128. Longest Consecutive Sequence

- Total Accepted: **78104**
- Total Submissions: **229322**
- Difficulty: **Hard**

Given an unsorted array of integers, find the length of the longest consecutive elements sequence.

For example,

Given [100, 4, 200, 1, 3, 2],

The longest consecutive elements sequence is [1, 2, 3, 4]. Return its length: 4.

Your algorithm should run in O(n) complexity.

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```cpp
//Tommy Hilfiger
class Solution {
public:
    map<int,bool> hashMap;
    int longestConsecutive(vector<int>& nums) {
        for(int i=0;i<nums.size();i++)
         hashMap.insert(pair<int,bool>(nums[i],true));
        int max=0;
        for(int i=0;i<nums.size();i++)
        {
            int up = nums[i]+1;
            while(hashMap.find(up)!=hashMap.end())
            {
                hashMap.erase(up);
                up++;
            }
            int down = nums[i]-1;
            while(hashMap.find(down)!=hashMap.end())
            {
                hashMap.erase(down);
                down--;
            }
            //zzw you should think why up-down+1 -2 ?
            if(up-down+1-2>max)
            max = up-down+1-2;
        }
        return max;
    }
};
```