#include<iostream.h>

#include<conio.h>

int ne=1,min\_cost=0;

void main()

{

clrscr();

int n,i,j,min,cost[20][20],a,b,u,v,source,visited[20];

cout<<"enter the number of matrices:\n";

cin>>n;

cout<<"enter the cost of matrix:\n";

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

{

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

{

cin>>cost[i][j];

if(cost[i][j]==0)

cost[i][j]=999;

}

}

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

visited[i]=0;

cout<<"enter the root node:";

cin>>source;

visited[source]=1;

cout<<"\n minimum cost spanning tree:\n";

while(ne<n)

{

min=999;

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

{

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

{

if(cost[i][j]<min)

if(visited[i]!=0)

{

min=cost[i][j];

a=v=i;

b=v=j;

}

}

}

if(visited[v]==0||visited[v]==0)

{

cout<<"\n edge"<<ne++<<"\t("<<a<<"--->"<<b<<")"<<min;

min\_cost=min\_cost+min;

visited[b]=1;

}

cost[a][b]=cost[b][a]=999;

}

cout<<"\n minimum cost="<<min\_cost<<"\n";

getch();

}

OUTPUT:

enter the number of matrices:

5

enter the cost of matrix:

0 4 5 6 1

0 3 7 2 1

4 3 2 0 2

2 4 0 4 1

4 3 1 4 2

enter the root node:1

minimum cost spanning tree:

edge1 (1--->5)1

edge2 (5--->3)1

edge3 (3--->2)3

edge4 (2--->4)2

minimum cost=7