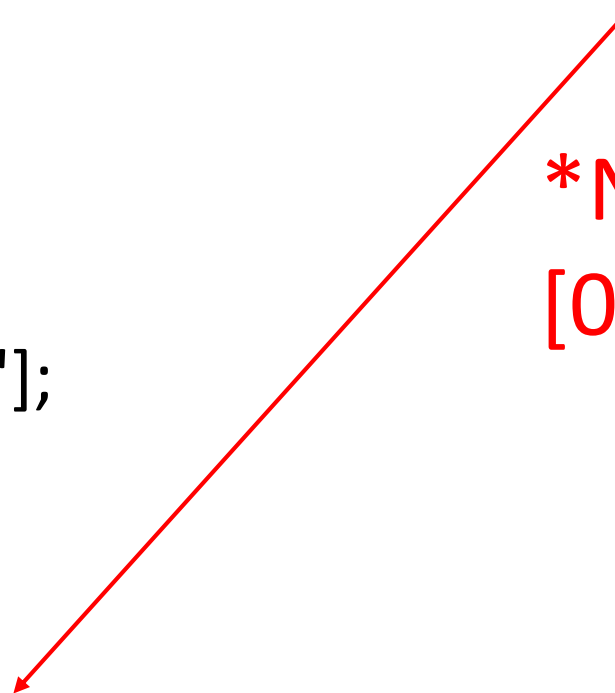
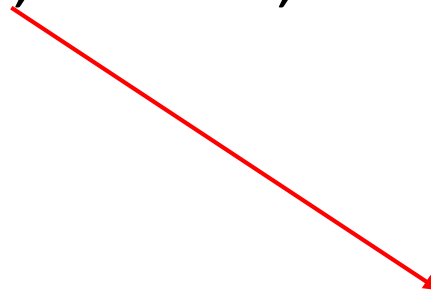
```
var car1 = "Saab";  
var car2 = "Volvo";  
var car3 = "BMW";
```

Array [**Index (position)**] – Begins at [0]

```
var cars = ["Saab", "Volvo", "BMW"];
```

***NOTE**

[0] is the first index



	0	1	2
cars	cars[0]	cars[1]	cars[2]
	Saab	Volvo	BMW

Array [**Index (position)**] – Last [**Index**]

****IMPORTANT**

arrayname[arrayname.length-1] is also another way to access the last index.

```
var cars = ["Saab", "Volvo", "BMW"];
```



	0	1	2
cars	cars[0]	cars[1]	cars[2]
	Saab	Volvo	BMW

```
<p id="demo"></p>
```

What is output?

```
<script>
```

```
var cars = ["Saab", "Volvo", "BMW"];
```

```
document.getElementById("demo").innerHTML = cars;
```

```
</script>
```


Declaring and Initializing Arrays Syntax ****Preferred Method**

1) Creates an Array, and 2) assigns values to it

```
var array_name = [item1, item2, ...];
```

```
var cars = ["Saab", "Volvo", "BMW"];
```

Declaring and Initializing Arrays Syntax – **Spanning several lines**

Creates an Array, and assigns values to it

```
var cars = [  
    "Saab",  
    "Volvo",  
    "BMW"  
];
```

ACCESSING Elements of an Array

<script>

| | 0 | 1 | 2 |
|------|-------------|--------------|------------|
| cars | cars[0] | cars[1] | cars[2] |
| | Saab | Volvo | BMW |

var cars = ["Saab", "Volvo", "BMW"];

var name = cars[0];

document.getElementById("demo").innerHTML = **name**;

</script>

What is the output?

ACCESSING Elements of an Array

<script>

| | 0 | 1 | 2 |
|------|-------------|--------------|------------|
| cars | cars[0] | cars[1] | cars[2] |
| | Saab | Volvo | BMW |

var cars = ["Saab", "Volvo", "BMW"];

document.getElementById("demo").innerHTML = **cars[0];**

</script>

What is the output?

ACCESSING Elements of an Array **at the END**

<script>

| | 0 | 1 | 2 |
|------|-------------|--------------|------------|
| cars | cars[0] | cars[1] | cars[2] |
| | Saab | Volvo | BMW |

var cars = ["Saab", "Volvo", "BMW"];

document.getElementById("demo").innerHTML = **cars[cars.length - 1];**

</script>

What is the output?

CHANGING Elements of an Array – use = operator

Refer to their index number.

	0	1	2
cars	cars[0]	cars[1]	cars[2]
	Saab	Volvo	BMW

cars[0] = “Opel”;

document.getElementById("demo").innerHTML = **cars[0];**

DISPLAYING the entire Array

<script>

| | 0 | 1 | 2 |
|------|---------|---------|---------|
| cars | cars[0] | cars[1] | cars[2] |
| | Saab | Volvo | BMW |

var cars = ["Saab", "Volvo", "BMW"];

document.getElementById("demo").innerHTML = **cars**;

</script>

**What is the
output?**