

THE INTRODUCTION TO

ARRAYS

- ▶ Arrays are container-like values that can hold other values. The values inside an array are called elements.
- ▶ When creating an array the common practice is to create a variable and use the [] brackets to initialize the array.
Example:

```
var namesArray = ["Mr. Fancy", "Da Business", "Bunkis"];
```

elements are separated by a comma

- ▶ Array elements don't all have to have the same type of values. Elements can be any kind of JavaScript value, including an array.

```
var multiValueArr = ["String", [3,44,2],2000,false,{key:"value"}];
```

- ▶ To access an array element you'll use the brackets with a specific element number inside.

Example: `multiValueArr[2];` *//output is 2000*

Arrays elements begin at 0.

- ▶ To access the last element in an array we can use the `.length` property. But wait! The `.length` property starts counting at 1 not 0. So to access the last element in an array we subtract 1.

Example:

```
multiValueArr[multiValueArr.length - 1]; //output is {key:"value"};
```

- ▶ We can also reassign elements by using bracket notation.

Example: `multiValueArr[0] = "Captain Fancy";`

- ▶ Looping in arrays: We can use the for loop just like we do with strings.
- ▶ For Loop

```
var testArray = [1, 2, 3, 4, 5];  
var sum = 0;  
for (var i = 0; i < testArray.length; i++) {  
    sum += testArray[i];  
}
```

- ▶ Arrays are a non-primitive datatype - This means we can manipulate the array directly.

```
1  var newArr = [1,2,3,4,5,6]
2
3  newArr[2] = 10;
4  newArr // [1,2,10,4,5,6]
```

- ▶ Using the Pop and Push array method.
- ▶ The pop array method will remove the last element of the array and return that value.

```
1  var newArr = [1,2,3,4,5,6]
2
3  newArr.pop();
4  console.log(newArr); //Output [1,2,3,4,5];
```

- ▶ The Push array method will simply add the argument provided into the array as the new last element of the array & returns that argument as well.
- ▶ Example

```
1  var newArr = [1,2,3,4,5,6]
2
3  newArr.push(7);
4  console.log(newArr) //Outputs [1,2,3,4,5,6,7];
```


- ▶ The shift method will remove the value from the front of the array and return that value removed.

```
1  var newArr = [1,2,3,4,5,6]
2
3  newArr.shift();
4  console.log(newArr) //Outputs [2,3,4,5,6]
```

- ▶ The unshift method will add the argument to front of the array and return that value added.

```
1  var newArr = [1,2,3,4,5,6]
2
3  newArr.unshift(0);
4  console.log(newArr) //Outputs [0,1,2,3,4,5,6]
```

JAVASCRIPT ARRAYS

- ▶ [MDN POP Method](#)
- ▶ [MDN PUSH Method](#)
- ▶ [MDN SHIFT Method](#)
- ▶ [MDN UNSHIFT Method](#)