Programación Competitiva

Alex Josué Flórez Farfán

Magister en Ciencias de la Computación

Ciencia de la Computación – UNSA
Segundo semestre 2021

Two Sum

- https://leetcode.com/problems/two-sum/

```cpp
#include <vector>
#include <unordered_map>
#include <iostream>

using namespace std;

vector<int> twoSum(vector<int>& nums, int target) {
    unordered_map<int, int> tmp;
    for (int i = 0; i < nums.size(); ++i) {
      if (tmp.count(target - nums[i])) {
        return {tmp[target - nums[i]], i};
      }
      tmp[nums[i]] = i;
    }
    return {-1, -1};
}

int main() {
    //vector<int> data{2, 7, 11, 15};        // 9
    //vector<int> data{-1, 1, 2, 3, 5};     // 5
    vector<int> data{1, 2, 7, 9, 11, 15};    // 11
    int target{11};
    vector<int> result = twoSum(data, target);
    for (auto e : result) {
        cout << e << " ";
    }
    cout << "\n";
}
```

Maximum Subarray Sum

- https://cses.fi/problemset/task/1643/
- 8
- -1 3 -2 5 3 -5 2 2

Sliding Cost

- https://cses.fi/problemset/task/1077
- Input:
- 8 3
- 2 4 3 5 8 1 2 1

- Output:
- 2 2 5 7 7 1

Prefix Sum Queries

- https://cses.fi/problemset/task/2166/

```
Input:
8 4
1 2 -1 3 1 -5 1 4
2 2 6
1 4 -2
2 2 6
2 3 4

Output:
5
2
0
```

3Sum

- https://leetcode.com/problems/3sum/