Cycle 2 lab 3

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#include <limits.h>
#include <stdio.h>
#define V9
 int min Distance (int dist [], bool sptset[])
{
int min = INT-MAX, min-index;
for (int v= 0; v <V, v++)
if (sptset [V] = =false && dist[V]<=min)
 min = dist[V], min-index =V,
 return min-index;
}
void printSolution(int dist [])
{
printf("Vertex |t|+ Distance from Source \n");
for (int i =0; i<V; i++)
printf ("% d |t| t% d |n", i, dist [i]);
}
void dijkstra (int graph [V][V], int src)
{
int dist [V];
bool spt set [V];
for (int i = 0; i <V; i++)
dist[i]= INT_MAX, sptSet [i]= false;
dist[src]=0;
for (int count = 0; count <V-1; count++){
```

```
int u= min Distance (dist, sptSet);
 sptSet[u]= true;
 for (int v=0; v<V; v++)

for (!sptSet[v]&& graph[u][v]&& dist[u]!= INT_MAX &&
  dist [u]+ graph [u][v]< dist[v])
 dist [v]= dist [u]+ graph [u][v];
 }
printSolution (dist);
}
int main()
{
int  graph [V][V]={{0,4,0,0,0,0,0,8,0},
                   {4,0,8,0,0,0,0,11,0},
                   {0,8,0,7,0,4,0,0,0,2},
                  {0,0,7,0,9,14,0,0,0},
                 {0,0,0,9,0,10,0,0,0},
                 {0,0,4,14,10,0,2,0,0},
                {0,0,0,0,0,2,0,1,6};
                {8,11,0,0,0,0,1,0,7},
               {0,0,2,0,0,0,6,7,0}};

 dijkstra (graph,0);
 return 0;
 }.
```