

## LAB-4

### BFS\_PrintNodesFromSource.c

```
#include <stdio.h>

void bfs(int);

int a[10][10],vis[10],n;

void main()
{
    int i,j,src;

    printf("enter no. of vertices\n");

    scanf("%d",&n);

    printf("enter adjecency matrix\n");

    for(i=1;i<=n;i++)
    {
        for(j=1;j<=n;j++)
        {
            scanf("%d",&a[i][j]);
        }
    }

    printf("enter source node\n");

    scanf("%d",&src);

    printf("nodes reachable from %d vertex\n ",src);
```

```
    bfs(src);  
    getch();  
}
```

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

```
f=f+1;
```

```
}
```

```
}
```