Notebook - Maratona de Programação

Py tá O(N)

Contents

1 Template

1.1 Template

```cpp
#include<bits/stdc++.h>

using namespace std;

const int MAX = 2e5+17;

int main() {
    ios::sync_with_stdio(false);
    cin.tie(NULL);


    return 0;
}
```

2 Algoritmos

2.1 Binary Search Last True

```cpp
int first_true(int lo, int hi, function<bool(int)> f)
    {
    hi++;
    while (lo < hi) {
        int mid = lo + (hi - lo) / 2;
        if (f(mid)) {
            hi = mid;
        } else {
            lo = mid + 1;
        }
    }
    return lo;
}
```

2.2 Binary Search First True

```cpp
int last_true(int lo, int hi, function<bool(int)> f)
    {
    lo--;
    while (lo < hi) {
        int mid = lo + (hi - lo + 1) / 2;
        if (f(mid)) {
            lo = mid;
        } else {
            hi = mid - 1;
        }
    }
    return lo;
}
```