**Warshal’s Program**

**Design and implement C/C++ Program to find the transitive closure using Warshal's algorithm.**

# include <stdio.h>  
int n,a[10][10],p[10][10];  
void path()  
{  
int i,j,k;  
for(i=0;i<n;i++)  
for(j=0;j<n;j++)  
p[i][j]=a[i][j];  
for(k=0;k<n;k++)  
for(i=0;i<n;i++)  
for(j=0;j<n;j++)  
if(p[i][k]==1&&p[k][j]==1)

p[i][j]=1;  
}  
void main()  
{  
int i,j;  
printf("Enter the number of nodes:");  
scanf("%d",&n);  
printf("\nEnter the adjacency matrix:\n");  
for(i=0;i<n;i++)  
for(j=0;j<n;j++)  
scanf("%d",&a[i][j]);  
path();  
printf("\nThe path matrix is shown below\n");  
for(i=0;i<n;i++)  
{  
for(j=0;j<n;j++)  
printf("%d ",p[i][j]);  
printf("\n");  
}  
}

OUTPUT

Enter the number of nodes:4

Enter the adjacency matrix:

0 1 0 0

0 0 0 1

0 0 0 0

1 0 1 0

The path matrix is shown below

1 1 1 1

1 1 1 1

0 0 0 0

1 1 1 1