#include<bits/stdc++.h>

using namespace std;

int solve(string src, unordered\_map<string,vector<string> > &tree, set<pair<string,int> > &res){

if(tree.find(src)==tree.end()){

res.insert({src,0});

return 1;

}

int size = 0;

for(auto it: tree[src]){

int s = solve(it,tree,res);

size+=s;

}

res.insert({src,size});

return 1+size;

}

int main(){

int n;

cin>>n;

unordered\_map<string,string> mp;

while(n--){

string s1,s2;

cin>>s1>>s2;

mp.insert(make\_pair(s1,s2));

}

unordered\_map<string,vector<string> > tree;

string ceo;

for(auto it: mp){

if(it.first==it.second){

ceo = it.first;

}

else{

tree[it.second].push\_back(it.first);

}

}

set<pair<string,int> > res;

for(auto it: tree){

solve(it.first,tree,res);

}

// sort(res.begin(),res.end());

for(auto it: res){

cout<<it.first<<" "<<it.second<<endl;

}

}