WDD 131

| Home | W1 | W2 | W3 | W4 | W5 | W6 | W7 |

W03 Learning Activity: JavaScript Arrays

Overview

An array is a data structure that stores a multiple values in a single variable instead of declaring separate variables for each value.

Prepare

In JavaScript, arrays can be declared like this:

```javascript
let scores = [100, 72, 83, 94, 88, 87];
```

```javascript
let names = ['Nancy','Blessing','Jorge','Svetlana'];
```

Arrays are zero-based indexed, meaning the first element is at index 0, the second element is at index 1, and so on.

Arrays can be accessed by an index reference:

```javascript
let aScore = scores[0];  // The aScore variable is assigned the value of 100
```

Arrays values can be modified:

```javascript
scores[0] = 99; // This assignment expression changed the first score in the
```

Arrays can be iterated over using a classic for loop:

```javascript
for (let i = 0; i < scores.length; i++) {
  console.log(scores[i]);
}
```

Preferred: Arrays can be iterated over using other looping structures like **forEach**:

```
scores.forEach(function(score) {
  console.log(score);
});
```

Arrays have a **length** property:

```
let numScores = scores.length; // The numScores variable is assigned the valu
```

Array Methods

Arrays have a number of methods that can be used to manipulate (change) them:

```
scores.push(100); // Adds a new element to the end of the array
```

```
scores.pop(); // Removes the last element from the array
```

```
scores.shift(); // Removes the first element from the array
```

```
scores.unshift(100); // Adds a new element to the beginning of the array
```

```
scores.slice(2,3); // Cut out a portion of the array starting at an index for
```

```
scores.splice(2, 1); // Removes 1 element from the array starting at index 2
```

```
scores.join(', '); // transform the array into a single string with a comma a
```

- Reference [JavaScript Arrays Reference](#) – MDN

  > This reference provides a complete list of array methods of which some will
  > be used extensively in this course.

Check Your Understanding

Given this array declaration:

```
let names = ['Nancy','Blessing','Jorge','Svetlana'];
```

✓ What is the value of the following expression?

```
names[2];
```

> ▶ Answer

✓ What is the value of the following expression?

```
names.length;
```

> ▶ Answer

✓ What is the index of the last item in the array? (Svetlana)

> ▶ Answer

✓ What does the following expression do?

```
names.push('Sally');
```

> ▶ Answer

Optional Resources

- [Master JavaScript Array Methods Like a Pro](#)

Week 03 Home