```
/*****************************************************************

                        Online C Compiler.
                Code, Compile, Run and Debug C program online.
Write your code in this editor and press "Run" button to compile

*****************************************************************/
#include<stdio.h>
#define V 4

void printSolution(int dist[][V]);

int min(int i,int j)
{
  if(i<j)
    return i;
  return j;
}

void floyd(int A[][4])
{
  int i,j,k,P[4][4];

  for(i=0;i<4;i++)
     for(j=0;j<4;j++)
        P[i][j]=A[i][j];

  for(k=0;k<4;k++)
      for(i=0;i<4;i++)
          for(j=0;j<4;j++)
              if(P[i][k]==1 && P[k][j]==1)
                P[i][j]=1;

   printSolution(P);
}

void printSolution(int dist[][V])
{
```

main.c

```
25          for(j=0;j<4;j++)
26              P[i][j]=A[i][j];
27
28      for(k=0;k<4;k++)
29          for(i=0;i<4;i++)
30              for(j=0;j<4;j++)
31                  if(P[i][k]==1 && P[k][j]==1)
32                      P[i][j]=1;
33
34      printSolution(P);
35  }
36
37  void printSolution(int dist[][V])
38  {
39      printf ("The following matrix shows the shortest distances"
40              " between every pair of vertices \n");
41      for (int i = 0; i < V; i++)
42      {
43          for (int j = 0; j < V; j++)
44          {
45              printf ("%d", dist[i][j]);
46          }
47          printf("\n");
48      }
49  }
50
51
52  int main()
53  {
54      int graph[V][V] = { {0,1,0,0},
55                          {0,0,0,1},
56                          {0,0,0,0},
57                          {1,0,1,0}
58                        };
59      printf("\n\n");
60      floyd(graph);
61      return 0;
62  }
```