

```
1  #include<stdio.h>
2  #include<stdlib.h>
3  void kruskals();
4  int c[10][10],n;
5  int main()
6  {
7      int i,j;
8      printf("\nenter the no. of vertices:\t");
9      scanf("%d",&n);
10     printf("\nenter the cost matrix:\n");
11     for(i=1;i<=n;i++)
12     {
13         for(j=1;j<=n;j++)
14         {
15             scanf("%d",&c[i][j]);
16         }
17     }
18     kruskals();
19 }

20
21 void kruskals()
22 {
23     int i,j,u,v,a,b,min;
24     int ne=0,mincost=0;
25     int parent[10];
26     for(i=1;i<=n;i++)
27     {
28         parent[i]=0;
29     }
30     while(ne!=n-1)
31     {
32         min=9999;
33         for(i=1;i<=n;i++)
34         {
35             for(j=1;j<=n;j++)
```



```
36     {
37         if(c[i][j]<min)
38         {
39             min=c[i][j];
40             u=a=i;
41             v=b=j;
42         }
43     }
44 }
45 while(parent[u]!=0)
46 {
47     u=parent[u];
48 }
49 while(parent[v]!=0)
50 {
51     v=parent[v];
52 }
53 if(u!=v)
54 {
55     printf("\n%d----->%d=%d\n",a,b,min);
56     parent[v]=u;
57     ne=ne+1;
58     mincost=mincost+min;
59 }
60 c[a][b]=c[b][a]=9999;
61 }
62 printf("\nmincost=%d",mincost);
63 }
```



```
❏ clang-7 -pthread -lm -o main main.c
❏ ./main
```

enter the no. of vertices: 6

enter the cost matrix:

```
9999 3 9999 9999 6 5
3 9999 1 9999 9999 4
9999 1 9999 6 9999 4
9999 6 6 9999 8 5
6 9999 9999 8 9999 2
5 4 4 5 2 9999
```

2----->3=1

5----->6=2

1----->2=3

2----->6=4

4----->6=5



