1. Given a string S, remove consecutive duplicates from it recursively.(do recursively)

#include <bits/stdc++.h>

using namespace std;

#define int long long

#define pi (3.141592653589)

#define float double

#define pb push\_back

#define mb make\_back

#define ff first

#define ss second

void remove1(char \*S)

{

if (S[0] == '\0')

return;

if (S[0] == S[1])

{

int i = 0;

while (S[i] != '\0')

{

S[i] = S[i + 1];

i++;

}

remove1(S);

}

remove1(S + 1);

}

int32\_t main()

{

#ifndef ONLINE\_JUDGE

freopen("input.txt", "r", stdin);

freopen("output.txt", "w", stdout);

#endif

ios\_base::sync\_with\_stdio(false);

cin.tie(NULL);

cout.tie(NULL);

char S1[1000];

cin >> S1;

remove1(S1);

cout << S1 << endl;

return 0;

}

2.Given an array arr of N integers. Find the contiguous sub-array with maximum sum.

#include <bits/stdc++.h>

using namespace std;

#define int long long

#define pi (3.141592653589)

#define float double

#define pb push\_back

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#define ff first

#define ss second

int32\_t main()

{

#ifndef ONLINE\_JUDGE

freopen("input.txt", "r", stdin);

freopen("output.txt", "w", stdout);

#endif

ios\_base::sync\_with\_stdio(false);

cin.tie(NULL);

cout.tie(NULL);

int a, sum = 0;

cin >> a;

int b[1000];

for (int i = 0; i < a; i++)

{

cin >> b[i];

}

for (int i = 0; i < a; i++)

{

sum = sum + b[i];

}

cout << sum << endl;

return 0;

}

3. Given a sorted array A of size N, delete all the duplicates elements from A.

#include <bits/stdc++.h>

using namespace std;

#define int long long

#define pi (3.141592653589)

#define float double

#define pb push\_back

#define mb make\_back

#define ff first

#define ss second

void removeDuplicates(int arr[], int n)

{

int i;

set<int> s;

for (i = 0; i < n; i++)

{

s.insert(arr[i]);

}

set<int>::iterator it;

cout << "\nAfter removing duplicates:\n";

for (it = s.begin(); it != s.end(); ++it)

cout << \*it << " ";

cout << '\n';

}

int32\_t main()

{

#ifndef ONLINE\_JUDGE

freopen("input.txt", "r", stdin);

freopen("output.txt", "w", stdout);

#endif

ios\_base::sync\_with\_stdio(false);

cin.tie(NULL);

cout.tie(NULL);

int arr[1000];

int n;

cin >> n;

for (int i = 0; i < n; i++)

{

cin >> arr[i];

}

cout << "\nBefore removing duplicates:\n";

for (int i = 0; i < n; i++)

cout << arr[i] << " ";

removeDuplicates(arr, n);

}