```
#include<stdio.h>
const int MAX = 100;

void WarshallTransitiveClosure(int graph[MAX][MAX], int numVert);
int main(void)
{
    int i, j, numVert;
    int graph[MAX][MAX];

    printf("Warshall's Transitive Closure\n");
    printf("Enter the number of vertices : ");
    scanf("%d",&numVert);

    printf("Enter the adjacency matrix :-\n");
    for (i=0; i<numVert; i++)
        for (j=0; j<numVert; j++)
            scanf("%d",&graph[i][j]);

    WarshallTransitiveClosure(graph, numVert);

    printf("\nThe transitive closure for the given graph is :-\n");
    for (i=0; i<numVert; i++)
    {
        for (j=0; j<numVert; j++)
        {
            printf("%d\t",graph[i][j]);
        }
        printf("\n");
    }

    return 0;
}

void WarshallTransitiveClosure(int graph[MAX][MAX], int numVert)
{
    int i,j,k;

    for (k=0; k<numVert; k++)
    {
        for (i=0; i<numVert; i++)
        {
            for (j=0; j<numVert; j++)
            {
                if (graph[i][j] || (graph[i][k] && graph[k][j]))
                    graph[i][j] = 1;
            }
        }
    }
}
```

OUTPUT

Enter the number of vertices : 4 Enter the adjacency matrix :- 0 0 1 0 0 0 0 1 1 0 0 0 0 1 0 0

```
The transitive closure for the given graph is :- 1 0 1 0
0 1 0 1
1 0 1 0
0 1 0 1

Warshall's Transitive Closure Enter the number of vertices : 4 Enter
the adjacency matrix :-

0 1 1 0 1 0 0 1 1 0 0 1 0 1 1 0

The transitive closure for the given graph is :- 1 1 1 1
1 1 1 1
1 1 1 1
1 1 1 1
```