**Maps and Sets Exercise**

1. What does the following code return?  
   **new Set([1,1,2,2,3,4])**

**A**: a Set is a collection of unique values, so it stores only distinct elements, ignoring/removing duplicates. The code will return a Set containing unique values from the array:

`Set {1, 2, 3, 4 }`

1. What does the following code return?

**[…new Set("referee")].join("")**

1. a Set is created using the string "referee" which can be treated as an array of characters. The Set constructor will remove duplicate characters and convert it to a set of unique characters. The code will return a string containing unique characters:

`"ref"`

1. What does the Map ***m*** look like after running the following code?

**let m = new Map();**

**m.set([1,2,3], true);**

**m.set([1,2,3], false);**

**A**. The Map ***m*** will contain two key-value pairs:

([1, 2, 3], true)

([1, 2, 3], false)

This is because the two arrays `[1, 2, 3]` are considered different keys in the Map. Arrays are reference types, so even if they have the same content, they are treated as different keys because they have different references.

1. Write a function called **hasDuplicate** which accepts an array and returns true or false if that array contains a duplicate.

Example:

hasDuplicate([1, 3, 2, 1]) // true

hasDuplicate(1, 5, -1, 4]) // false

1. const hasDuplicate = arr => new Set(arr).size !== arr.length;
2. Write a function called **vowelCount** which accepts a string and returns a map where the keys are numbers and the values are the count of the vowels in the string.

Example:

vowelCount('awesome') // Map { 'a' => 1, 'e' => 2, 'o' => 1 }

vowelCount('Colt') // Map { 'o' => 1 }