

```
/*DEPTH FIRST SEARCH*/
```

```
#include<stdio.h>
```

```
void DFS(int);
```

```
int G[10][10],visited[10]={0},n;
```

```
void main()
```

```
{
```

```
    int i,j;
```

```
    printf("Enter number of vertices: ");
```

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

```
    printf("\nEnter adjacency matrix of Graph : ");
```

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

```
    {
```

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

```
            scanf("%d",&G[i][j]);
```

```
    }
```

```
    DFS(0);
```

```
}
```

```
void DFS(int i)
```

```
{
```

```
    int j;
```

```
    printf("\n%d",i);
```

```
    visited[i]=1;
```

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

```
        if(!visited[j]&&G[i][j]==1)
```

```
            DFS(j);
```

```
}
```

```
=====
```

```
/*BREADTH FIRST SEARCH*/
```

```
#include<stdio.h>
```

```
int S[20][20],q[20]={0},n,visited[20]={0},i,j,f=0,r=-1;
```

```
void BFS(int v)
```

```
{
```

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

```
        if(S[v][i]&&visited[i]==0)
```

```
            q[++r]=i;
```

```
            if(f<=r)
```

```
            {
```

```
                visited[q[f]]=1;
```

```
                BFS(q[f++]);
```

```
            }
```

```
}
```

```

void main()
{
    int v;
    printf("Enter number of vertices: ");
    scanf("%d",&n);
    printf("\nEnter Graph data in matrix form :\n ");
    for(i=0;i<n;i++)
    {
        for(j=0;j<n;j++)
            scanf("%d",&S[i][j]);
    }
    printf("\nEnter the start vertex: ");
    scanf("d",&v);
    BFS(v);
    printf("\nReachable nodes are : ");
    for(i=0;i<n;i++)
    {
        if(visited[i])
            printf("%d\t",i);
        else{
            printf("Unable to reach all nodes.BFS impossible");
            break;
        }
    }
}

```