#include<stdio.h>

#include<conio.h>

int a[20][20],q[20],visited[20],n,f=-1,r=-1;

void bfs(int v)

{

int i;

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

{

if(a[v][i]!=0 && visited[i]==0)

{

r=r+1;

q[r]=i;

visited[i]=1;

printf("%d",i);

}

}

f=f+1;

if(f<=r)

bfs(q[f]);

}

int main()

{

int v,i,j;

printf("\enter the no of vertices");

scanf("%d",&n);

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

{

visited[i]=0;

}

printf("\n enter the graph data in matrix form");

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

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

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

printf("enter the starting vertwx ");

scanf("%d",&v);

f=r=0;

q[r]=v;

printf("\n bfs traversal is \n");

visited[v]=1;

printf("%d",v);

bfs(v);

if(r!=n-1)

printf("\n bfs is not posible");

}

O/P:

←nter the no of vertices3

enter the graph data in matrix form0 1 1

1 0 1

1 1 0

enter the starting vertwx 3

bfs traversal is

3 12