

LAB PROGRAM 8

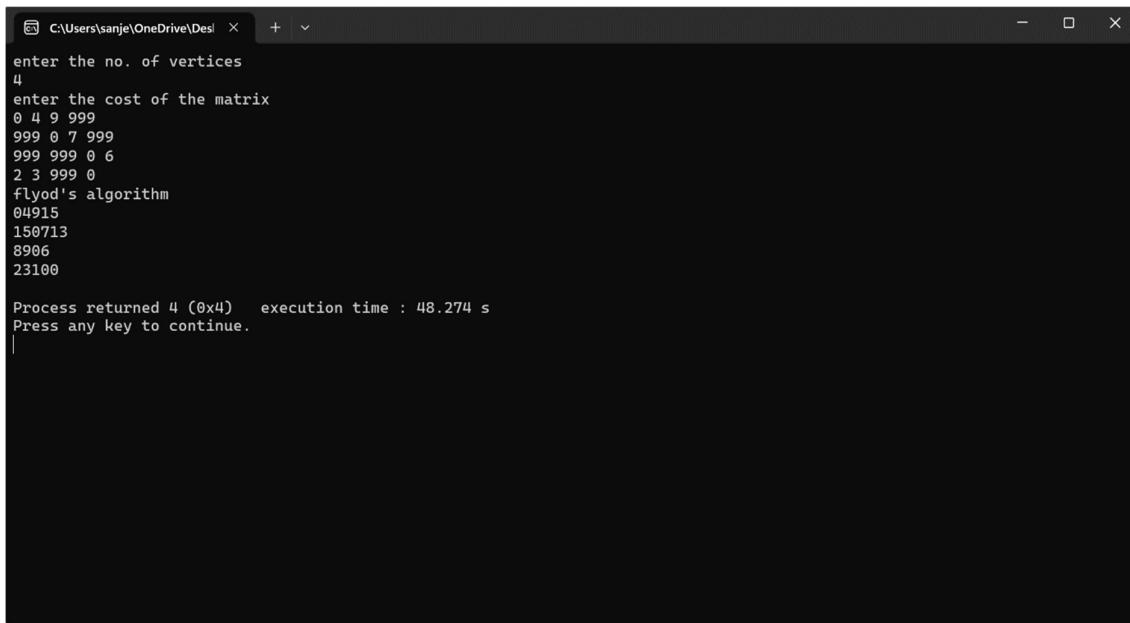
AIM: Implement All Pair Shortest paths problem using Floyd's algorithm.

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++)
            {
                if(d[i][j] > d[i][k] + d[k][j])
                    d[i][j] = d[i][k] + d[k][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



A screenshot of a terminal window titled "C:\Users\sanje\OneDrive\Desktop". The window contains the following text:

```
enter the no. of vertices
4
enter the cost of the matrix
0 4 9 999
999 0 7 999
999 999 0 6
2 3 999 0
floyd's algorithm
04915
150713
8906
23100

Process returned 4 (0x4)  execution time : 48.274 s
Press any key to continue.
```