

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

```
#include<math.h>
```

```
int a[10][10],n;
```

```
void bfs(int src)
```

```
{
```

```
int q[1],f=-1,r=-1;
```

```
int vis[10],i,j;
```

```
for(j=1;j<=n;j++)
```

```
vis[j]=0;
```

```
vis[src]=1;
```

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

```
while(f<r)
```

```
{
```

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

```
    for(j=1;j<=n;j++)
```

```
        if(a[i][j]==1 && vis[j]!=1)
```

```
        {
```

```
            vis[j]=1;
```

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

```
        }
```

```
}
```

```
for(j=1;j<=n;j++)
```

```
if(vis[j]!=1)
```

```
printf("\n node %d is not reachable\n",j);
```

```
else
```

```
    printf("\n node %d is reachable\n",j);
```

```
}
```

```
void main()
```

```
{  
    int i,j,src;  
    printf("\n enter the number of nodes\t");  
    scanf("%d",&n);  
    printf("\n enter the adjacency matrix:\n");  
    for(i=1;i<=n;i++)  
        for(j=1;j<=n;j++)  
            scanf("%d",&a[i][j]);  
    printf("\n enter the source node:\n");  
    scanf("%d",&src);  
    bfs(src);  
}
```