program-14

#include<stdio.h>

int a,b,u,v,n,i,j,ne=1;

int visited[10]= {

0

}

,min,mincost=0,cost[10][10];

int main()

{

printf("\n Enter the number of nodes:");

scanf("%d",&n);

printf("\n Enter the adjacency matrix:\n");

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

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

scanf("%d",&cost[i][j]);

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

cost[i][j]=999;

}

visited[1]=1;

printf("\n");

while(ne<n) {

for (i=1,min=999;i<=n;i++)

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

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

if(visited[i]!=0)

{

min=cost[i][j];

a=u=i;

b=v=j;

}

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

printf("\n Edge %d:(%d %d) cost:%d",ne++,a,b,min);

mincost+=min;

visited[b]=1;

}

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

}

printf("\n Minimun cost=%d",mincost);

}

output:

[shilpa@shilpa-linux ADA\_LAB-PROG-main]$ gcc -o PRIMS PRIMS.C

[shilpa@shilpa-linux ADA\_LAB-PROG-main]$ ./PRIMS

Enter the number of nodes:4

Enter the adjacency matrix:

0 10 0 0

0 0 20 0

40 0 0 50

0 0 0 0

Edge 1:(1 2) cost:10

Edge 2:(2 3) cost:20

Edge 3:(3 4) cost:50

Minimun cost=80