LAB 4- DFS METHOD

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4-D

```c
#include <stdio.h>
#include <stdlib.h>
int a[20][20],reach[20],n;
void dfs(int v)
{
 int i;
 reach[v]=1;
 for(i=1;i<=n;i++)
  if(a[v][i] && !reach[i])
   dfs(i);
}
void main()
{
 int i,j,count=0;

 printf("\n Enter number of vertices:");
 scanf("%d",&n);
 for(i=1;i<=n;i++)
 {
  reach[i]=0;
  for(j=1;j<=n;j++)
```

```c
      a[i][j]=0;
   }
printf("\n Enter the adjacency matrix:\n");
for(i=1;i<=n;i++)
 for(j=1;j<=n;j++)
  scanf("%d",&a[i][j]);
dfs(1);
printf("\n");
for(i=1;i<=n;i++)
{
  if(reach[i])
   count++;
}
if(count==n)
 printf("\n Graph is connected\n");
else
 printf("\n Graph is not connected\n");
}
```