Program-Dijkstras

```
#include<iostream>
#include<climits>
using namespace std;

int minimumDist(int dist[],bool Test[])
{
     int min =INT_MAX,index;
     for(int i=0;i<6;i++)
     {
          if(Test[i]==false && dist[i]<=min)
          {
               min=dist[i];
               index=i;
          }
     }
     return index;
}
void Dijkstra(int graph[6][6],int src)
{
int dist[6];
bool Test[6];

for(int i=0;i<6;i++)
{
     dist[i]=INT_MAX;
     Test[i]=false;
}
dist[src]=0;
for(int i=0;i<6;i++)
{
int m=minimumDist(dist,Test);
Test[m]=true;
for(int i=0;i<6;i++)
{
     if(!Test[i]&& graph[m][i]&& dist[m]!=INT_MAX && dist[m]
+graph[m][i]<dist[i])

     dist[i]=dist[m]+graph[m][i];
}
}
cout<<"Vertex\t\tDistance frome sourece"<<endl;
for(int i=0;i<6;i++)
{
char str=65+i;
cout<<str<<"\t\t\t"<<dist[i]<<endl;
}
}

int main()
{
int graph[6][6]=
```

```
{
     {0,10,20,0,0,0},
     {10,0,0,50,10,0},
     {20,0,0,20,33,0},
     {0,50,20,0,20,2},
     {0,10,33,20,0,1},
     {0,0,0,2,1,0}};
     Dijkstra(graph,0);
     return 0;
}
```

Output:

Vertex	Distance frome sourece
A	0
B	10
C	20
D	23
E	20
F	21