

```

1: #include<stdio.h>
2: #define V 8
3: #define INF 999999
4:
5: int min(int a,int b){
6:     if(a<b)return a;
7:     return b;
8: }
9: void printSolution(int dist[][V])
10: {
11:     printf("\n:::::::::::::::::::::::: ALL PAIR SHORTEST PATH
12:     ::::::::::::::::::::::::::\n");
13:     printf("_____");
14:     printf("\n_|_|1|_|2|_|3|_|4|_|5|_|6|_|7|_|8|\n");
15:     for (int i = 0; i < V; i++)
16:     {
17:         printf(" %d | ",i+1);
18:         for (int j = 0; j < V; j++)
19:         {
20:             if (dist[i][j] == INF)
21:                 printf("%7s|", "INF");
22:             else
23:                 printf ("%7d|", dist[i][j]);
24:         }
25:         printf("\n");
26:     }
27:     printf("_____ \n");
28: }
29: }
30: ]
31: void floydWarshal(int graph[][V]){
32:     int dist[V][V];
33:     for(int i=0;i<V;++i){
34:         for(int j=0;j<V;++j){
35:             dist[i][j]=graph[i][j];
36:         }
37:     }
38:     for(int k=0;k<V;++k){
39:         for(int i=0;i<V;++i){
40:             for(int j=0;j<V;++j){
41:                 dist[i][j]=min(dist[i][j],dist[i][k]+dist[k][j]);
42:             }
43:         }
44:     }
45: }
46:
47: printSolution(dist);
48: }
49:
50: int main(){

```

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51:     int graph[V][V]={0,10,INF,INF,INF,INF,INF,8},
52:                       {INF,0,INF,INF,INF,2,INF,INF},
53:                       {INF,1,INF,1,INF,INF,INF,INF},
54:                       {INF,INF,INF,0,3,INF,INF,INF},
55:                       {INF,INF,INF,INF,0,-1,INF,INF},
56:                       {INF,INF,-2,INF,INF,0,INF,INF},
57:                       {INF,-4,INF,INF,INF,-1,0,INF},
58:                       {INF,INF,INF,INF,INF,INF,1,0}};
59:
60:     floydWarshal(graph);
61:     return 0;
62: }
63:
```