



```

#include <stdio.h>
#define MAXNODES 100
int graph[MAXNODES][MAXNODES];
int n; /** Number of vertices/nodes ***/
int q[MAXNODES],front=-1,rear=-1, start_node;
int visited[MAXNODES]={0}; /** 0:if not visited; 1:if in stack; 2:if displayed**/

void BFS( )
{
int i;
printf("%d\t",start_node);
visited[start_node]=2;
for(i=0;i<n;i++)
{
    if(graph[start_node][i]==1&&!visited[i])
    {
        q[++rear]=i;
        if(front==-1) front=0;

        visited[i]=1;
    }
}
if(front<=rear)
{
    start_node=q[front++];
    BFS( );
}
else /* for disconnected portion */
{
    for(i=0;i<n;i++)
        if(visited[i]==0)
        {
            start_node=i;
            BFS( );
        }
}
}

```

```
void main( )
{
    int i,j;
    printf("Feed in the number of nodes ");
    scanf("%d",&n);
    printf("Feed in the adj. matrix\n");
    for (i=0;i<n;i++)
        for(j=0;j<n;j++)
            scanf("%d",&graph[i][j]);

    start_node=0;
    BFS( );
}
```

