**#include <stdio.h>**

**int adjacency\_matrix[20][20];**

**int visited[20];**

**int n;**

**void depth\_first\_search(int v)**

**{**

**int i;**

**visited[v]=1;**

**for(i=0; i<7; i++)**

**if(adjacency\_matrix[v][i] && !visited[i])**

**{**

**printf("\n %d->%d",v,i);**

**depth\_first\_search(i);**

**}**

**}**

**int main()**

**{**

**int i, j, count=0;**

**printf("\n Enter number of vertices:");**

**scanf("%d", &n);**

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

**{**

**visited[i]=0;**

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

**adjacency\_matrix[i][j]=0;**

**}**

**printf("Enter the adjacency matrix:\n");**

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

**{**

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

**scanf("%d", &adjacency\_matrix[i][j]);**

**}**

**depth\_first\_search(0);**

**printf("\n");**

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

**{**

**if(visited[i])**

**count++;**

**}**

**if(count==n)**

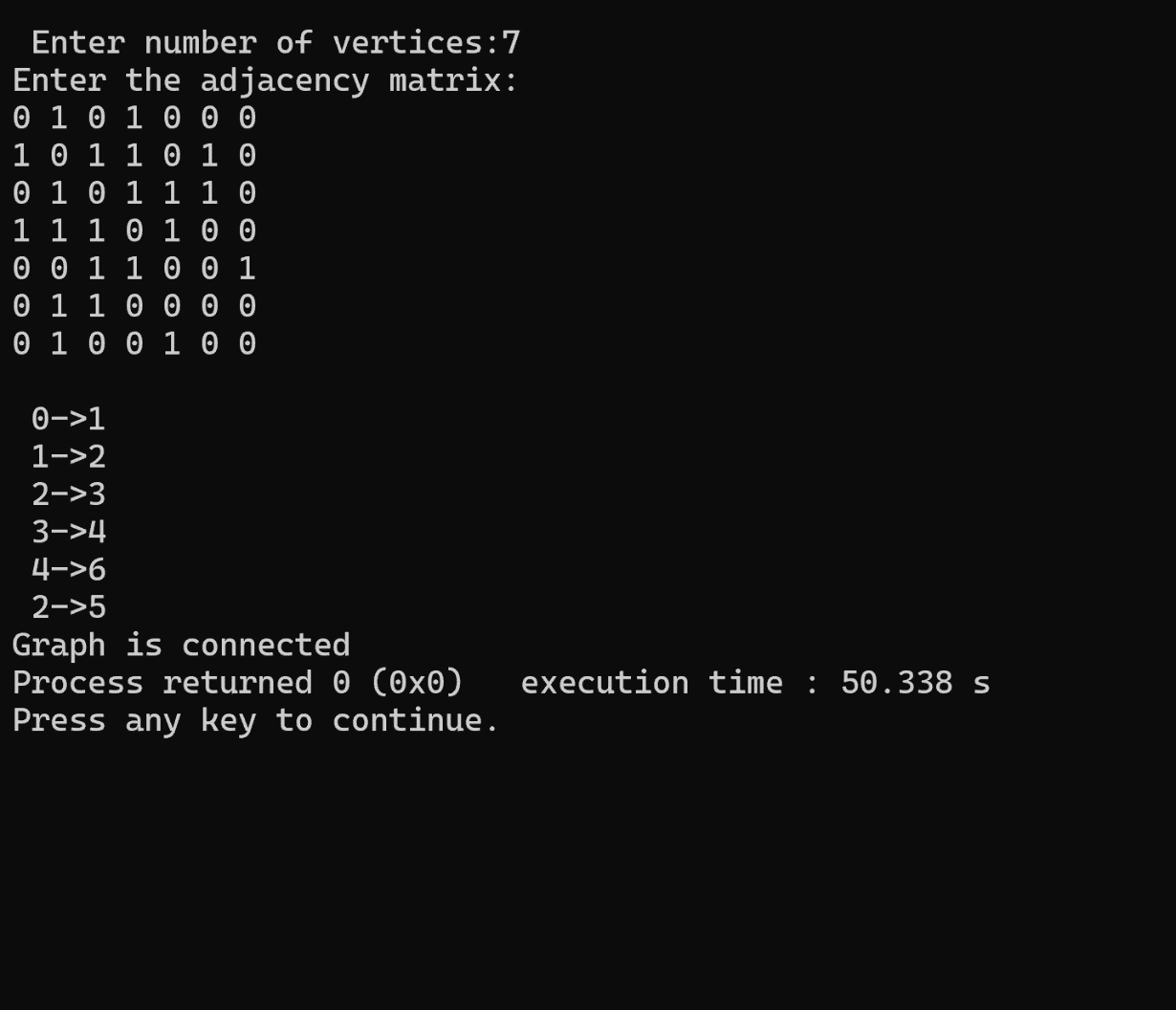
**printf("Graph is connected");**

**else**

**printf("Graph is not connected");**

**return 0;**

**}**

****