```
main.c
   1
       #include<stdio.h>
   2
       #include<stdlib.h>
        void kruskals();
   3
   4
        int c[10][10],n;
   5
        int main()
        {
   6
   7
         int i.j:
   8
         printf("\menter the no. of vertices:\t");
   9
         scanf("%d",&n);
         printf("\nenter the cost matrix:\n");
  10
  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
         }
         while(ne!=n-1)
  30
  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
             {
              min=c[i][j];
  39
  40
              u=a=i;
  41
              v=b=j;
  42
             }
  43
           }
  44
          }
  4
```

```
main.c
  34
           for(j=1;j<=n;j++)
  35
  36
             if(c[i][j]<min)</pre>
  37
  38
              min=c[i][j];
  39
              u=a=i;
  40
              v=b=j;
  41
  42
  43
          }
  44
         while(parent[u]!=0)
  45
  46
          u=parent[u];
  47
  48
         while(parent[v]!=0)
  49
  50
          {
  51
          v=parent[v];
  52
         if(u!=v)
  53
  54
          printf("\n%d---->%d=%d\n",a,b,min);
  55
          parent[v]=u;
  56
  57
          ne=ne+1;
          mincost=mincost+min;
  58
  59
         c[a][b]=c[b][a]=9999;
  60
  61
        printf("\nmincost=%d",mincost);
  62
  63
  64
```

```
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
mincost=15
```