Name: Ravi Sajjanos Course: ADA Lab Test 2 Date : 1/08/07/2021. 1/9 / horing Sign is (Roya & Program: 7 [01] foil dose hair orded jib biss From a given vertex in a weighted connected graph, find shortest path to others vertices Using Dijkstra's algorithm? to 2 192 trei Modification:

print number of nodes along the shortest { (+ padh s; 1-1/> + tomos (0 = hours) } + (Ve to 2 type (teste) Donn tes around = 1) # include < stdio. h> [1] 132192 Program Code: int minDistance Cint dist[] int sptSet[], intV] int min = agg, min_index; + [H] lab / for (v=0), NXV; V++) tor cv=0, vs==0 && dist[v] <= min)

if (sptSet [v]==0 && dist[v] <= min)

min = dist[v], min _index = v; Fretuen min-index;

```
point Solution (int Soc, int dist [], int V) &
           int i;
            printf ("In It Vertex ItIt Distance from some In");
              for (120; 1< V; 1++) del 191
                 printf (" + "/c -> 1.0 | th 1.d | n", sr+65,
                                   i+65, dist[i]);
        void dykstra (int graph [10][10], int soc, int ) {
     (int dist[v]) of all 10171 and 10171
   int i, count, u, visations being dail
             for (i=0;i<V;i++)
           dist[i]=999, sptSet[i]=0;

dist[sxc]=0;
          for (count=0', count < V-1; count++) {
                u = min Distance (dist, 8pt Set 3V);
Spt Set [u]=1;
for (comply=0; N < N; y++) {
                if (1. spt Set [v] && graph [u][v] &&
                         dist[u]!= 999 & & dist[u]+
(ma [v] luby, graph Eud[v] < diet[v]) {
  dist [v]= dist [u]+ graph [u][v];
             printsolution ( sec, dist, V);
```

int main() } int graph [10][10]; point (" Enter the number of vertices \n");

8 canf (" 1.d", \$VA; train adjucency matsh \n");

Phint f (" Enter the radjucency matsh \n"); for (1:0; i < V; i++) ? [1 to 2 / 2 }) for Cj=0; j < V; j++) & m scanf (" Id", & graph [i] [j);

scanf (" Id", & graph [ii] [j);

for cases sets, Italy (") disjkstra (graph, O, V); return o; [11] estresso 1 L 1 12 / 12 / 1 - 1 30 3 (4+4) (10 1/2 5) 3 (10 1 1 1) SCENTER ENTRY OF FRENCH Late Compagned from the Extraction of the Contraction of 16-17-17-10-12/m hm Lett minister = kissee

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Modification:
        to print number of modes along the Shortest
 path;
void dykstra (int graph [4] [6], int see, int V] &
      int is count, u, v; all isless is pleases
       int spt Set[v];
      for Ci=0; iCV; i++) /2/1001
     dist [1] = 999, spt Set[i]=0;
        dist[Soc]=0;
         int number [v];
         for ( Count to; Count < V-1; Count ++) &
              u= min Distance (dist, sp1 Set, V);
               number [u] = Count jl
          8pt Set[4]=1;
                for [v=0; V < V; v++) ?
  if (!Spt Set [v] & 4 graph [u] [v] & 4 dist [u]! = 999 44
          dist [u]+graph[u][v] < dist [v]) {
    dist[v]= dist[u]+graph tu][v];
   for (1=0; i<V; i++) }
         if (spt Set [i] =0) &
int max = 0;
               for (int j=0;j<V;j++){
     if (number [j]) marx 44 spt Set [j]!=0
            max = number [j];
```

number [i] = marx; print Solution (dist, V, number); int print Solution (int diet [], int V, int mamber []) { printf ("Veitex It/t Distance from Source (m"); for (120; 120; 1++) pant ("1d 1d 1d 1, dist (i), number [1]);

