

## PROGRAM 21:

```
#include<stdio.h>

#include<conio.h>

int a[20][20],q[20],visited[20],n,i,j,f=0,r=-1;

void bfs(int v) {
    for (i=1;i<=n;i++)
        if(a[v][i] && !visited[i])
            q[++r]=i;
    if(f<=r) {
        visited[q[f]]=1;
        bfs(q[f++]);
    }
}

int main() {
    int v;

    printf("\n Enter the number of vertices:");
    scanf("%d",&n);
    for (i=1;i<=n;i++) {
        q[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",&a[i][j]);

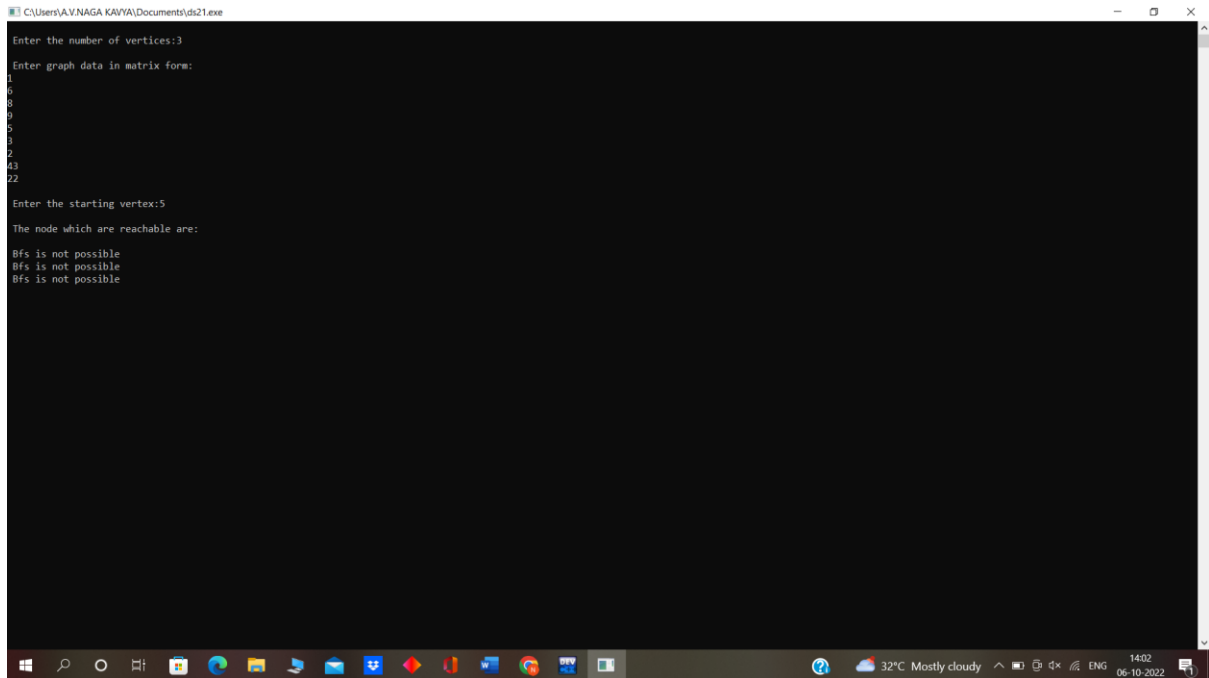
    printf("\n Enter the starting vertex:");
    scanf("%d",&v);

    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();  
}
```

## OUTPUT:



```
C:\Users\A.V.NAGA KAVYA\Documents>dfs21.exe  
Enter the number of vertices:3  
Enter graph data in matrix form:  
1  
0  
8  
9  
5  
3  
2  
43  
22  
Enter the starting vertex:5  
The node which are reachable are:  
Bfs is not possible  
Bfs is not possible  
Bfs is not possible
```