

WARSHALL ALGORITHM PROGRAM

PROGRAM:-

```
#include<stdio.h>

void warshalls();

int a[10][10], p[10][10], i,j,k,n;

void main()
{
printf("Enter number of vertices\n");
scanf("%d",&n);
printf("enter adjacency matrix\n");
for(i=1;i<=n;i++)
{
    for(j=1;j<=n;j++)
    {
        scanf("%d",&a[i][j]);
    }
}
warshalls();
printf("Path Matrix\n");
for(i=1;i<=n;i++)
{
    for(j=1;j<=n;j++)
    {
        printf("%d\t",p[i][j]);
    }
    printf("\n");
}
getch();
}
```

```

void warshalls()
{
    for(i=1;i<=n;i++)
    {
        for(j=1;j<=n;j++)
        {
            p[i][j]=a[i][j];
        }
    }

    for(k=1;k<=n;k++)
    {
        for(i=1;i<=n;i++)
        {
            for(j=1;j<=n;j++)
            {
                if((p[i][j]!=1) && (p[i][k]==1 && p[k][j]==1))
                    p[i][j]=1;
            }
        }
    }
}

```

OUTPUT:

```

Enter number of vertices
4
enter adjacency matrix
0 0 0 1
1 0 1 1
1 0 0 1
0 0 1 0
Path Matrix
1      0      1      1
1      0      1      1
1      0      1      1
1      0      1      1

```