#include<stdio.h>

Breadth First Search

```
#include<conio.h>
int adj[20][20],queue[20],visited[20],n,front=0,rear=-1;
void bfs(int v)
{
        int i,j;
        for (i=1;i<=n;i++)
          if(adj[v][i] && !visited[i])
            queue[++rear]=i;
        if(front<=rear)
        {
                visited[queue[front]]=1;
                bfs(queue[front++]);
        }
}
void main()
{
        int v,i,j;
        clrscr();
        printf("\n Enter the number of vertices:");
        scanf("%d",&n);
        for (i=1;i<=n;i++)
        {
                queue[i]=0;
                visited[i]=0;
        }
        printf("\n Enter graph data in matrix form:\n");
        for (i=1;i<=n;i++)
          for (j=1;j<=n;j++)
            scanf("%d",&adj[i][j]);
        printf("\n Enter the starting vertex:");
        scanf("%d",&v);
        bfs(v);
        printf("\n The node which are reachable are:\n");
        for (i=1;i<=n;i++)
          if(visited[i])
            printf("%d\t",i);
          else
            printf("\n Bfs is not possible");
        getch();
}
```