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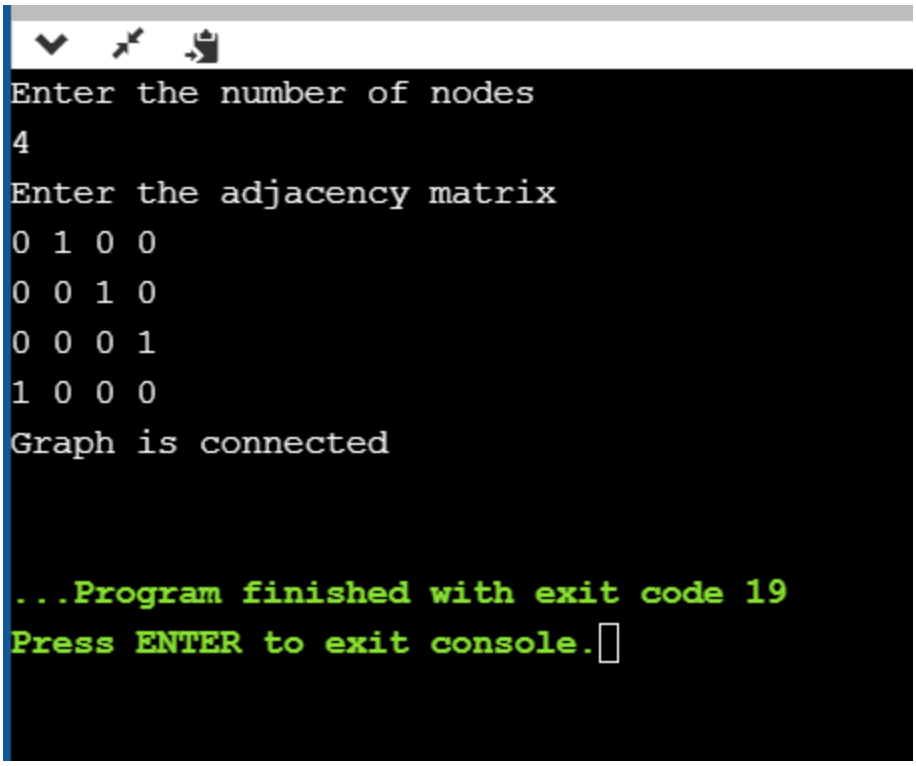
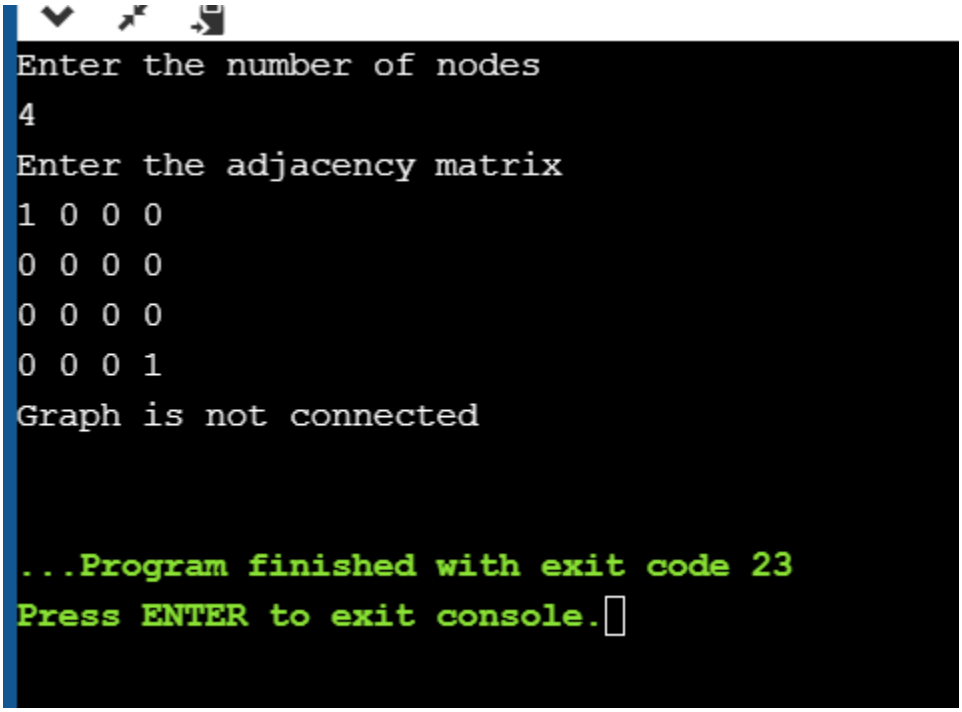
DFS

```
#include<stdio.h>
#include<conio.h>
int a[1][10];
void dfs(int n, int cost[10][10], int u, int s[])
{
int v;
s[u]=1;
for(v=0;v<n;v++)
{
if((cost[u][v]==1) && (s[v]==0))
dfs(n,cost,v,s);
}
}
void main()
{
int n,i,j,cost[10][10],s[10],con,flag;
printf("Enter the number of nodes\n");
scanf("%d", &n);
printf("Enter the adjacency matrix\n");
for(i=0;i<n;i++)
{
for(j=0;j<n;j++)
scanf("%d", &cost[i][j]);
}
```

```
con=0;
for(j=0;j<n;j++)
{
for(i=0;i<n;i++)
s[i]=0;
dfs(n,cost,j,s);
flag=0;
for(i=0;i<n;i++)
{
if(s[i]==0)
flag=1;
}
if(flag==0)
con=1;
}
if(con==1)
printf("Graph is connected\n");
else
printf("Graph is not connected\n");
}
```


Enter the number of nodes
4
Enter the adjacency matrix
0 1 0 0
0 0 1 0
0 0 0 1
1 0 0 0
Graph is connected
...Program finished with exit code 19
Press ENTER to exit console.


Enter the number of nodes
4
Enter the adjacency matrix
1 0 0 0
0 0 0 0
0 0 0 0
0 0 0 1
Graph is not connected
...Program finished with exit code 23
Press ENTER to exit console.