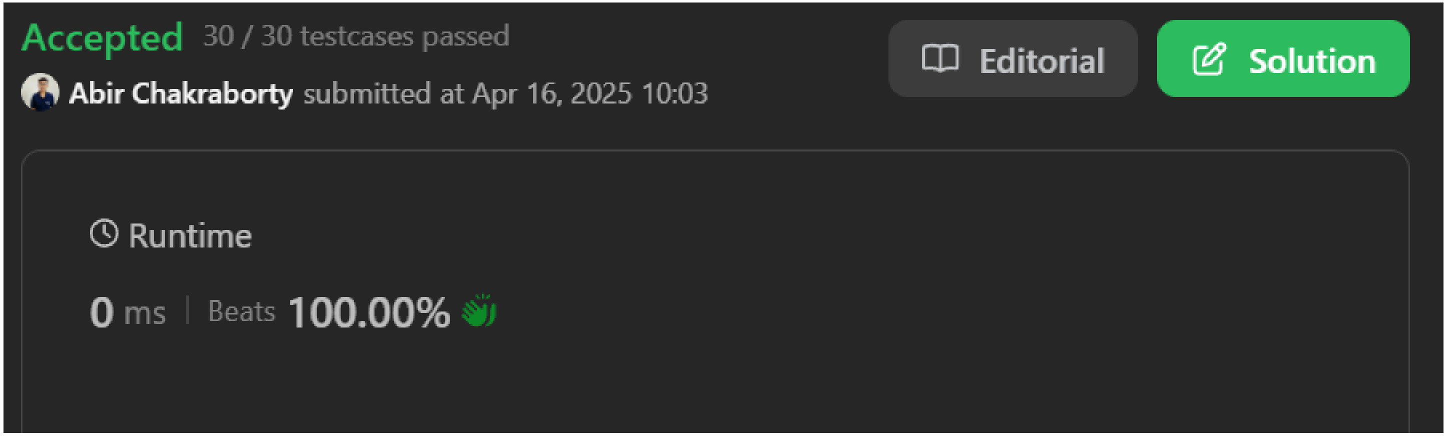
NAME- Abir Chakraborty| UID- 22BCS14321 | SECTION- 601/A

1 Pascal Triangle

```
class Solution {
public:
  vector<vector<int>> generate(int n) {
    vector<vector<int>> ans;
    for (int row = 1; row <= n; row++)
      ans.push_back(pascalTriangle(row));
    return ans;
  }
private:
  vector<int> pascalTriangle(int row) {
    vector<int> ansRow;
    long long ans = 1;
    ansRow.push_back(1);
    for (int col = 1; col < row; col++) {
      ans = ans * (row - col) / col;
      ansRow.push_back(ans);
    }
    return ansRow;
  }
};
```



