ASSIGNMENT 4

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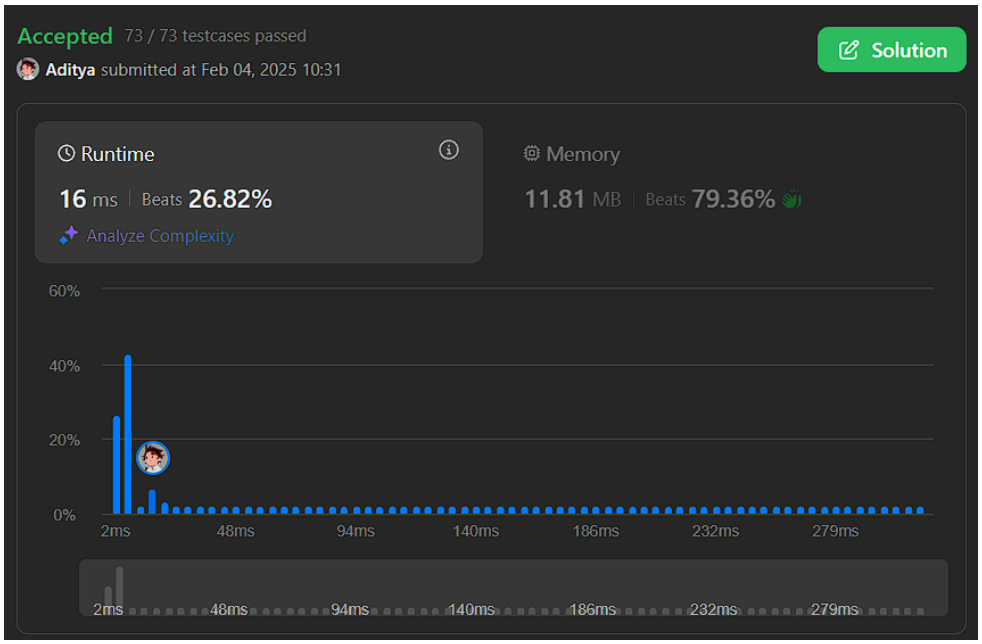
BRANCH: CSE **SECTION:** 22BCS_FL_IOT_603A
SEMESTER: 6 **DATE OF SUBMISSION:** 20/2/25
SUBJECT NAME: AP LAB -2 **SUBJECT CODE:** 22CSP-351

LEET CODE QUESTIONS :

1763.LONGEST NICE SUBSTRING

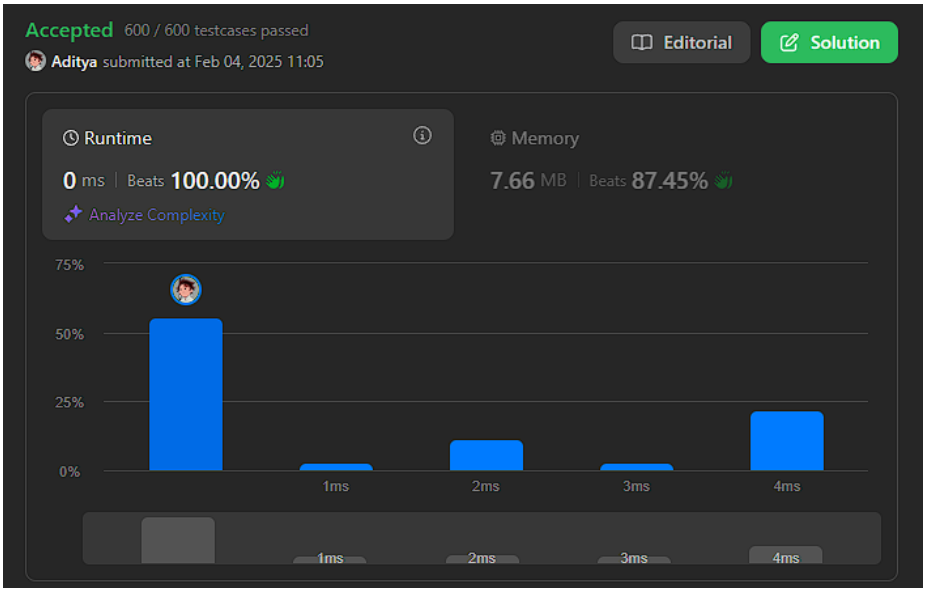
```
class Solution {
public:
    bool isnice(const unordered_set<char>& hs){
        for(char c:hs){
            if(islower(c)&& hs.find(toupper(c))==hs.end()){
                return false;
            }
            if(isupper(c)&& hs.find(tolower(c))==hs.end()){
                return false;
            }
        }
        return true;
    }
    string longestNiceSubstring(string s) {
        int n=s.length();
        if (n<2) return "";
        string ans="";
        for (int i=0; i<n; i++) {
            unordered_set<char> hs;
            for (int j=i; j<n; ++j) {
                hs.insert(s[j]);
                if (isnice(hs)) {
                    if (j-i+1 > ans.length()) {
                        ans = s.substr(i, j - i + 1);
                    }
```

```
            }
        }
        return ans;
    }
};
```



