DJKSITRA'S ALGORITHM

```
#include< limit.h>
#include < stdio.h>
# define V 5
int  main()
{
        int  int=adj

        int graph[V][V]
        printf ("Enter the distance matrix )
        for (int i=0; i<V; i++)
        {
                for(int j=0; j<V; j++)
                        Scanf ("-1.d", & graph[i][j]);
        }
        djkstra ( graph )

}

Void  djkstra ( int graph [V][V] )
{
        int  parent[V]
        int  key [V]
        bool  mstset[V]
        for(int i=0; i< V; i++){
                parent[i]=0
                key [i] = INT _ MAX
                mst set [i] = false
        }
        key [0]= 0
        parent[0] =-1
        for(int  count=0; count< V-1 ; count++)
        {
```

```
int u= minkey[key, mstset];
mstset [u]= true

for (int v=0; v< V; v++)
{
    if (graph[u][v] && mstset [v]==false

                        && key[v] != INT_MAX
                        && key[u] + graph[u][v]
                            <    key[v] )
    {

        key[v] = key[u] + graph[u][v]

    }
}

print (key);

int minkey (int k[], bool & mstset[])
{
    int min = INT_MAX;
    int minIndex;
    for (int i=0; i<V; i++)
    {
        if (key[i] < min)
        {
            min = key[i]
            minIndex =i
        }
    }
    return minIndex;
}
```