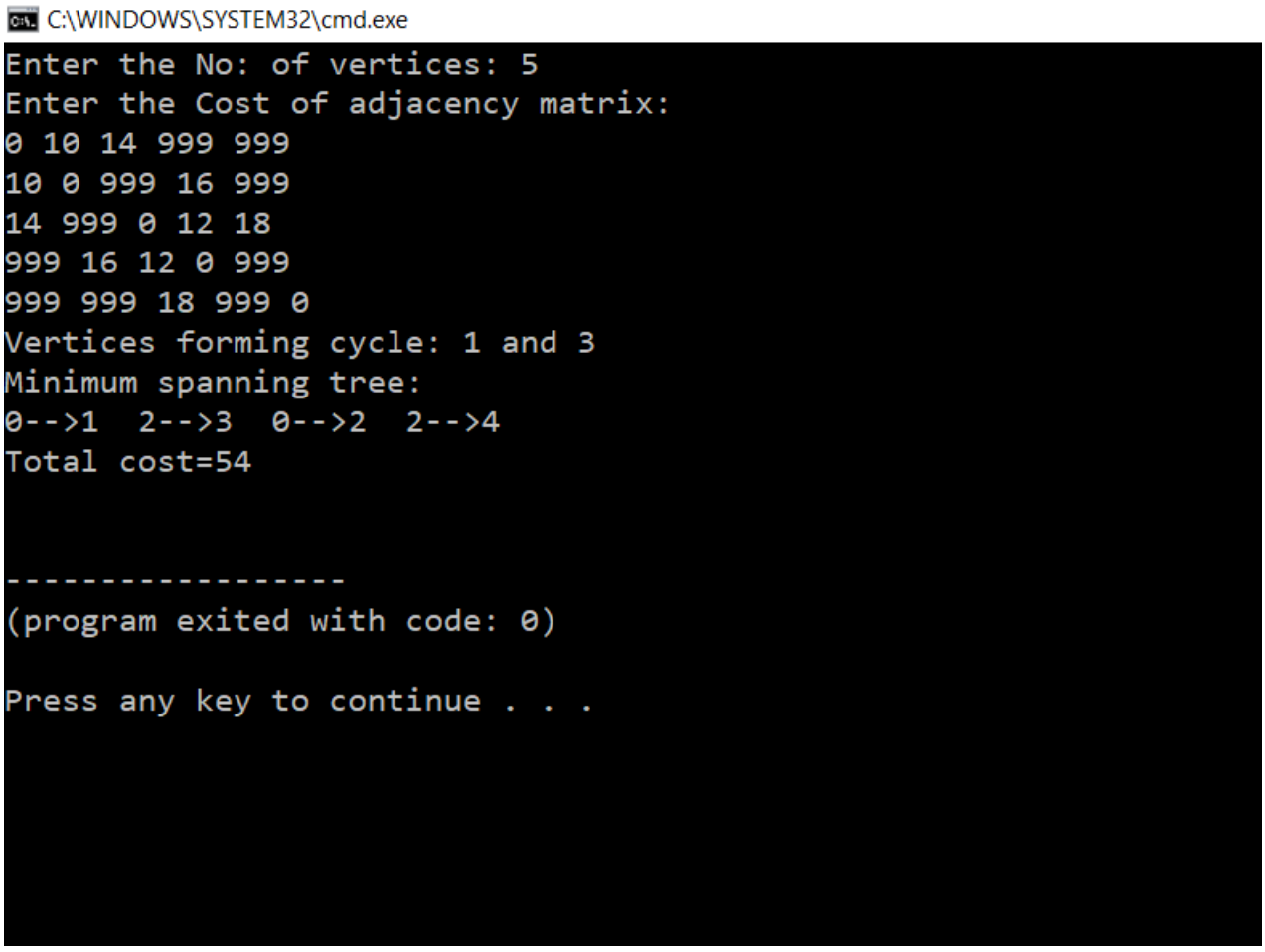
```c
#include<stdio.h>
#include<process.h>

int cost[10][10],min,i,j,count,k,u,v,parent[10],t[10][10],n,sum=0;
void union_ij(int i,int j)
{
    if(i<j)
    {
      parent[j]=i;
    }
    else
    {
      parent[i]=j;
    }
}

int find(int v)
{
    while(parent[v]!=v)
    {
      v=parent[v];
    }
    return v;
}

void kruskals()
{
    count=0;
    k=0;
    sum=0;
    for (i=0;i<n;i++)
    {
        parent[i]=i;
    }
    while (count!=(n-1))
    {
        min=999;
        for (i=0;i<n;i++)
```

```
        for (i=0;i<n;i++)
        {
            for (j=0;j<n;j++)
            {
                if (cost[i][j]<min && cost[i][j]!=0)
                {
                    min=cost[i][j];
                    u=i;
                    v=j;
                }
            }
        }
        i=find(u);
        j=find(v);
        if(i==j)
        {
            printf("Vertices forming cycle: %d and %d\n",u,v);
        }
        if (i!=j)
        {
            t[k][0]=u;
            t[k][1]=v;
            k++;
            count++;
            sum=sum+cost[u][v];
            union_ij(i,j);
        }
        cost[u][v]=cost[v][u]=999;
    }
    printf("Minimum spanning tree:\n");
    for (i=0;i<k;i++)
    {
        printf("%d-->%d  ",t[i][0],t[i][1]);
    }
    printf("\nTotal cost=%d\n",sum);
}

int main()
```

```
        {
            printf("Vertices forming cycle: %d and %d\n",u,v);
        }
        if (i!=j)
        {
            t[k][0]=u;
            t[k][1]=v;
            k++;
            count++;
            sum=sum+cost[u][v];
            union_ij(i,j);
        }
        cost[u][v]=cost[v][u]=999;
    }
    printf("Minimum spanning tree:\n");
    for (i=0;i<k;i++)
    {
        printf("%d-->%d  ",t[i][0],t[i][1]);
    }
    printf("\nTotal cost=%d\n",sum);
}

int main()
{
    printf("Enter the No: of vertices: ");
    scanf("%d",&n);
    printf("Enter the Cost of adjacency matrix:\n");
    for (i=0;i<n;i++)
    {
        for (j=0;j<n;j++)
        {
            scanf("%d",&cost[i][j]);
        }
    }
    kruskals();
    return 0;
}
```


C:\WINDOWS\SYSTEM32\cmd.exe
Enter the No: of vertices: 5
Enter the Cost of adjacency matrix:
0 10 14 999 999
10 0 999 16 999
14 999 0 12 18
999 16 12 0 999
999 999 18 999 0
Vertices forming cycle: 1 and 3
Minimum spanning tree:
0-->1 2-->3 0-->2 2-->4
Total cost=54

(program exited with code: 0)
Press any key to continue . . .