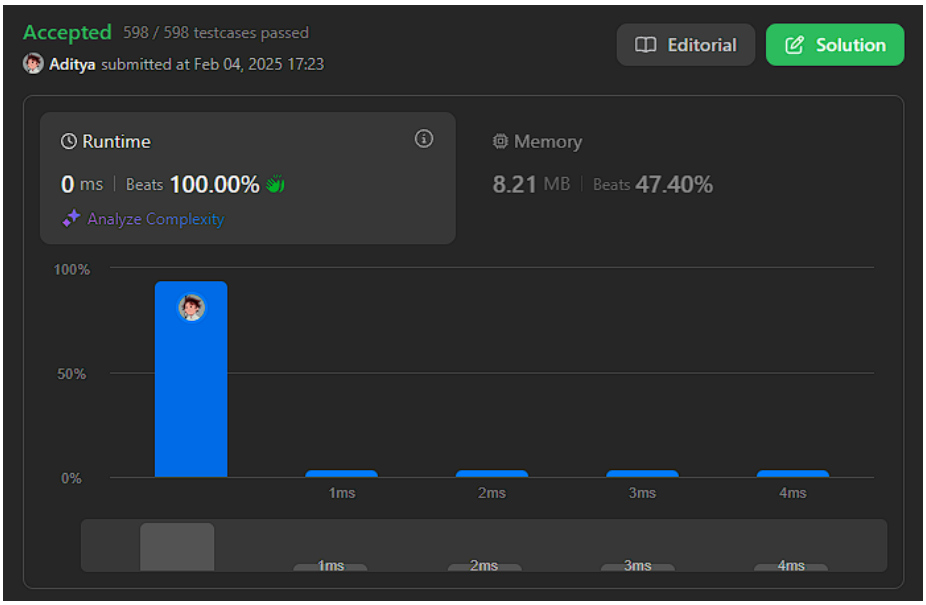
190.REVERSE BITS

```
class Solution {
public:
    uint32_t reverseBits(uint32_t n) {
        uint32_t ans=0;
        for(int i=0; i<32; i++){
            ans<<=1;
            ans |=(n&1);
            n>>=1;
        }
        return ans;
    }
};
```



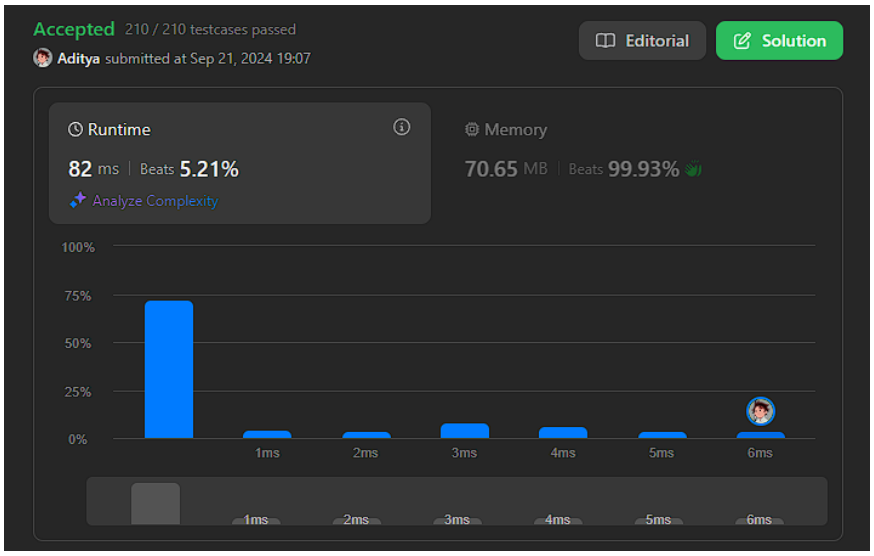
191.NUMBER OF 1 BITS

```
class Solution {
public:
    int hammingWeight(int n) {
        int ans=0;
        for(int i=31; i>=0; i--){
            if(((n>>i)&1)==1){
                ans++;
            }
        }
        return ans;
    }
};
```



