Training Day19 report

3 July 2024

Introduction about Javascript Array:

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

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

Example:

let fruits=["apple", 123, 4.5, -9.2, true, "9876539579"]

console.log("Orignal list :", fruits);

console.log("Length of list:" ,fruits.length);

Output:

PS C:\Users\dell\Documents\Javascript.js> node "c:\Users\dell\Documents\Javascript.js\tempCodeRunnerFile.js"

Orignal list : [ 'apple', 123, 4.5, -9.2, true, '9876539579' ]

Length of list: 6

Creating an Array:

Using an array literal is the easiest way to create a JavaScript Array.

Syntax: const array\_name = [item1, item2, ...];

## Accessing Array Elements

You access an array element by referring to the **index number**:

let fruits=["apple", 123, 4.5, -9.2, true, "9876539579"]

console.log("Orignal list :", fruits);

console.log("Length of list:" ,fruits.length);

console.log(fruits[0]);

Output:

PS C:\Users\dell\Documents\Javascript.js> node "c:\Users\dell\Documents\Javascript.js\array.js"

Orignal list : [ 'apple', 123, 4.5, -9.2, true, '9876539579' ]

Length of list: 6

apple

## Changing an Array Element

let fruits=["apple", 123, 4.5, -9.2, true, "9876539579"]

console.log("Orignal list :", fruits);

console.log("Length of list:" ,fruits.length);

console.log(fruits[0]);

fruits[0]="Cherry";

console.log("Orignal list :", fruits);

## Output:

## PS C:\Users\dell\Documents\Javascript.js> node "c:\Users\dell\Documents\Javascript.js\array.js"

## Orignal list : [ 'apple', 123, 4.5, -9.2, true, '9876539579' ]

## Length of list: 6

## apple

## Orignal list : [ 'Cherry', 123, 4.5, -9.2, true, '9876539579' ]

## Converting an Array to a String

The JavaScript method toString() converts an array to a string of (comma separated) array values.

let fruits=["apple", 123, 4.5, -9.2, true, "9876539579"]

console.log("Orignal list :", fruits);

console.log("Length of list:" ,fruits.length);

console.log(fruits[0]);

fruits[0]="Cherry";

console.log("Orignal list :", fruits);

console.log("String:", fruits.toString());

## Output:

## PS C:\Users\dell\Documents\Javascript.js> node "c:\Users\dell\Documents\Javascript.js\array.js"

## Orignal list : [ 'apple', 123, 4.5, -9.2, true, '9876539579' ]

## Length of list: 6

## apple

## Orignal list : [ 'Cherry', 123, 4.5, -9.2, true, '9876539579' ]

## String: Cherry,123,4.5,-9.2,true,9876539579

## Arrays are Objects:

Arrays are a special type of objects. The typeof operator in JavaScript returns "object" for arrays.

But, JavaScript arrays are best described as arrays.

Arrays use **numbers** to access its "elements".

## Objects use **names** to access its "members".

## Array Properties and Methods:

The real strength of JavaScript arrays are the built-in array properties and methods:

## The length Property: The length property of an array returns the length of an array (the number of array elements).

## Accessing the First Array Element

## Accessing the Last Array Element

## Adding Array Elements: The easiest way to add a new element to an array is using the push() method. New element can also be added to an array using the length property.

## Example:

let fruits=["apple", 123, 4.5, -9.2, true, "9876539579"]

console.log("Orignal list :", fruits);

console.log("Length of list:" ,fruits.length);

console.log(fruits[0]);

console.log(fruits[fruits.length-1]);

fruits[0]="Cherry";

console.log("Orignal list :", fruits);

console.log("String:", fruits.toString());

console.log("After pop :", fruits.pop());

console.log("Orignal list :", fruits);

console.log("Push the element:", fruits.push("orange"));

console.log("Orignal list :", fruits);

console.log("String:", fruits.toString());

console.log("String:", fruits.join("/"));

let trees=[",NEEM","MANGOTREE", "COCOCUTTREE","OAKTREE"]

console.log("COMBINE :", fruits + trees);

console.log("Orignal list :", [fruits + trees]);

console.log("Orignal list :", [fruits]+[trees]);

## Output:

## PS C:\Users\dell\Documents\Javascript.js> node "c:\Users\dell\Documents\Javascript.js\array.js"

## Orignal list : [ 'apple', 123, 4.5, -9.2, true, '9876539579' ]

## Length of list: 6

## apple

## 9876539579

## Orignal list : [ 'Cherry', 123, 4.5, -9.2, true, '9876539579' ]

## String: Cherry,123,4.5,-9.2,true,9876539579

## After pop : 9876539579

## Orignal list : [ 'Cherry', 123, 4.5, -9.2, true ]

## Push the element: 6

## Orignal list : [ 'Cherry', 123, 4.5, -9.2, true, 'orange' ]

## String: Cherry,123,4.5,-9.2,true,orange

## String: Cherry/123/4.5/-9.2/true/orange

## COMBINE : Cherry,123,4.5,-9.2,true,orange,NEEM,MANGOTREE,COCOCUTTREE,OAKTREE

## Orignal list : [

## 'Cherry,123,4.5,-9.2,true,orange,NEEM,MANGOTREE,COCOCUTTREE,OAKTREE'

## ]

## Orignal list : Cherry,123,4.5,-9.2,true,orange,NEEM,MANGOTREE,COCOCUTTREE,OAKTREE