

# Assignment

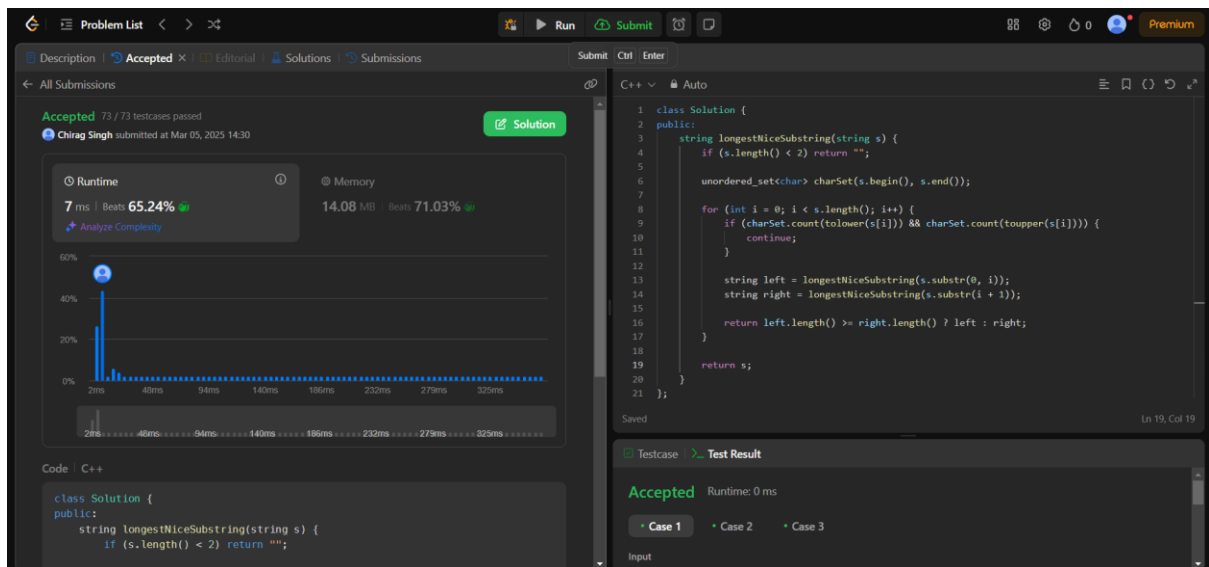
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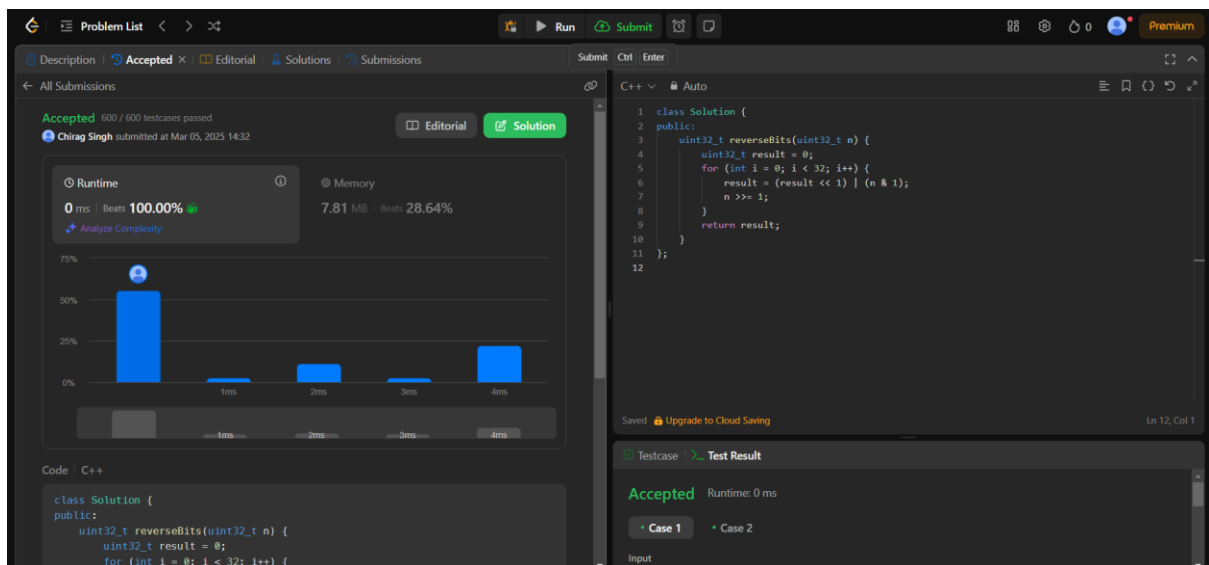
Section: FL\_603

