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