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Activities Text Editor Sep 12 15:36 eepexp71.c
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eepexp71.c x
1 #include <stdio.h>
2 int a[20][20], q[20], visited[20], n, f=-1, r=-1;
3 void bfs(int v)
4 {
5     int i;
6     for(i=0; i<n; i++)
7     {
8         if(a[v][i] != 0 && visited[i]==0)
9         {
10             r=r+1;
11             q[r]=i;
12             visited[i]=1;
13             printf("%d ", i);
14         }
15     }
16     f=f+1;
17     if(f==r)
18         bfs(q[f]);
19 }
20
21 int main()
22 {
23     int v, i, j;
24     printf("\n Enter number of vertices:");
25     scanf("%d", &n);
26     for(i=0; i<n; i++)
27     {
28         visited[i]=0;
29     }
30     printf("\n Enter graph data in matrix form:\n");
31     for(i=0; i<n; i++)
32     {
33         for(j=0; j<n; j++)
34             scanf("%d", &a[i][j]);
35     }
36     printf("\n Enter the starting vertex:");
37     scanf("%d", &v);
38     f=-1;
39     bfs(v);
40 }
```

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10     r=r+1;
11     q[r]=i;
12     visited[i]=1;
13     printf("%d ", i);
14 }
15 }
16 f=f+1;
17 if(f==r)
18     bfs(q[f]);
19 }
20
21 int main()
22 {
23     int v, i, j;
24     printf("\n Enter number of vertices:");
25     scanf("%d", &n);
26     for(i=0; i<n; i++)
27     {
28         visited[i]=0;
29     }
30     printf("\n Enter graph data in matrix form:\n");
31     for(i=0; i<n; i++)
32     {
33         for(j=0; j<n; j++)
34             scanf("%d", &a[i][j]);
35     }
36     printf("\n Enter the starting vertex:");
37     scanf("%d", &v);
38     f=-1;
39     q[r]=v;
40     visited[v]=1;
41     printf("%d ", v);
42     bfs(v);
43     if(r==n-1)
44     {
45         printf("\n BFS not possible");
46         printf("\n");
47         return 0;
48     }
49 }
```

```
dl416@ttadmin:~$ gedit eepexp71.c
dl416@ttadmin:~$ gcc eepexp71.c
dl416@ttadmin:~$ ./a.out

Enter number of vertices:5

Enter graph data in matrix form:
0 1 0 0 1
1 0 1 1 1
0 1 0 1 0
0 1 1 0 1
1 1 0 1 0

Enter the starting vertex:31240
```