

Bredth First

Search:

```
#include<stdio.h>

#include<conio.h>

inta[30][30],vis[10],n;

void bfs(int);

voidmain()

{

    inti,j,m,p,q,start;

    printf("enterno.ofvertices\n"); scanf("%d",&n);

    printf("enterno.ofedges\n");

    scanf("%d",&m);

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

    {

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

            a[i][j]=0;

        }

    }

    for(i=1; i<=m; i++){

        printf("enteranedge\n");

        scanf("%d%d",&p,&q);

        a[p][q]=1;

    }
```

```

    for(i=1;i<=m;i++)
    {
        vis[i]=0;

printf("enter the starting vertex\n");

scanf("%d",&start);

        printf("nodes reachable from starting vertex are\n"); bfs(start);

        getch();
    }

```

```

Void bfs(int v)
{
    int i, q[30], f=0, r=0, u; vis[v]=1;

    q[r]=v;

    while(f<=r){

        u=q[f];

        printf("%d",u);

        for(i=1;i<=n;i++){

            if(a[u][i]==1 && vis[i]==0){

                r=r+1;

                q[r]=i;

                vis[i]=1;

            }

        }

        f=f+1;

    }
}

```

```
enter no. of vertices
5
enter no. of edges
6
enter an edge
1 5
enter an edge
1 2
enter an edge
2 5
enter an edge
2 4
enter an edge
3 1
enter an edge
3 4
enter the starting vertex
1
nodes reachable from starting vertex are
1254
```

