ANAGHA ACHARYA

1BM19CS224

Find Minimum Cost Spanning Tree of a given undirected graph using Prim’s algorithm.

#include<stdio.h>

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

int visited[10]={0},min,mincost=0,cost[10][10];

void prims(){

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("\nEdge %d(%d %d); Cost=%d",ne++,a,b,min);

mincost+=min;

visited[b]=1;

}

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

}

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

}

void main()

{

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

scanf("%d",&n);

printf("\nEnter 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;

}

prims();

}

OUTPUT:



