#include <iostream>

using namespace std;

int w[10][10],visit[10],no[45],edge[45],par[10];

int parent(int );

int main()

{int n,i,j,temp,u,v,p=0,k=0;

cout<<"enter the number of vertices"<<endl;

cin>>n;

cout<<"enter the weighted matrix"<<endl;

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

{

for(j=0;j<n;j++)

cin>>w[i][j];

}

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

par[i]=i;

for(i=0;i<n-1;i++)

{

for(j=i+1;j<n;j++)

{no[p]=w[i][j];

edge[p]=(i\*10)+j;

p++;

}

}

for(i=0;i<p-1;i++)

{

for(j=i+1;j<p;j++)

{

if(no[j]<no[i])

{

temp=no[i];no[i]=no[j];no[j]=temp;

temp=edge[i];edge[i]=edge[j];edge[j]=temp;

}

}

}

i=0;

while(k<n-1)

{u=parent(edge[i]/10);

v=parent(edge[i]%10);

if(u!=v)

{cout<<edge[i]/10<<"->"<<edge[i]%10<<"----"<<w[edge[i]/10][edge[i]%10]<<endl;

k++;

par[v]=u;

}

i++;

}

return 0;

}

int parent(int i)

{int j=i;

while(par[j]!=j)

j=par[j];

return j;

}