Subject: AP

## Longest Nice Substring



## Reverse Bits



# Number of 1 Bits

The screenshot shows a C++ solution for the 'Number of 1 Bits' problem. The code is as follows:

```
1 class Solution {
2 public:
3     int hammingWeight(int n) {
4         int count = 0;
5         while (n) {
6             n &= (n - 1);
7             count++;
8         }
9         return count;
10    };
11 };
12
```

The submission status is 'Accepted' with 598 / 598 testcases passed. The runtime is 0 ms, beating 100.00% of solutions. The memory usage is 8.22 MB, beating 47.55% of solutions. The test result for Case 1 is 'Accepted' with a runtime of 0 ms.

# Maximum Subarray

The screenshot shows a C++ solution for the 'Maximum Subarray' problem. The code is as follows:

```
1 class Solution {
2 public:
3     int maxSubArray(vector<int>& nums) {
4         int maxSum = nums[0], currentSum = nums[0];
5
6         for (int i = 1; i < nums.size(); i++) {
7             currentSum = max(nums[i], currentSum + nums[i]);
8             maxSum = max(maxSum, currentSum);
9         }
10
11         return maxSum;
12    };
13 };
14
```

The submission status is 'Accepted' with 210 / 210 testcases passed. The runtime is 0 ms, beating 100.00% of solutions. The memory usage is 71.72 MB, beating 53.05% of solutions. The test result for Case 1 is 'Accepted' with a runtime of 0 ms.

## Search a 2D Matrix II

The screenshot shows a C++ solution for the 'Search a 2D Matrix II' problem. The code is as follows:

```
1 class Solution {
2 public:
3     bool searchMatrix(vector<vector<int>>& matrix, int target) {
4         int m = matrix.size();
5         int n = matrix[0].size();
6
7         int i=0;
8         int j=n-1;
9
10        while(i<m && j>=0)
11        {
12            if(matrix[i][j]==target)
13            {
14                return true;
15            }
16            else if(matrix[i][j]>target)
17            {
18                j--;
19            }
20            else
21            {
22                i++;
23            }
24        }
25        return false;
26    }
27};
```

The submission is accepted, with 130 / 130 testcases passed. The runtime is 56 ms (Beats 44.56%) and the memory is 18.85 MB (Beats 37.17%). A bar chart shows the runtime distribution across various time intervals.

## Super Pow

The screenshot shows a C++ solution for the 'Super Pow' problem. The code is as follows:

```
5 int modPow(int x, int n) {
6     int result = 1;
7     x %= MOD;
8     while (n > 0) {
9         if (n % 2 == 1) result = (result * x) % MOD;
10        x = (x * x) % MOD;
11        n /= 2;
12    }
13    return result;
14}
15
16 int superPow(int a, vector<int>& b) {
17     int result = 1;
18     for (int digit : b) {
19         result = modPow(result, 10) * modPow(a, digit) % MOD;
20     }
21     return result;
22 }
23
24};
```

The submission is accepted, with 57 / 57 testcases passed. The runtime is 3 ms (Beats 31.26%) and the memory is 15.30 MB (Beats 14.22%). A bar chart shows the runtime distribution across various time intervals.