Accepted 30 / 30 testcases passed

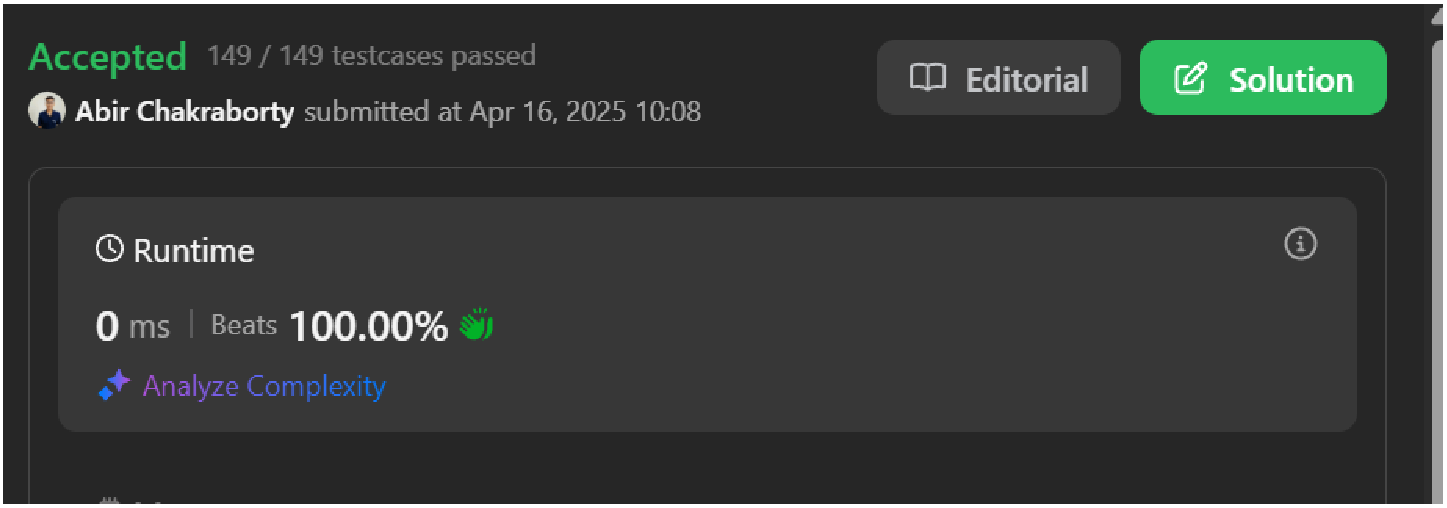
Abir Chakraborty submitted at Apr 16, 2025 10:03

Runtime

0 ms | Beats 100.00%

2. Hamming Distance

```
class Solution {
    public:
        int hammingDistance(int x, int y) {
            int dist = 0, n = x ^ y;
            while (n) {
                ++dist;
                n &= n - 1;
            }
            return dist;
        }
    };
```



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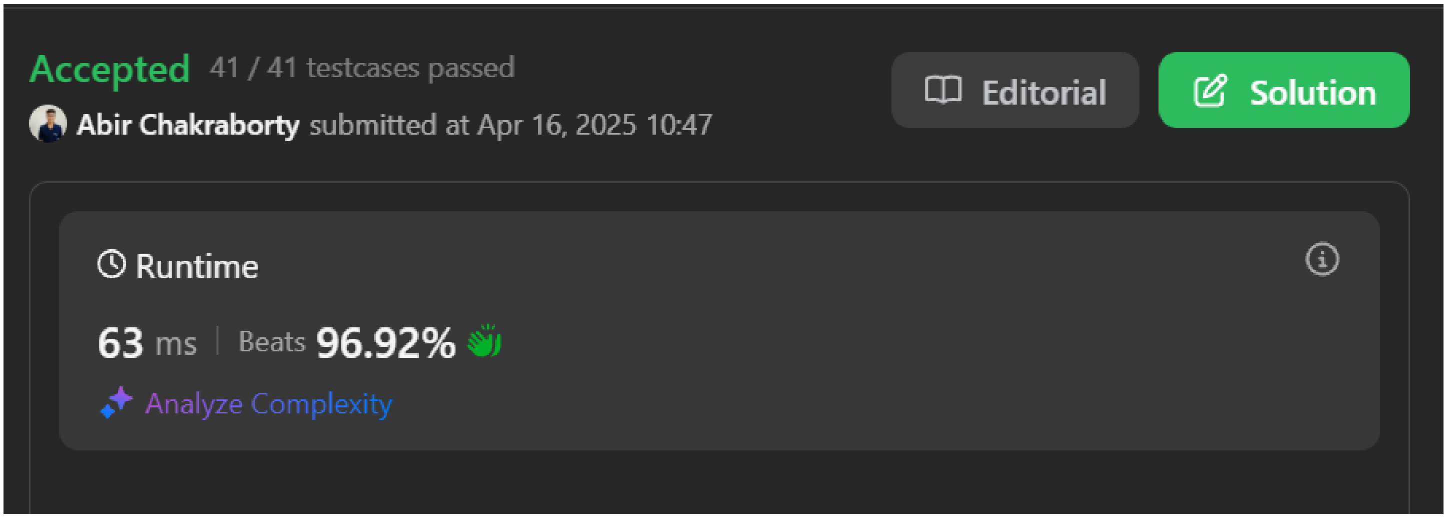
Runtime

