

```
1  #include<stdio.h>
2  #include<stdlib.h>
3  void prims();
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     prims();
19 }
20
21 void prims()
22 {
23     int i,j,u,v,min;
24     int ne=0,mincost=0;
25     int elec[10];
26     for(i=1;i<=n;i++)
27     {
28         elec[i]=0;
29     }
30     elec[1]=1;
31     while(ne!=n-1)
32     {
33         min=9999;
34         for(i=1;i<=n;i++)
35         {
36             for(j=1;j<=n;j++)
37             {
38                 if(elec[i]==1)
39                 {
40                     if(c[i][j]<min)
41                     {
42                         min=c[i][j];
43                         u=i;
44                         v=j;
```

main.c

```
42     min=c[i][j];
43     u=i;
44     v=j;
45 }
46 }
47 }
48 }
49 if(elec[v]!=1)
50 {
51     printf("\n%d----->%d=%d\n",u,v,min);
52     elec[v]=1;
53     ne=ne+1;
54     mincost=mincost+min;
55 }
56 c[u][v]=c[v][u]=9999;
57 }
58 printf("\nmincost=%d",mincost);
59 }
60
```

Console

Shell

```
> 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
```

1----->2=3

2----->3=1

2----->6=4

6----->5=2

6----->4=5

mincost=15