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#include<stdio.h>

#include<conio.h>

#include<stdlib.h>

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

int min,mincost=0,cost[9][9],parent[9];

int find(int);

int uni(int,int);

int main()
{
    printf("\n\tImplementation of Kruskal's algorithm\n");

    printf("\nEnter the no. of vertices:");

    scanf("%d",&n);

    printf("\nEnter the cost 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;
        }
    }

    printf("The edges of Minimum Cost Spanning Tree are\n");

    while(ne < n)
    {
        for(i=1,min=999;i<=n;i++)
        {
            for(j=1;j <= n;j++)
            {
                if(cost[i][j] < min)
                {

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        min=cost[i][j];

        a=u+i;

        b=v+j;

    }

}

}

u=find(u);
v=find(v);
if(uni(u,v))
{

    printf("%d edge (%d,%d) =%d\n",ne++,a,b,min);

    mincost +=min;

}

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

}

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

getch();

}

int find(int i)

{

    while(parent[i])

        i=parent[i];

    return i;

}

int uni(int i,int j)

{

    if(i!=j)

    {

        parent[j]=i;

        return 1;

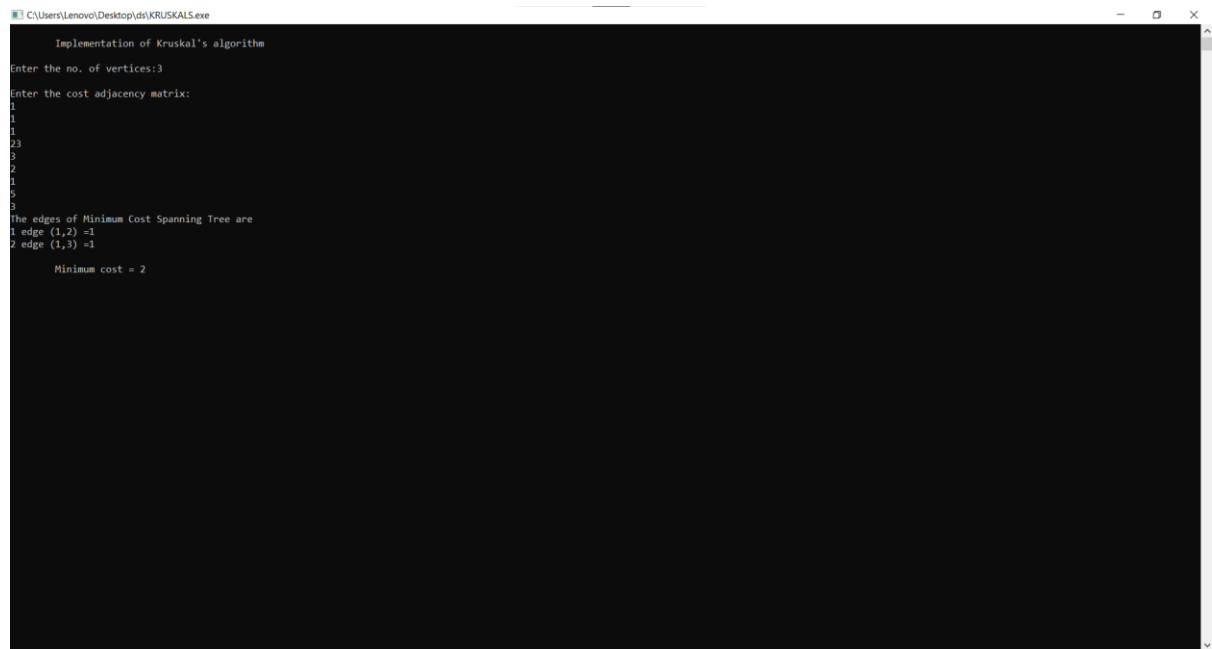
    }

}

```

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return 0;
```

```
}
```



```
C:\Users\Lenovo\Desktop\ds\KRUSKALS.exe
Implementation of Kruskal's algorithm
Enter the no. of vertices:3
Enter the cost adjacency matrix:
1
1
1
0
3
3
2
1
0
3
The edges of Minimum Cost Spanning Tree are
1 edge (1,2) =1
2 edge (1,3) =1
Minimum cost = 2
```