#include<bits/stdc++.h>

using namespace std;

class graph{

unordered\_map<string,list<pair<string,int> > > l;

public:

edge(string x, string y, bool bid, int wt){

l[x].push\_back(make\_pair(y,wt));

if(bid){

l[y].push\_back(make\_pair(x,wt));

}

}

void display(){

for(auto city: l){

string c = city.first;

cout<<c<<"->";

list<pair<string,int> > nbrs = city.second;

for(auto nbr: nbrs){

cout<<nbr.first<<" "<<nbr.second<<",";

}

cout<<endl;

}

}

};

int main(){

graph g;

g.edge("A","B",true,20);

g.edge("A","C",true,10);

g.edge("B","D",true,40);

g.edge("A","D",false,50);

g.edge("C","D",true,30);

g.display();

}