1763. Longest Nice Substring

```
class Solution {
public:
    string longestNiceSubstring(string s) {
        unordered_set<char> missing;
        for (char c : s) {
            if (islower(c)) missing.insert(toupper(c));
            else missing.insert(tolower(c));
        }
        for (int i = 0; i < s.size(); i++) {
            if (missing.count(s[i])) {
                continue;
            }
            string s1 = longestNiceSubstring(s.substr(0, i));
            string s2 = longestNiceSubstring(s.substr(i + 1));
            return s1.size() >= s2.size() ? s1 : s2;
        }
        return s;
    }
};
```



190. Reverse Bits

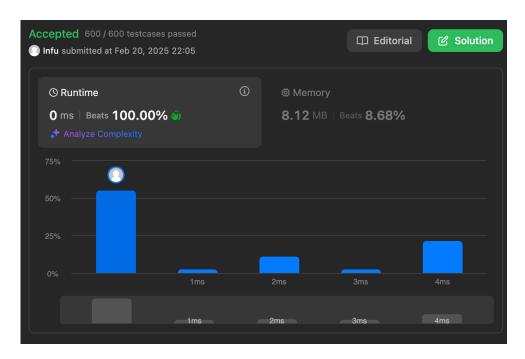
```
class Solution {
public:
    uint32_t reverseBits(uint32_t n)
    {
        string bits = bitset<32>(n).to_string();
        reverse(bits.begin(), bits.end());

        int ans = stoll(bits, NULL, 2);
        return ans;
    }
};
```



191. Number of 1 Bits

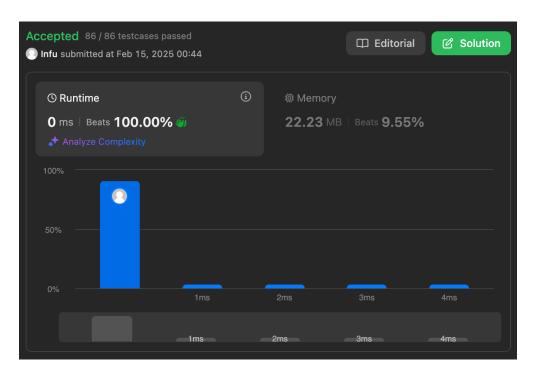
```
class Solution {
public:
    int hammingWeight(int n) {
        stack<int> s;
        while(n){
            s.push(n % 2);
            n = n / 2;
        }
        int count = 0;
        while(!s.empty()){
```



98. Validate Binary Search Tree

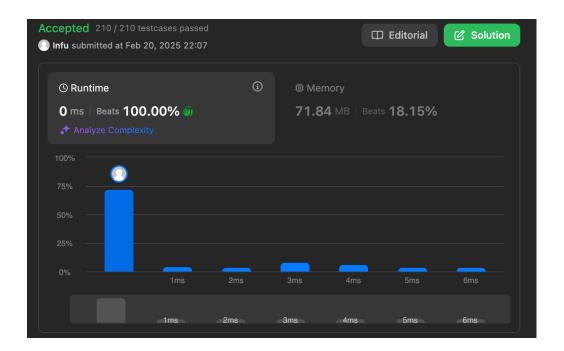
```
class Solution {
public:
    void inorder(TreeNode *root, vector<int>&ans)
    {
        if (root == NULL)
            return;
        inorder(root->left,ans);
        ans.push_back(root->val);
        inorder(root->right,ans);
```

```
bool isValidBST(TreeNode* root)
{
    vector<int>ans;
    inorder(root,ans);
    for(int i=1;i<ans.size();i++)
    {
        if(ans[i]<=ans[i-1])
        {
            return false;
        }
    }
    return true;
}</pre>
```



53. Maximum Subarray

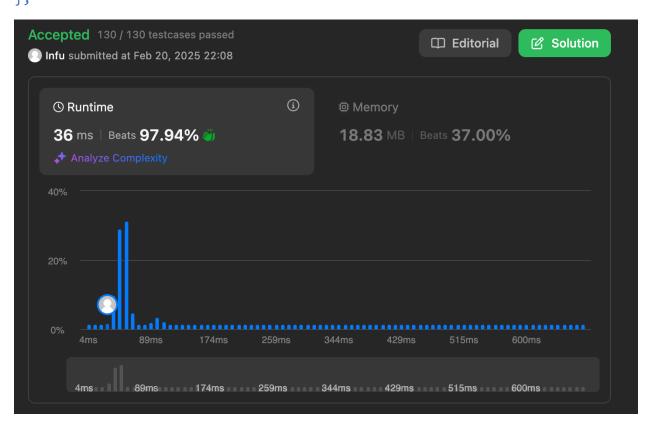
```
class Solution {
public:
    int maxSubArray(vector<int>& arr) {
    long long maxi = LONG_MIN; // maximum sum
    long long sum = 0;
    int n = arr.size();
   for (int i = 0; i < n; i++) {
        sum += arr[i];
        if (sum > maxi) {
            maxi = sum;
        }
        if (sum < 0) {
            sum = 0;
        }
    }
    return maxi;
    }
};
```



240. Search a 2D Matrix II

```
class Solution {
public:
    bool searchMatrix(vector<vector<int>>& matrix, int target) {
        int cols = matrix[0].size() - 1;
        int n = matrix.size() - 1;
        int rows = 0;

        while(rows <= n && cols >= 0){
            int toCompare = matrix[rows][cols];
            if(toCompare > target){
                cols--;
            }else if(toCompare < target){
                rows++;
                rows++;
               rows++;
                rows++;
                rows
```



372. Super Pow

```
class Solution {
public:
   int pow(int a, int b){
     if(b==0) return 1;
   int temp=pow(a,b/2);
```

```
if(b%2==0) return ((temp%1337)*temp%1337)%1337;
    else return (a%1337*((temp%1337*temp%1337)%1337))%1337;
}
int superPow(int a, vector<int>& b) {
    if(b.size()==0) return 1;
    int x=b.back(); b.pop_back();
    return pow(superPow(a, b), 10) * pow(a, x) % 1337;
}
.
```

