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#include<bits/stdc++.h>
using namespace std;

void solve(){
    int n;
    cout << "Enter length of input array : ";
    cin >> n;

    int arr[n];

    cout << "Enter all the array elements\n";

    for(int i = 0; i < n; i++){
        cin >> arr[i];
    }

    int diff[n];

    for(int i = 1; i < n; i++){
        diff[i] = arr[i] - arr[i-1];
    }

    int count = 1 , ans = 0;

    for(int i = 1; i < n-1; i++){
        if(diff[i] == diff[i+1]){
            count++;
        }else{
            if(count > ans){
                ans = count;
            }
            count = 1;
        }
    }

    if(count > ans){
        ans = count;
    }

    cout << "length of longest arithmetic subarray is ";
    cout << ans + 1 << " .\n";
}

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}
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int main(){
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    solve();
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    return 0;
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}
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