Date	29/10/2022
Team ID	PNT2022TMID49848
Project Name	Smart waste management system

CODING:

```c
#include<stdio.h>

#include<stdlib.h>

#define infinity 999

int nd,n=26,v,a[50];

float dist[50];

float

cost[26][26]={999,3.55,4.35,5.85,7.3,7.5,9.45,7.45,6.05,3.45,4.65,6.35,8.8,8.95,10.1,9.55,9.15,8.1,6.85,3.3,2.2,3.4,3.7,5.65,6.35,5.1,3.55,999,8.35,2.3,3.7,4.25,5.95,3.75,2.55,2.1,3.33,3.55,5.1,5.75,6.9,6.75,6.35,5.3,4.05,4.8,3.7,2.7,2.35,4.3,5,4.4,4.35,0.85,999,1.5,2.95,3.4,5.1,2.9,1.7,2.9,4.1,2.7,4.25,4.9,6.05,5.9,5.5,4.45,3.2,5.6,4.5,3.5,3.15,5.1,5.8,5.45,5.85,3.2,1.5,999,1.45,1.9,3.6,1.6,2.8,4.4,5.4,3.7,2.95,3.6,4.75,6.9,6.5,5.45,4.2,7.1,6,5,4.65,6.6,7.3,6.95,7.3,3.7,2.95,1.45,999,3.35,5.05,3.05,4.25,5.85,6.85,5.15,4.4,5.05,5.2,8.33,7.95,6.9,5.65,8.55,7.45,6.45,6.1,8.05,8.75,8.4,7.5,4.25,3.4,1.9,3.35,999,1.7,3.5,4.7,6.3,7.3,5.6,3.75,3.8,4.95,6.35,6.75,7.35,6.1,9,7.9,6.9,6.55,8.5,9.2,8.85,9.45,5.95,5.1,3.6,5.05,1.7,999,3.4,4.6,8,7,5.3,2.05,2.7,2.85,5.25,5.65,9.05,7.8,10.7,9.6,8.6,8.25,10.2,10.9,10.55,7.45,3.75,2.9,1.6,3.05,3.5,3.4,999,1.2,5,3.8,2.1,1.35,2,3.15,4.55,4.9,3.85,2.6,8.5,7.4,6.4,6.05,7.2,7.9,8.35,6.05,2.55,1.7,2.8,4.25,4.7,4.6,1.2,999,3.8,2.6,0.9,2.55,3.2,4.35,4.1,3.7,2.65,1.4,7.3,6.2,5.2,4.35,6,6.7,7.15,3.45,2.1,2.9,4.4,5.85,6.3,8,5,3.8,999,1.2,2.9,6.15,6.8,7.95,6.1,5.7,4.65,3.4,4.7,3.6,2.6,2.25,2.2,2.9,4.55,4.65,3.3,4.1,5.4,6.85,7.3,7,3.8,2.6,1.2,999,1.7,4.95,4.3,5.45,4.9,4.5,3.45,2.2,5.9,4.8,3.8,3.45,3.4,4.1,5.75,6.35,3.55,2.7,3.7,5.15,5.6,5.3,2.1,0.9,2.9,1.7,999,3.25,2.6,3.75,3.2,2.8,1.75,0.5,7.6,6.5,5.5,5.15,5.1,5.8,7.45,8.8,5.1,4.25,2.95,4.4,3.75,2.05,1.35,2.55,6.15,4.95,3.25,999,0.65,1.8,3.2,3.6,4.65,3.75,9.85,8.75,7.75,6.9,8.35,9.05,9.7,8.95,5.75,4.9,3.6,5.05,3.8,2.7,2,3
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.2,6.8,4.3,2.6,0.65,999,1.15,2.55,2.95,4,3.1,10.2,9.1,8.1,7.75,7.7,8.4,10.5,10.1,6.9,6.05,4.75,
6.2,4.95,3.85,3.15,4.35,7.95,5.45,3.75,1.8,1.15,999,1.4,1.8,2.85,4.1,11.35,10.25,9.25,8.9,8.8
5,9.26,11.2,9.55,6.75,5.9,6.9,8.35,6.35,5.25,4.5,4.1,6.1,4.9,3.2,3.2,2.55,1.4,999,0.4,1.45,2.7,
