```
#include <bits/stdc++.h>
using namespace std;
int main(){
        string s;
        getline(cin,s); // nhap xau co dau cach dung getline
        stringstream ss(s);
        //>>
        string word;
        int cnt =0;
        while(ss >> word){
                ++cnt;
        }
        cout << cnt << endl;
        return 0;
}
```

Bai1:
```
#include <bits/stdc++.h>
using namespace std;
int main(){
        string s;
        getline(cin,s); // nhap xau co dau cach dung getline
        string word;
        cin>> word;
        stringstream ss(s);
        string token;
        while(ss >> token){
                if(token != word){
                        cout << token << " ";
                }
        }
        return 0;
}
```

Bai2.1:
```
#include <bits/stdc++.h>
using namespace std;
int main(){
        int t; cin>>t;
        cin.ignore();
        while(t--){
```

```
                    string s;
                    getline(cin,s);
                    for(int i=0;i<s.size();i++) s[i]= tolower(s[i]);
                    vector<string> v;
                    stringstream ss(s);
                    string tmp;
                    while(ss >> tmp) v.push_back(tmp);
                    cout << v[v.size()-1]; //cout v.back()
                    for(int i=0;i<v.size()-1;i++){
                            cout << v[i][0];
                    }
                    cout <<"@gmail.com" << endl;
            }
            return 0;
}
```

Bai2.2:

```
#include <bits/stdc++.h>
using namespace std;
int main(){
        int t; cin>>t;
        cin.ignore();
        map<string,int> mp;
        while(t--){
                string s;
                getline(cin,s);
                for(int i=0;i<s.size();i++) s[i]= tolower(s[i]);
                vector<string> v;
                stringstream ss(s);
                string tmp;
                string res ="";
                while(ss >> tmp) v.push_back(tmp);
                res+= v[v.size()-1]; //cout v.back()
                for(int i=0;i<v.size()-1;i++){
                        res += v[i][0];
                }
                if(mp[res]==0){
                        cout << res << "@gmail.com" << endl;}
                else{
                        cout << res << mp[res]+1 << "@gmail.com" << endl;
                }
                mp[res]++;
        }
```

```
        return 0;
}

Bai3:
#include <bits/stdc++.h>
using namespace std;
void vietHoa(string &s){
        for(int i=0;i < s.size();i++){
                s[i] = toupper(s[i]);
        }
}
void chuanHoa(string &s){
        s[0]= toupper(s[0]);
        for(int i=1;i<s.size();i++){
                s[i] = tolower(s[i]);
        }
}
int main(){
        int t; cin>>t;
        cin.ignore();
        map<string,int> mp;
        while(t--){
                string s;
                getline(cin,s);
                for(int i=0;i<s.size();i++) s[i]= tolower(s[i]);
                vector<string> v;
                stringstream ss(s);
                string tmp;
                while(ss >> tmp) v.push_back(tmp);
                for(int i=0;i<v.size()-1;i++){
                        chuanHoa(v[i]);
                        cout << v[i];
                        if(i == v.size()-2) cout <<", ";
                        else cout << " ";
                }
                vietHoa(v[v.size()-1]);
                cout << v[v.size()-1];
                cout << endl;
        }
        return 0;
}

Bai4:
#include <bits/stdc++.h>
```

```cpp
using namespace std;
void vietHoa(string &s){
        for(int i=0;i < s.size();i++){
                s[i] = toupper(s[i]);
        }
}
void chuanHoa(string &s){
        s[0]= toupper(s[0]);
        for(int i=1;i<s.size();i++){
                s[i] = tolower(s[i]);
        }
}
int main(){
        int t; cin>>t;
        cin.ignore();
        map<string,int> mp;
        while(t--){
                string s;
                getline(cin,s);
                for(int i=0;i<s.size();i++) s[i]= tolower(s[i]);
                vector<string> v;
                stringstream ss(s);
                string tmp;
                while(ss >> tmp) v.push_back(tmp);

                chuanHoa(v[v.size()-1]);
                cout << v[v.size()-1] <<", ";

                for(int i=0;i<v.size()-1;i++){
                        chuanHoa(v[i]);
                        cout << v[i] << " ";
                }
        }
        return 0;
}
```

Bai5.1 cach1
```cpp
#include <bits/stdc++.h>
using namespace std;

int main(){
        string s;
        cin >> s;
        set<char> se;
```

```cpp
        for(char x:s){
                se.insert(x);
        }
        if(se.size()==26) cout << "YES" << endl;
        else "NO";
        return 0;
}
```

Bai5.1 cach2:

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

int main(){
        string s;
        cin >> s;
        int a[26] ={0};
        for(char x:s){
                a[x-'a']=1;
        }
        for(int i=0;i<26;i++){
                if(a[i]==0){
                        cout << "NO\n";
                        return 0;
                }
        }
        cout << "YES\n";
        return 0;
}
```

Bai5.2:
```cpp
#include <bits/stdc++.h>
using namespace std;

int main(){
        int t; cin>>t;
        while(t--){
                string s;cin>>s;
                int k;cin>>k;
                if(s.size()<26){
                        cout << 0 << endl; continue;
                }
                set<char> se;
                for(char x:s){
```

```cpp
                se.insert(x);
            }
            if(26 -se.size() <=k){
                cout <<"1\n";
            }
            else
                cout << "0\n";
        }
        return 0;
}


Bai 6:
#include <bits/stdc++.h>
using namespace std;

int main(){
        int t; cin>>t;
        cin.ignore();
        while(t--){
                string s;
                getline(cin,s);
                stringstream ss(s);
                string tmp;
                int cnt=0;
                while(ss >> tmp) ++cnt;
                cout << cnt << endl;
        }
}

Bai7:
#include <bits/stdc++.h>
using namespace std;
int cnt[1005];
int main(){
        int t; cin>>t;
        cin.ignore();
        while(t--){
                string s;
                getline(cin,s);
                map<char,int>mp;
                for(char x:s){
                        mp[x]++;
                }
```

```cpp
                long long ans = s.size();
                for(auto it: mp){
                        ans+= it.second * (it.second-1)/2;
                }
                cout << ans << endl;
        }
}
```

Bai7 cach 2:
```cpp
#include <bits/stdc++.h>
using namespace std;
int cnt[1005];
int main(){
        int t; cin>>t;
        cin.ignore();
        while(t--){
                string s;
                getline(cin,s);
                int a[256] ={0};
                for(char x:s){
                        a[x]++;
                }
                long long ans = s.size();
                for(int i=0;i<256;i++){
                        if(a[i]!=0){
                                ans += a[i]* (a[i]-1)/2;
                        }
                }
                cout << ans << endl;
        }
}
```

Bai8:
```cpp
#include <bits/stdc++.h>
using namespace std;
int cnt[1005];
int main(){
        int t; cin>>t;
        cin.ignore();
        while(t--){
                string s;
                getline(cin,s);
                int a[256] ={0};
                for(char x:s){
```

```
                    a[x]++;
            }
            string ans = "";
            for(char x:s){
                    if(a[x]==1){
                            cout << x;
                    }
            }
            cout << ans << endl;
    }
}

Bai9:
#include <bits/stdc++.h>
using namespace std;
int cnt[1005];
int main(){
    int m,s;
    cin >>m>>s;
    if(s>9*m || s==0 && m>1){
            cout << "-1 -1\n"; return 0;
    }
    int lon[m], be[m] ={0};
    int tmp =s;
    for(int i=0;i<m;i++){
            if(s >= 9){
                    lon[i]=9;
                    s-=9;
            }
            else{
                    lon[i]=s;
                    s=0;
            }
    }
    --tmp;
    for(int i=m-1;i>0;i--){
            if(tmp>=9){
                    be[i]=9;
                    tmp-=9;
            }
            else{
                    be[i]=tmp;
                    tmp=0;
            }
    }
```

```cpp
        }
        be[0] = tmp +1;
        for(int i=0;i<m;i++) cout << be[i];
        cout << " ";
        for(int i=0;i<m;i++) cout << lon[i];
        return 0;

}
```

Bai10:
```cpp
#include <bits/stdc++.h>
using namespace std;
int cnt[1005];
int main(){
        int n;
        cin >>n;
        set<string> se;
        cin.ignore();
        for(int i=0;i<n;i++){
                string s;
                getline(cin,s);
                se.insert(s);
        }
        cout << se.size() << endl;
        return 0;

}
```

Bai11:
```cpp
#include <bits/stdc++.h>
using namespace std;
int cnt[1005];

bool check(string s){
        string t =s;
        reverse(s.begin(),s.end());
        if(s !=t) return false;
        for(char x:s){
                if((x-'0')%2==1)
                        return false;
        }
        return true;
}
int main(){
        int t; cin>>t;
```

```cpp
        while(t--){
                string s;cin >>s;
                if(check(s)) cout << "YES\n";
                else cout << "NO\n";
        }
        return 0;

