Given integer array, return true if any value appears at least twice in the array, else false.

$$[1, 2, 3, 1] \longrightarrow True$$

$$[1, 2, 3, 4] \longrightarrow false$$

~~~~~~

hashmap = {

traversed through list → O(n) ←time-   '1' : +2
Create a hashmap   → O(n) → space   '2' : 1
                                         '3' : 1

                              }

~~~~~~

input array

set (input)   length == input
                        return false
                else

return true

$O(1)$ ~ $O(n)$

$O(n) \rightarrow$ Space

Sorted $\left[1, 8, 9, 1, 2, 3, 2, 4, 8 \right]$

$\left[1, 1, 2, 2, 3, 4, 8, 8, 9 \right]$ $O(n \log n)$ Time

traverse through the sorted list, $O(n)$
or
$O(1)$.

if curre is equal to next

Brute force $\rightarrow$ $O(n^2)$ time

$O(1) \rightarrow$ Space