#include<iostream>

using namespace std;

class Graph{

public:

void adjm(string name[],int v){

int g[v][v];

char ch;

for(int i=0;i<v;i++){

for(int j=0;j<v;j++){

g[i][j]=0;

}

}

for(int i=0;i<v;i++){

for(int j=i+1;j<v;j++){

if(g[i][j]==0){

cout<<"Is there any city present between"<<name[i]<<" "<<name[j]<<" ";

cin>>ch;

if(ch=='Y'||ch=='y'){

cout<<"Enter the amount fuel required"<<"\n";

cin>>g[i][j];

g[j][i]=g[i][j];

}

}

}

}

cout<<"Adjcency matrix represented as"<<"\n";

for(int i=0;i<v;i++){

cout<<name[i]<<" ";

}

cout<<endl;

for(int i=0;i<v;i++){

cout<<name[i]<<" ";

for(int j=0;j<v;j++){

cout<<g[i][j]<<" ";

}

cout<<endl;

}

}

};

int main(){

int choice,ch;

Graph g;

do{

cout<<"Enter 1.to enter city"<<"\n";

cout<<"Enter 2.to enter name of city for cost calculation"<<"\n";

cin>>choice;

switch(choice){

case 1:

int v;

cout<<"Enter how many cities you want"<<"\n";

cin>>v;

break;

case 2:

string name[v];

cout<<"Enter the name of cities"<<"\n";

for(int i=0;i<v;i++){

cin>>name[i];

}

g.adjm(name,v);

}

cout<<"Do you want to continue"<<"\n";

cin>>ch;

}while(ch==4);

}