}
```

Bai12;
```cpp
#include <bits/stdc++.h>
using namespace std;
int cnt[1005];

void solve(){
        string s;cin>>s;
        int i= s.size()-2;
        while(i>=0 && s[i]<=s[i+1]) --i;
        if(i==-1){
                cout << "-1\n"; return;
        }
        int j=s.size()-1;
        while(s[i] <= s[j] || (s[j-1]==s[j] && s[j] <s[i])){
                --j;
        }
        swap(s[i],s[j]);
        if(s[0]=='0'){
                cout << "-1\n";
        }
        else cout << s << endl;
}
int main(){
        int t; cin>>t;
        while(t--){
                solve();
        }
        return 0;

}
```

Bai13:
```cpp
#include <bits/stdc++.h>
using namespace std;
```

```cpp
int cnt[1005];


int main(){
        string s;cin>>s;
        int a[26]= {0};
        for(char x:s){
                a[x-'a']++;
        }
        int max_val = *max_element(a,a+26);
        if(s.length()-max_val + 1 >= max_val)
                cout<< "1\n";
        else
                cout <<"0\n";
        return 0;


}
```

Bai14:
```cpp
#include <bits/stdc++.h>
using namespace std;
int cnt[1005];

void max_val(string a, string b){
        for(char &x:a){
                if(x== '5') x='6';
        }
        for(char &x:b){
                if(x=='5') x= '6';
        }
        cout << stoll(a)+stoll(b)<<endl;
}
void min_val(string a, string b){
        for(char &x:a){
                if(x== '6') x='5';
        }
        for(char &x:b){
                if(x=='6') x= '5';
        }
        cout << stoll(a)+stoll(b)<<" ";
}
int main(){
        int t;cin>>t;
```

```cpp
        while(t--){
                string a,b; cin>>a>>b;
                min_val(a,b);
                max_val(a,b);
        }
        return 0;


}
```

Bai15:
```cpp
#include <bits/stdc++.h>
using namespace std;
int cnt[1005];
void solve(string s){
        int ans=0;
        int sum=0;
        for(char x:s){
                if(isdigit(x)){
                        sum = sum*10+x-'0';
                }
                else{
                        ans+= sum;
                        sum=0;
                }
        }
        ans+= sum;
        cout << ans <<endl;
}
int main(){
        int t;cin>>t;
        while(t--){
                string s;
                cin>>s;
                solve(s);
        }
        return 0;


}
```
Bai16:
```cpp
#include <bits/stdc++.h>
using namespace std;
int cnt[1005];
```

```cpp
void solve(string s){
        int ans=INT_MIN;
        int sum=0;
        for(char x:s){
                if(isdigit(x)){
                        sum = sum*10+x-'0';
                }
                else{
                        ans=max(ans,sum);
                        sum=0;
                }
        }
        ans = max(ans,sum);
        cout << ans <<endl;
}
int main(){
        int t;cin>>t;
        while(t--){
                string s;
                cin>>s;
                solve(s);
        }
        return 0;


}

Bai17:
#include <bits/stdc++.h>
using namespace std;
int cnt[1005];
void solve(){
        string s; int k;
        cin >>s>>k;
        int ans=0;
        for(int i=0;i<s.size();i++){
                int cnt[256];
                memset(cnt,0, sizeof(cnt));
                int dem=0;
                for( int j=i;j<s.size();j++){
                        if(cnt[s[j]]==0){
                                ++dem;
                        }
                        if(dem ==k){
```

```cpp
                        ++ans;
                    }
                    if(dem >k) break;
                    cnt[s[j]] =1;
                }
            }
        cout << ans << endl;
}
int main(){
        int t;cin>>t;
        while(t--){
                solve();
        }
        return 0;
}
```

Bai18:
```cpp
#include <bits/stdc++.h>
using namespace std;
int cnt[1005];
set<string> convert(string s){
        stringstream ss(s);
        set<string> se;
        string tmp;
        while(ss>>tmp){
                se.insert(tmp);
        }
        return se;
}
void solve(){

}
int main(){
        int t;cin>>t;
        cin.ignore();
        while(t--){
                string s1,s2;
                getline(cin,s1);
                getline(cin,s2);
                set<string> se1= convert(s1);
                set<string> se2= convert(s2);
                for(string x: se1){
```

