

main.c

E

```
1  #include<stdio.h>
2  #include<stdlib.h>
3  int n,a[10][10],p[10][10];
4
5  void warshall(int n,int a[10][10],int p[10][10])
6  {
7      int i,j,k;
8      for(i=0;i<n;i++)
9          for(j=0;j<n;j++)
10             p[i][j]=a[i][j];
11
12         for(k=0;k<n;k++)
13             for(i=0;i<n;i++)
14                 for(j=0;j<n;j++)
15                     if((p[i][j]==0) && (p[i][k]==1 && p[k][j]==1))
16                         p[i][j]=1;
17 }
18 int main()
19 {
20     int i,j;
21
22     printf("enter the number of vertices\n");
23     scanf("%d",&n);
24     printf("enter the adjacency matrix\n");
25     for(i=0;i<n;i++)
26     {
27         for(j=0;j<n;j++)
28         {
29             scanf("%d",&a[i][j]);
30         }
31     }
32     warshall(n,a,p);
33     printf("transitive closure\n");
34     for(i=0;i<n;i++)
35     {
36         for(j=0;j<n;j++)
37         {
38             printf("%d\t",p[i][j]);
39         }
40         printf("\n");
41     }
42 }
43
```



Invite

Console

Shell

```
> clang-7 -pthread -lm -o main main.c
```

```
> ./main
```

```
enter the number of vertices
```

```
4
```

```
enter the adjacency matrix
```

```
1 0 0 1
```

```
1 1 1 0
```

```
0 1 0 1
```

```
0 1 1 1
```

```
transitive closure
```

```
1 1 1 1
```

```
1 1 1 1
```

```
1 1 1 1
```

```
1 1 1 1
```

```
> 
```