



```
1  #include<stdio.h>
2  void prims();
3  int cost[10][10],vis[10], vt[10],et[10][10],edge[10][10],e=0,i,j,k,u,v,sum=0,n,m;
4  void main()
5  {
6      printf("Enter the number of vertices\n");
7      scanf("%d",&n);
8      printf("Enter the cost of adjacency matrix\n");
9      for(i=1;i<=n;i++)
10         for(j=1;j<=n;j++)
11             {
12                 scanf("%d",&cost[i][j]);
13             }
14      prims();
15      printf("Minimum Spanning Tree:\n");
16      for(i=1;i<=e;i++)
17      {
18          printf("\n%d\t%d ", et[i][1],et[i][2]);
19      }
20
21      printf("\nTotal Cost= %d",sum);
22  }
23  void prims()
24  {
25      {
26          int x=1, min;
27          vt[x]=1;
28          vis[x]=1;
29          for(i=1;i<=n;i++)
30          {
31              j=x;
32              min=999;
33              while(j>0)
34              {
35                  k=vt[j];
36                  for(m=2;m<=n;m++)
37                  {
38                      if(cost[k][m]<min && vis[m]==0)
39                      {
40                          min=cost[k][m];
41                          u=k;
42                          v=m;
43                      }
44                  }
45                  j--;
46              }
47              vt[++x]=u;
48              et[i][1]=u;
49              et[i][2]=v;
50              e++;
51              vis[v]=1;
52              sum=sum+cost[u][v];
53          }
54      }
```

## x Terminal

Enter the number of vertices

4

Enter the cost of adjacency matrix

0 1 5 2

1 0 999 999

5 999 0 3

2 999 3 0

Minimum Spanning Tree:

1->2

1->4

1->3

1->3

Total Cost= 13