LAB PROGRAM 8

AIM: Implement All Pair Shortest paths problem using Floyd's algorithm.

SOURCE CODE

```
#include<stdio.h>
#include<stdlib.h>
#define INF 999
int a[10][10],d[10][10],n;
int min(int a,int b)
{
   if(a<b)
   {
      return a;
   }
   else
   {
      return b;
   }
}
void shortestpath()
{
   int i,j,k;
   for(k=0;k<n;k++)
   {
      for(i=0;i<n;i++)
      {
         for(j=0;j<n;j++)
```

```
        {
            d[i][j]=min(d[i][j],d[i][k]+d[k][j]);
        }
      }
   }
}
void main()
{
   int i,j;
   printf("enter the no. of vertices\n");
   scanf("%d",&n);
   printf("enter the cost of the matrix\n");
   for(i=0;i<n;i++)
      for(j=0;j<n;j++)
   {
      scanf("%d",&a[i][j]);
      d[i][j]=a[i][j];
   }
   shortestpath();
   printf("flyod's algorithm \n");
   for(i=0;i<n;i++)
   {
      for(j=0;j<n;j++)
      {
         printf("%d",d[i][j]);
      }
      printf("\n");
   }
}
```

OUTPUT SCREENSHOT