

**Code:**

```
#include<stdio.h>

#include<conio.h>

int n,a[10][10],p[10][10];

void warshall(int n,int a[10][10],int p[10][10])

{

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][j]==0) && (p[i][k]==1 && p[k][j]==1))

p[i][j]=1;

}

void main()

{

int i,j;

printf("enter the number of vertices\n");

scanf("%d",&n);

printf("enter the adjacency matrix\n");

for(i=0;i<n;i++)

{

for(j=0;j<n;j++)

{
```

```

scanf("%d",&a[i][j]);
}
}
warshall(n,a,p);
printf("transitive closure\n");
for(i=0;i<n;i++)
{
for(j=0;j<n;j++)
{
printf("%d\t",p[i][j]);
}
printf("\n");
}
getch(); }

```

### **output:**

```

enter the number of vertices
3
enter the adjacency matrix
0 0 1
0 0 0
1 1 1
transitive closure
1      1      1
0      0      0
1      1      1

...Program finished with exit code 0
Press ENTER to exit console.

```