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#include <stdio.h>
#include <process.h>

void bfs(int);
int a[10][10], vis[10], n;

int main()
{
    int i, j, src;
    printf("\nEnter the No: of Vertices:");
    scanf("%d", &n);
    printf("\nEnter the Adjacency Matrix:\n");
    for(i=0; i<n; i++)
    {
        for(j=0; j<n; j++)
        {
            scanf("%d", &a[i][j]);
        }
    }
    printf("\nEnter the Source Vertex:");
    scanf("%d", &src);
    printf("Nodes reachable from vertex %d are :\n", src);
    for(i=0; i<n; i++)
        vis[i]=0;
    bfs(src-1);
    return 0;
}

void bfs(int v)
{
    int q[10], f=0, r=0, u, i;
    vis[v]=1;
    q[r]=v;
    while(f<=r)
    {
        u=q[f];
        printf("%d\n", (u+1));
        for(i=0; i<n; i++)

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15  for(j=0;j<n;j++)
16  {
17      scanf("%d",&a[i][j]);
18  }
19  }
20  printf("\nEnter the Source Vertex:");
21  scanf("%d",&src);
22  printf("Nodes reachable from vertex %d are :\n",src);
23  for(i=0;i<n;i++)
24      vis[i]=0;
25  bfs(src-1);
26  return 0;
27  }
28  void bfs(int v)
29  {
30      int q[10],f=0,r=0,u,i;
31      vis[v]=1;
32      q[r]=v;
33      while(f<=r)
34      {
35          u=q[f];
36          printf("%d\n", (u+1));
37
38          for(i=0;i<n;i++)
39          {
40              if(a[u][i]==1&&vis[i]==0)
41              {
42                  vis[i]=1;
43                  r=r+1;
44                  q[r]=i;
45              }
46          }
47          f=f+1;
48      }
49  }
50  }
51

```

C:\WINDOWS\SYSTEM32\cmd.exe

Enter the No: of Vertices:5

Enter the Adjacency Matrix:

0 0 1 1 0

0 0 0 1 0

0 0 0 0 0

0 0 1 0 0

1 1 0 0 0

Enter the Source Vertex:1

Nodes reachable from vertex 1 are :

1

3

4

(program exited with code: 0)

Press any key to continue . . .