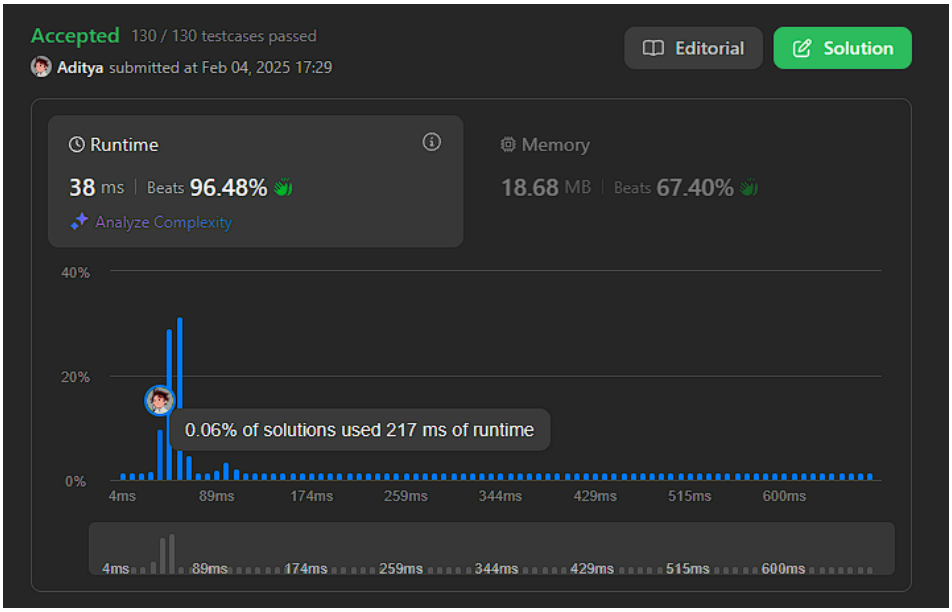
53.MAXIMUM SUBARRAY

```
class Solution {
public:
    int maxSubArray(vector<int>& nums) {
        int ans=INT_MIN;
        int sum=0;
        for(int i=0; i<nums.size(); i++){
            sum+=nums[i];
            ans=max(ans,sum);
            if(sum<0){
                sum=0;
            }
        }
        return ans;
    }
};
```



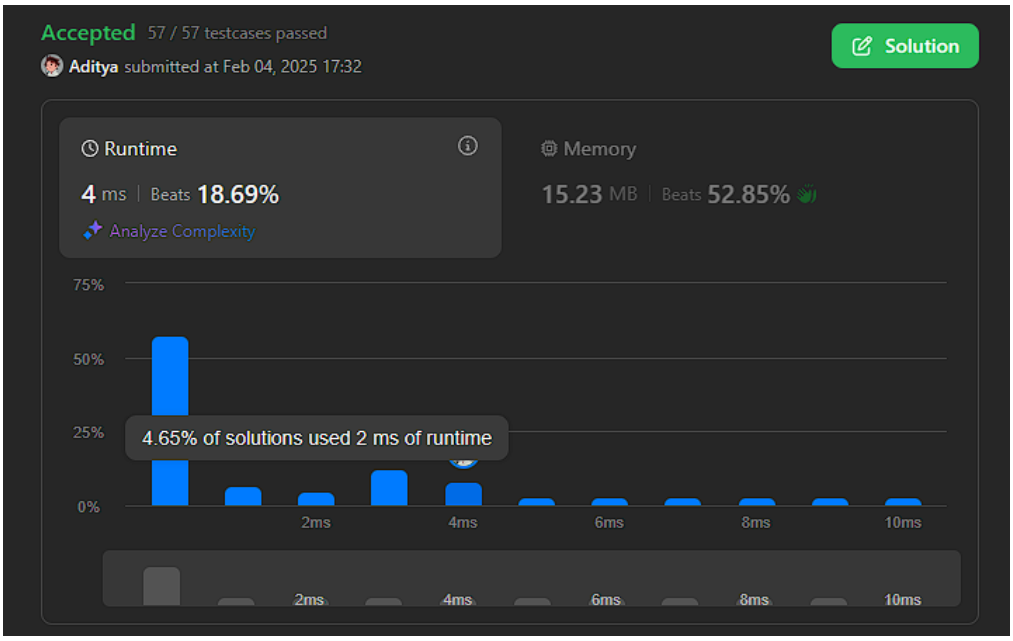
240.SEARCH A 2D MATRIX II

```
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++;
            }else{
                return true;
            }
        }
        return false;
    }
};
```



372.SUPER POW

```
class Solution {
    const int base = 1337;
    int powmod(int a, int k)
    {
        a %= base;
        int result = 1;
        for (int i = 0; i < k; ++i)
            result = (result * a) % base;
        return result;
    }
    public:
    int superPow(int a, vector<int>& b) {
        if (b.empty()) return 1;
        int last_digit = b.back();
        b.pop_back();
        return powmod(superPow(a, b), 10) * powmod(a, last_digit) % base;
    }
};
```


Accepted 57 / 57 testcases passed
Aditya submitted at Feb 04, 2025 17:32
Solution
Runtime
4 ms | Beats 18.69%
Analyze Complexity
Memory
15.23 MB | Beats 52.85%
75%
50%
25%
0%
4.65% of solutions used 2 ms of runtime
2ms
4ms
6ms
8ms
10ms