0 ms | Beats 100.00%

3. Task Scheduler

```
class Solution {
public:
    int leastInterval(vector<char>& tasks, int n) {
        vector<int> mp(26, 0);
        int max_freq = 0, count_maxfreq = 0, sz = tasks.size();
        for (char i : tasks) {
            mp[i - 'A']++;
            if (mp[i - 'A'] > max_freq) {
                max_freq = mp[i - 'A'];
            }
        }
        for (int i = 0; i < 26; i++) {
            if (mp[i] == max_freq) count_maxfreq++;
        }
        int time = (max_freq - 1) * (n + 1) + count_maxfreq;
        return max(time, sz);
    }
};
```



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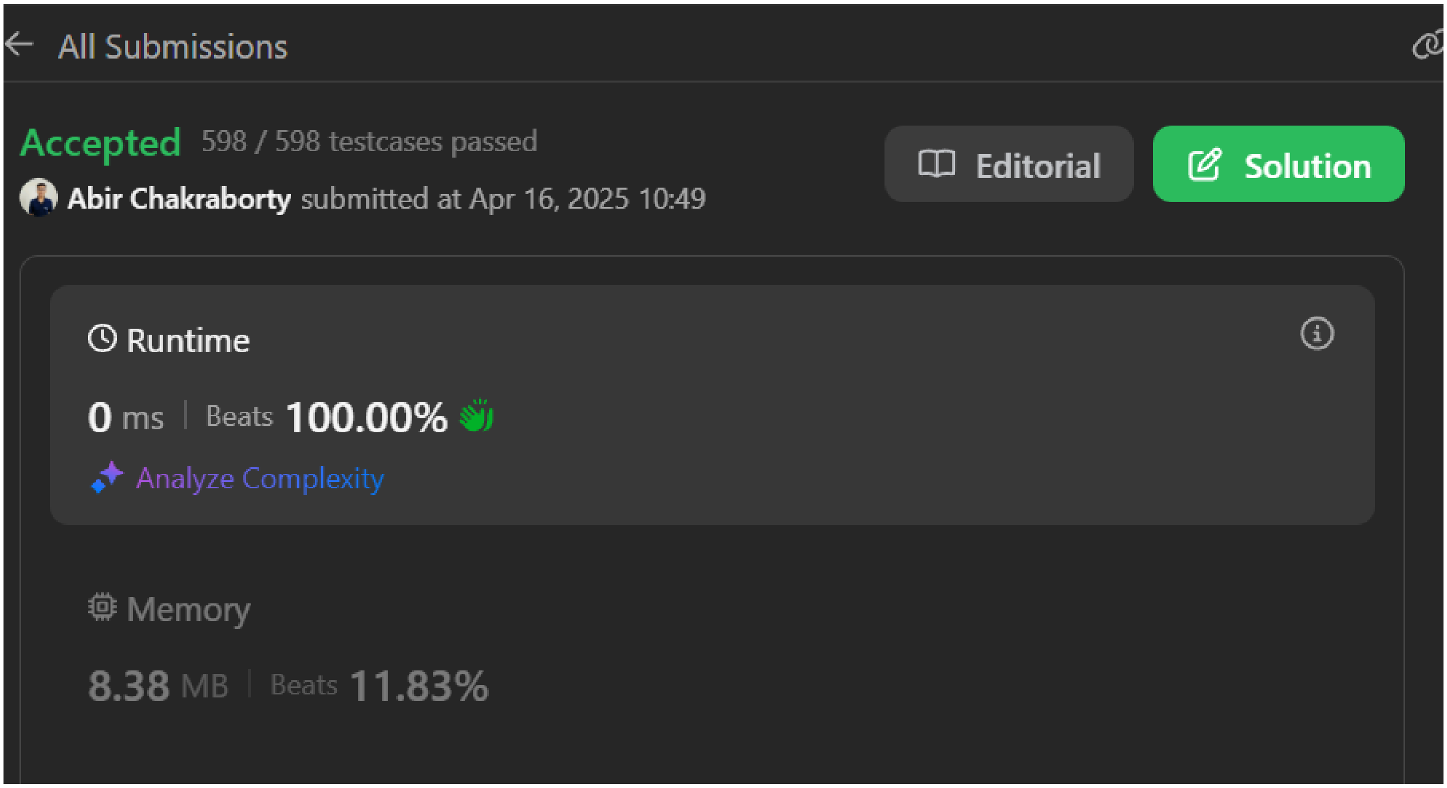
Runtime