```cpp
                if(se2.find(x)== se2.end()){
                        cout << x << " ";
                }
            }
            cout << endl;
        }
        return 0;
}
```

Bai19:
```cpp
#include <bits/stdc++.h>
using namespace std;
int cnt[1005];

bool check1(string s){
        for(int i=0;i<4;i++){
                if(s[i] >= s[i+1])
                        return false;
        }
        return true;
}
bool check2(string s){
        for(int i=1;i<5;i++){
                if(s[i] != s[0])
                        return false;
        }
        return true;
}

bool check3(string s){
        return s[0] == s[1] && s[1]==s[2] && s[3]==s[4];
}
bool check4(string s){
        for(char x:s){
                if(x!=6 && x!=8)
                        return false;
        }
        return true;
}
int main(){
        int t;cin>>t;
        cin.ignore();
        while(t--){
                string s;cin>>s;
```

```cpp
            string tmp= s.substr(5,6);
            tmp.erase(3,1);
            if(check1(tmp) || check2(tmp) || check3(tmp) || check4((tmp)))
                    cout << "YES\n";
            else cout << "NO\n";


        }
        return 0;
}
```

Bai20:
```cpp
#include <bits/stdc++.h>
using namespace std;

int check(string s){
        if(s[0]=='0') return -1;
        set<char> se;
        for(char x:s){
                if(!isdigit(x)){
                        return -1;
                }
                se.insert(x);
        }
        return se.size() ==10;
}
int main(){
        int t;cin>>t;
        while(t--){
                string s;cin>>s;
                int res =check(s);
                if(res ==-1) cout <<"INVALID\n";
                else if(res ==0) cout << "NO\n";
                else cout << "YES\n";
        }
        return 0;
}
```

Bai 20 khac

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

void solve(){
        string s1, s2;
```

```cpp
        cin>>s1>>s2;
        int dem1[256]={0};
        int dem2[256]={0};
        for(char x:s2){
                dem2[x]++;
        }
        int ans= INT_MAX;
        int left=0;
        int cnt=0;
        int index=-1;
        for(int i=0;i< s1.length();i++){
                dem1[s1[i]]++;
                if(dem1[s1[i]] <= dem2[s1[i]]) ++cnt;
                if(cnt==s2.length()){
                        while(dem1[s1[left]]> dem2[s1[left]] || dem2[s1[left]]==0){
                                if(dem1[s1[left]]> dem2[s1[left]]){
                                        dem1[s1[left]]--;
                                }
                                ++left;
                        }
                        if(ans> i-left+1){
                                ans=i-left+1;
                                index= left;
                        }
                }
        }
        if(index==-1) cout << "-1\n";
        else cout << s1.substr(index,ans) << endl;

}
int main(){
        int t;cin>>t;
        while(t--){
                solve();
        }
        return 0;
}

Bai21:
#include <bits/stdc++.h>
using namespace std;

void solve(){
        string s;cin>>s;
```

```cpp
        map<char, int> mp;
        for(char x:s){
                mp[x]++;
        }
        int len = mp.size(); // so luong ki tu khac nhau trong xau s
        int ans= INT_MAX;
        int left=0;
        int cnt=0;
        int dem[256]={0};
        for(int i=0;i<s.length();i++){
                dem[s[i]]++;
                if(dem[s[i]]==1) ++cnt;
                if(cnt==len){
                        while(dem[s[left]] >1){
                                dem[s[left]]--;
                                ++left;
                        }
                        ans=min(ans,i-left+1);
                }
        }
        cout << ans << endl;

}
int main(){
        int t;cin>>t;
        while(t--){
                solve();
        }
        return 0;
}

Bai22:
#include <bits/stdc++.h>
using namespace std;

string cong(string a, string b){
        if(a.length() < b.length()) swap(a,b);
        int n= a.length(), m=b.length();
        reverse(a.begin(),a.end());
        reverse(b.begin(), b.end());
        b+= string(n-m, '0'); // them n so 0 vao so b
        string res="";
        int nho=0;
        for(int i=0;i<n;i++){
```

```cpp
            int tmp = (a[i]-'0') +(b[i]- '0') +nho;
            res+= (char)(tmp %10 + '0');
            nho = tmp /=10;
        }
        if(nho) res+=(char)(nho +'0');
        reverse(res.begin(), res.end());
        return res;
}
//kiem tra xau s, xau thu 1 bat dau tu l, co chieu dai l2,
//xau thu 2 bat dau tu l+ len1, co chieu dai len 2
bool kt(string s, int l, int len1, int len2){
        string s1= s.substr(l,len1);
        string s2= s.substr(l+len1, len2);
        string s3= cong(s1,s2);
        if(s3.length() > (s.length()- len1 - len2- l)) return false;
        if(s3 == s.substr(l+len1+len2, s3.length())){
                if(s.length() == l+ len1+len2+s3.length())
                        return true;
                return kt(s, l+len1,len2,s3.length());
        }
        return false;
}
void solve(){
        string s;cin>>s;
        for(int i=1; i<s.length();i++){
                for(int j=1; j<= s.length()-i;j++){
                        if(kt(s,0,i,j)){
                                cout << "Yes\n";
                                return;
                        }
                }
        }
        cout << "No\n";
}
int main(){
        int t;cin>>t;
        while(t--){
                solve();
        }
        return 0;
}
```

