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*bfs.c

```c
#include<stdio.h>
#include<conio.h>
void insertq(int q[],int node, int *f, int *r)
{
   if((*f==-1) && (*r==-1))
   {
       (*f)++, (*r)++, q[*f]=node;
   }
   else{
     (*r)++, q[*r]=node;
       }
}

int deleteq(int q[],int *f,int *r)
{
   int temp;
   temp=q[*f];
   if(*f == *r) *f=*r=-1;
   else (*f)++;
   return temp;
}

void bfs(int n, int adj[][10],int src, int visited[])
{
   int q[20], f=-1,r=-1,v,i;
   insertq(q,src,&f,&r);
   while((f <=r ) && (f != -1))
   {
       v=deleteq(q,&f,&r);
       if(visited[v]!=1)
       {
            visited[v]=1;
             printf("%d",v);
        }
        for(i=1;i<=n;i++)
             if((adj[v][i]==1) && (visited[i] !=1))
```

*bfs.c X

```
27      while((f <=r ) && (f != -1))
28      {
29          v=deleteq(q,&f,&r);
30          if(visited[v]!=1)
31          {
32               visited[v]=1;
33                printf("%d",v);
34           }
35           for(i=1;i<=n;i++)
36                if((adj[v][i]==1) && (visited[i] !=1))
37             insertq(q,i,&f,&r);
38       }
39      }
40
41
42      void main()
43      {
44     int n,i,j,adj[10][10],src,visited[10];
45
46     printf("enter number of vertices\n");
47     scanf("%d",&n);
48     printf("Enter adjacency matrix\n");
49     for(i=1;i<=n;i++)
50     {
51            visited[i]=0;
52       for(j=1;j<=n;j++)
53          scanf("%d",&adj[i][j]);
54      }
55      printf("enter starting vertex\n");
56      scanf("%d",&src);
57      printf("The nodes reachable from src are\n");
58      bfs(n,adj,src,visited);
59
60        }
61
```

C:\Users\CMRS\Documents\bfs.exe

```
enter number of vertices
4
Enter adjacency matrix
1 1 1 1
0 0 1 0
1 0 1 0
0 1 0 1
enter starting vertex
1
The nodes reachable from src are
1234
Process returned -1 (0xFFFFFFFF)   execution time : 44.305 s
Press any key to continue.
```