ANAGHA ACHARYA

1BM19CS224

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

#include<stdio.h>

int n, v, u,cost[10][10], parent[10]={0}, i, j;

int count=1, mincost=0, min, a, b;

void kruskals(){

while(count<n)

{

min=999;

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

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

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

{

min=cost[i][j];

a=u=i;

b=v=j;

}

while(parent[u])

u=parent[u];

while(parent[v])

v=parent[v];

if(u!=v)

{

count++;

printf("\nEdge(%d->%d)=%d", a, b, min);

mincost+=min;

parent[v]=u;

}

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

}

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

}

void main()

{

printf("Enter number of vertices:");

scanf("%d",&n);

printf("\nEnter cost 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;

}

kruskals();

}

OUTPUT

 