Bai23:

```cpp
#include <bits/stdc++.h>
using namespace std;
long long gt[22];
void init(){
        gt[0]=1;
        for(int i=1;i<=20;i++){
                gt[i]= i*gt[i-1];
        }


}
// R+G+B =n; R>=r , B>=b, G>=g
void solve(){
        int n,g,r,b;
        cin >>n>>g>>r>>b;
        long long res=0;
        for(int R=n;R>=r;R--){
                for(int G= n-R;G>=g;G--){
                        int B=n-R-G;
                        if(B>=b){
                                res+= gt[n] / (gt[R]*gt[G]*gt[B]);
                        }
                }
        }
        cout << res << endl;
}
int main(){
        int t;cin>>t;
        init();
        while(t--){
                solve();
        }
        return 0;
}



Bai24:
#include <bits/stdc++.h>
using namespace std;
long long gt[22];


int main(){
```

```cpp
        int t;cin>>t;
        cin.ignore();
        while(t--){
                string s;
                getline(cin,s);
                stringstream ss(s);
                vector<string> v;
                string word;
                while(ss >> word){
                        v.push_back(word);
                }
                for(int i=v.size()-1;i>=0;i--){
                        cout << v[i] << " ";
                }
                cout << endl;
        }
        return 0;
}

Bai25:
#include <bits/stdc++.h>
using namespace std;
long long gt[22];

void solve(string s, int n){
        string res="";
        for(char x:s){
                if(x=='4'){
                        res+="322";
                }
                else if(x== '6'){
                        res+="35";
                }
                else if(x=='8'){
                        res+= "2227";
                }
                else if(x=='9'){
                        res+="3327";
                }
                else if(x!='1' && x!='0') res+=x;
        }
        sort(res.begin(),res.end(),greater<char>());
        cout << res << endl;
}
```

```cpp
int main(){
        int t;cin>>t;
        cin.ignore();
        while(t--){
                int n;cin>>n;
                string s;cin>>s;
                solve(s,n);
        }
        return 0;
}


Bai26
#include <bits/stdc++.h>
using namespace std;
long long gt[22];

void solve(string s, int n){
        string res="";
        for(char x:s){
                if(x=='4'){
                        res+="322";
                }
                else if(x== '6'){
                        res+="35";
                }
                else if(x=='8'){
                        res+= "2227";
                }
                else if(x=='9'){
                        res+="3327";
                }
                else if(x!='1' && x!='0') res+=x;
        }
        sort(res.begin(),res.end(),greater<char>());
        cout << res << endl;
}
int main(){
        int t;cin>>t;
        cin.ignore();
        while(t--){
                int n;cin>>n;
                string s;cin>>s;
                solve(s,n);
```

```cpp
        }
        return 0;
}
```

Bai27:
```cpp
#include <bits/stdc++.h>
using namespace std;


void solve(string s){
        int ans =0;
        for(int i=0; i< s.length()-2;i++){
                if(s=="") break;
                if(s[i]=='1' && s[i+1]=='0' && s[i+2]=='0'){
                        ans +=3;
                        s.erase(i,3);
                        i=-1;
                }
        }
        cout << ans << endl;
}
int main(){
        int t;cin>>t;
        while(t--){
                string s;cin>>s;
                solve(s);
        }
        return 0;
}
```

Bai28:
```cpp
#include <bits/stdc++.h>
using namespace std;


long long gcd(long long a, long long b){
        if(b==0)
                return a;
        return gcd(b,a%b);
}
int main(){
        int t;cin>>t;
        while(t--){
                long long a,x,y;
```

```cpp
                    cin >>a>>x>>y;
                    long long g = gcd(x,y);
                    for(int i=0;i<g;i++){
                            cout <<a;
                    }
                    cout << endl;
            }
            return 0;
    }

Bai29:
#include <bits/stdc++.h>
using namespace std;

bool check(char c){
        return c== ' ' || c=='.' || c=='!' || c=='?'|| c==','|| c=='-';
}
bool cmp(pair<string,int> a, pair<string,int> b){
        if(a.second != b.second)
                return a.second > b.second;
        return a.first < b.first;
}
int main(){
        int n; cin >>n;
        map<string, int> mp;
        cin.ignore();
        while(n--){
                string s;
                getline(cin,s);
                string tmp="";
                for(int i=0;i<s.length();i++){
                        if(s[i]== ' ') continue;
                        while(i< s.length() && !check(s[i])){
                                tmp += (char)s[i];
                                ++i;
                        }
                        //cout << tmp << endl;
                        mp[tmp]++;
                        tmp ="";

                }
                vector<pair<string,int>> v;
                for(auto it:mp){
                        v.push_back(it);
```

```cpp
            }
            sort(v.begin(),v.end(),cmp);
            for(auto it :v){
                    cout << it.first << " " << it.second << endl;
            }

        }
        return 0;
}

Bai31:
#include <bits/stdc++.h>
using namespace std;

void solve(){
        string s;
        int x;
        cin>>s>>x;
        int cnt=0;
        for(int i=s.length()-1;i>=0;i--){
                if(s[i]=='0'){
                        ++cnt;
                }
                else break;
                if(cnt >=x) break;
        }
        if(cnt >=x) cout << "YES\n";
        else cout <<"NO\n";
}
int main(){
        int t;cin>>t;
        while(t--){
                solve();
        }
        return 0;
}

Bai32:
#include <bits/stdc++.h>
using namespace std;

void solve(){
        string s;
        cin>>s;
```

```cpp
        int lt=1;
        int r= (s[s.length()-1] -'0')%5;
        for(int i=s.length()-2;i>=0;i--){
                lt*=2;
                lt %=5;
                r= r+ (s[i] - '0')*lt;
                r%=5;
        }
        if(r==0){
                cout << "Yes\n";
        }
        else cout << "No\n";
}
int main(){
        int t;cin>>t;
        while(t--){
                solve();
        }
        return 0;
}
```

Bai34:
```cpp
#include <bits/stdc++.h>
using namespace std;

long long du(string a, long long m){
        long long r=0;
        for(char x:a){
                r=r*10+x-'0';
                r%=m;
        }
        return r;
}

long long binpow(long long a, long long b , long long m){
        long long res=1;
        while(b){
                if(b%2 ==1){
                        res*=a;
                        res %= m;
                }
                a *=a;
                a %=m;
                b/=2;
        }
```

```cpp
        return res;
    }
int main(){
        int t;cin>>t;
        while(t--){
                string a;
                long long b;
                long long m;
                cin>>a>>b>>m;
                long long r = du(a, m);
                cout << binpow(r,b,m) << endl;
        }
        return 0;
}
```

Bai35:
```cpp
#include <bits/stdc++.h>
using namespace std;

long long du(string a, long long m){
        long long r=0;
        for(char x:a){
                r=r*10+x-'0';
                r%=m;
        }
        return r;
}

int main(){
        int t;cin>>t;
        while(t--){
                long long a;
                string b;
                cin>>a>>b;
                long long r = du(b,a);
                cout << __gcd(a,r) << endl;
        }
        return 0;
}
```
Bai36:
```cpp
#include <bits/stdc++.h>
using namespace std;
```

```cpp
long long du(string a, long long m){
        long long r=0;
        for(char x:a){
                r=r*10+x-'0';
                r%=m;
        }
        return r;
}

int main(){
        int t;cin>>t;
        while(t--){
                string s;cin>>s;
                int r=0;
                for(int i=0;i< s.length();i++){
                        if(i%2==0){
                                r += s[i] - '0';
                                cout << r << " ";
                        }
                        else{
                                r-= s[i] - '0';
                                cout << r << " ";}

                }
                if(r%11==0) cout << "Yes\n";
                else cout << "No\n";
        }
        return 0;
}

Bai40:
#include <bits/stdc++.h>
using namespace std;


bool cmp(string a, string b){
        string ab = a + b;
        string ba = b + a;
        return ab > ba;
}

int main(){
        int TC; cin >> TC;
        while(TC--){
```

```cpp
        int n; cin >> n;
        string a[n];
        for(int i = 0; i < n; i++){
                cin >> a[i];
        }
        sort(a, a + n, cmp);
        for(string x : a){
                cout << x;
        }
        cout << endl;
    }
    return 0;
}
```