63 ms | Beats 96.92%

4. Number of 1 bits

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



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Runtime

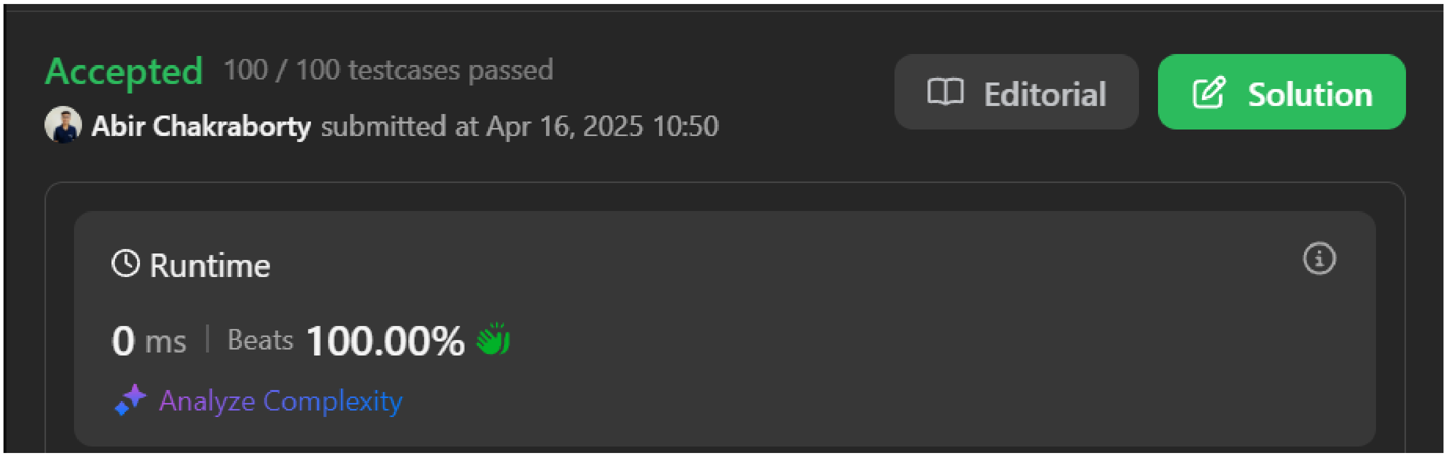
0 ms | Beats 100.00%

Memory

8.38 MB | Beats 11.83%

5. Valid Parenthesis

```
class Solution {
    public:
      bool isValid(string s) {
        stack<char> st;
        for (auto it : s) {
          if (it == '(' || it == '{' || it == '[')
            st.push(it);
          else {
            if (st.size() == 0)
              return false;
            char ch = st.top();
            st.pop();
            if ((it == ')' and ch == '(') or (it == ']' and ch == '[') or
              (it == '}' and ch == '{'))
              continue;
            else
              return false;
          }
        }
        return st.empty();
      }
    };
```



Accepted 100 / 100 testcases passed

Abir Chakraborty submitted at Apr 16, 2025 10:50

Runtime

0 ms | Beats 100.00%