128 最长连续序列

```
Label：数组、并查集
给定一个未排序的整数数组 nums ，找出数字连续的最长序列（不要求序列元素在原数组中连续）的长度
    输入：nums = [100,4,200,1,3,2]
    输出：4
    解释：最长数字连续序列是 [1, 2, 3, 4]。它的长度为 4。
    输入：nums = [0,3,7,2,5,8,4,6,0,1]
    输出：9
```

- 排序

```
class Solution {
    public int longestConsecutive(int[] nums) {
        if (nums == null || nums.length == 0)return 0;

        Arrays.sort(nums);
        int count = 1;
        int re = 0;

        for (int i = 1; i < nums.length; i++) {
            if (nums[i] - 1 == nums[i-1]) {
                count++;
            } else if (nums[i] == nums[i-1]) {
                while (i < nums.length && nums[i] == nums[i-1]) {
                    i++;
                }
                i--;
            }else {
                re = Math.max(re,count);
                count = 1;
            }
        }
        return Math.max(re,count);
    }
}
```

- Hash

```
class Solution {
    public int longestConsecutive(int[] nums) {
        int n = nums.length;
        if (n == 0) return n;

        HashSet<Integer> set = new HashSet<>();

        for (int i=0;i<n;i++) {
            set.add(nums[i]);
        }

        int maxLength= Integer.MIN_VALUE;
        for (int a : set) { // set -> list

            if (set.contains(a - 1)) {
                continue;
            } else { // 断开，则开始统计
                int len = 0;
                while (set.contains(a++)) {
                    len++;
                }
                maxLength = Math.max(len, maxLength);
            }
        }
        return maxLength;
    }
}
```