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floyds.c

```c
#include<stdio.h>
#include<conio.h>
int a[10][10],n;
void floyds();
int min(int,int);
void main()
{
int i,j;
printf("\n enter the no. of vertices:\t");
scanf("%d",&n);
printf("\n enter the cost matrix:\n");
for(i=1;i<=n;i++)
{
for(j=1;j<=n;j++)
{
scanf("%d",&a[i][j]);
}
}
floyds();
}
void floyds()
{
int i,j,k;
for(k=1;k<=n;k++)
{
for(i=1;i<=n;i++)
{
for(j=1;j<=n;j++)
{
a[i][j]=min(a[i][j],a[i][k]+a[k][j]);
}
}
}

printf("\n all pair shortest path matrix is:\n");
for(i=1;i<=n;i++)
```

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floyds.c

```
22  {
23  int i,j,k;
24  for(k=1;k<=n;k++)
25  {
26  for(i=1;i<=n;i++)
27  {
28  for(j=1;j<=n;j++)
29  {
30  a[i][j]=min(a[i][j],a[i][k]+a[k][j]);
31  }
32  }
33  }
34
35  printf("\n all pair shortest path matrix is:\n");
36  for(i=1;i<=n;i++)
37  {
38  for(j=1;j<=n;j++)
39  {
40  printf("%d \t",a[i][j]);
41  }
42  printf("\n\n");
43  }
44  }
45  int min(int x,int y)
46  {
47  if(x<y)
48  {
49  return x;
50  }
51  else
52  {
53  return y;
54  }
55  }
56
```

C:\Users\CMRS\Documents\floyds.exe

```
 enter the no. of vertices:     4

 enter the cost matrix:
9999 9999    3 9999
   2 9999 9999 9999
9999    7 9999    1
   6 9999 9999 9999

 all pair shortest path matrix is:
10      10      3       4

2       12      5       6

7       7       10      1

6       16      9       10


Process returned 4 (0x4)   execution time : 65.382 s
Press any key to continue.
```