Question:→ Contains Duplicate (LeetCode)

$$[1,2,3,4], \quad [1,1,2,2,3,4]$$

↓ false

↓ true } boolean

$1, 2, 3, 4$ / $1, 1, 2, 2, 3, 4$ - - - -

Sort:→ $[1,2,3,4,1,] \Rightarrow 1,1,2,3,4$

$$arr[i] == arr[j+1]$$

$$\{ i < size(arr) - 1$$

int n = arr.size()

Sort (arr.begin(), arr.end())

return true

for (int i=0; i<n-1; i++)

```
    Ju ( (int i=0; i<n.. ;)
    {     if (arr[i] == arr[i+1])
          {
                return true;
          }
    }
return false;
```

$TC: \rightarrow$ sort $\Rightarrow \log n$
                    $+$
                $n \qquad \Rightarrow O(n \log n)$

Approach — 2

$\llcorner\rightarrow$ "HashSet"

$$[1, 2, 3, 4, 1, 2]$$

insert)

insert
$\{ 1, 2, 3, 4$ ✗ ✗ $\}$ false

duplicate

return true

⊛ "Problems around duplicate?
then apply ⇒ 'HashSet' "

Soln.

```
unordered_set<int> intSet;

for (int x : nums)
{
    //check duplicates
    if ( intSet.find(x) != intSet.end())
    { return true;
    }
    else
    { intSet.insert(x).
```

```
use {  inSet.insert(r);
        }
    }
    return false;
```