Arrays

Arrays are variables which can hold more than one value

Const fruits = ["banana" , "apple", "grapes"]

Const $a_1 = [7, \text{"harry"}, \underline{false}]$ Can be different types

Accessing values

Let numbers = [1,7,9,21]

Numbers[0] \longrightarrow 1 Numbers.length \longrightarrow 4

Changing the values

Let numbers = [7,2,40,9]

Numbers[2] = 8 "numbers" now becomes [7,2,8,9]

Arrays are mutable, arrays can be changed

In JS , arrays are objects the typeof operator on arrays returns object Const n=[1,7,9]Typeof $n\longrightarrow$ returns "object"

Array methods

There are some important array methods in Js . Some of them are as follows :

1. tostring() - converts an array to a string of comma seprated values

2. **join()** - join all the array elements using a seperator

3. **pop()** - removes last element from the array

4. push() - adds a new element at the end of the array

- 5. Shift() removes first element and returns it
- 6. Upshift() adds element to the beginning returns the new array length
- 7. Delete() array elements can be deleted using the delete operator

8. Concat() - used to join arrays to the given

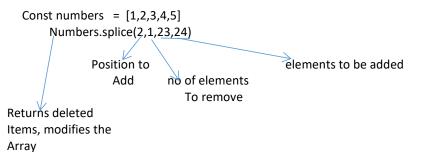
Let a1 =
$$[1,2,3]$$

Returns a new array does not change existing arrays

9. Sort() - sort() method is used to sort an array alphabetically

Sort() takes optional compare function . if this function is provided as the first argument , the sort() function will consider these values (the values returned from the compare function) as the basis of sorting

10. Splice() - splice can be used to add new items to an array



11. Slice() - slices out a piece from an array it creates a new array

12. Reverse() - reverses the elements in the source array

Looping through Arrays -

Arrays can be looped through using the classical Js for loop or through some other methods discussed below -

1. For...each loop - calls a function , once for each array element

- 2. Map() creates a new array by performing some operation on each array element.

3. Filter() - filters an array with values that passes a test. Creates a new array

4. Reduce method - reduces an array to a single value

Const
$$n = [1,8,7,11]$$

Let sum = n.reduce(add) -----> a function

5. Array.from() - used to create an array from any other object

Array.from("harry")

- 6. For.....of loop for.....of loop can be used to get the values from an array
- 7. For.....in loop for....in loop can be used to get the keys from an array