**Data Structures**

**2. Stack**

1. **Alice Library**

**#include<bits/stdc++.h>**

**using namespace std;**

**#define endl "\n"**

**#define FIO ios\_base::sync\_with\_stdio(false);cin.tie(NULL);cout.tie(NULL);**

**#define all(v) (v).begin(),(v).end()**

**#define ll long long**

**#define inf LONG\_LONG\_MAX**

**int main()**

**{**

**FIO;**

**string s;**

**cin>>s;**

**ll n = s.length();**

**stack<char> st;**

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

**{**

**if(s[i]=='/' or (s[i]>='a' and s[i]<='z'))**

**{**

**st.push(s[i]);**

**}**

**else**

**{**

**// reverse the string upto '/' in stack**

**string temp = "";**

**while(st.top()!='/')**

**{**

**temp+=st.top();**

**st.pop();**

**}**

**// remove '/' from stack's top**

**st.pop();**

**for(ll j=0;j<temp.length();j++)**

**{**

**st.push(temp[j]);**

**}**

**}**

**}**

**string ans = "";**

**while(!st.empty())**

**{**

**ans+=st.top();**

**st.pop();**

**}**

**reverse(all(ans));**

**cout<<ans;**

**}**

1. **Fun Game(Capillary)**

**#include <iostream>**

**using namespace std;**

**int main() {**

**int num;**

**cin >> num;**

**int arr[num];**

**for(int i=0;i<num;i++){**

**cin >> arr[i];**

**}**

**int x = 0;**

**int y = num - 1;**

**while(x < num && y>=0){**

**int A = arr[x];**

**int B = arr[y];**

**if(A < B){**

**cout << "2 ";**

**x++;**

**}else if(A > B){**

**cout << "1 ";**

**y--;**

**}else{**

**cout << "0 ";**

**x++;**

**y--;**

**}**

**}**

**}**