10.8,9.7,8.7,8.35,8.3,9,10.65,9.15,6.35,5.5,6.5,7.95,6.75,5.65,4.9,3.7,5.7,4.5,2.8,3.6,2.95,1.8
,0.4,999,1.05,2.3,10.4,9.3,8.3,7.75,7.9,8.6,10.25,8.1,5.3,4.45,5.45,6.9,7.35,9.05,8.85,2.65,4.
65,3.45,1.75,4.65,4,2.85,1.45,1.05,999,1.25,9.35,8.25,7.25,6.9,6.85,7.55,9.2,6.85,4.05,3.2,4.
2,5.65,6.1,7.8,2.6,1.4,3.4,2.2,0.5,3.75,3.1,4.1,2.7,2.3,1.25,999,8.1,7,6,5.65,5.6,6.3,7.95,3.3,4
.8,5.6,7.1,8.55,9,10.7,8.5,7.3,4.7,5.9,7.6,9.85,10.2,11.35,10.8,10.4,9.35,8.1,999,1.1,2.3,2.8,4
.8,5.5,4,2.2,3.7,4.5,6,7.45,7.9,9.6,7.4,6.2,3.6,4.8,6.5,8.75,9.1,10.25,9.7,9.3,8.25,7,1.1,999,1.
2,1.7,3.7,4.4,2.9,3.4,2.7,3.5,5,6.45,6.9,8.6,6.4,5.2,2.6,3.8,5.5,7.75,8.1,9.25,8.7,8.3,7.25,6,2.3
,1.2,999,0.5,2.5,3.2,1.7,3.7,2.35,3.15,4.65,6.1,6.55,8.25,6.05,4.35,2.25,3.45,5.15,6.9,7.75,8.
9,8.35,7.95,6.9,6.65,2.8,1.7,0.5,999,2,2.7,2.3,5.65,4.3,5.1,6.6,8.05,8.5,10.2,7.2,6,2.2,3.4,5.1,
8.35,7.7,8.85,8.3,7.9,6.85,5.6,4.8,3.7,2.5,2,999,0.7,3.2,6.35,5,5.8,7.3,8.75,9.2,10.9,7.9,6.7,2.
9,4.1,5.8,9.05,8.4,9.26,9,8.6,7.55,6.3,5.5,4.4,3.2,2.7,0.7,999,2.5,5.1,4.4,5.45,6.95,8.4,8.85,1
0.55,8.35,7.15,4.55,5.75,7.45,9.7,10.05,11.2,10.65,10.25,9.2,7.45,4,2.9,1.7,2.3,3.2,2.5,999};

void dij()

 {

int i,u,count,w,flag[26];

 float min;

for(i=0;i<=n)

{

 min=99;

for(w=0;w<n;w++)

if(dist[w]<min&&!flag[w])

{

Min=dist[w];

u=w;

}

flag[u]=1;

Count++;

for(w=0;w<n; w++)

```c
if((dist[u]+cost[u][w]<dist[w])&&!flag[w])

    dist{w}=dist[u]+cost[u][w];

}

for(i=0;i<n;i++)

if(i==v)

dist[i]=999;

}

int sort()

{

int i,j,flag,temp;

for(i=0;i<nd;i++)

for(j=0;j<nd-i-1;j++)

{

if(dist[a[j+1]]<dist[a[j]])

{

temp=a[j];

a[j]=a[j+1];

a[j+1]=temp;

}

}

flag=a[0];

for(i=0;i<nd;i++)

a[i]=a[i+1];

nd--;

printf("%d",flag);
```

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return flag;

}

Void main()

{

int count,i,j;

printf("\n Enter  the source vertex:\n");

scanf("%d",&v);

printf("\n Enter the number of activre nodes:\n ");

scanf("%d",&count);

printf("\n Enter the active nodes \n");

for(i=0;i<count;i++)

{

Scanf("%d",&a[i]);

}

Nd=count;

for(i=0;i<count-1;i++)

{

dij(n,v);

v=sort();

}

Printf("%d",a[0]);

}
```