

## LABORATORY WORK SHEET

Name of the Student : Muhamd Fauzan Zohaib

Class : B.tech CSE Semester : II

Course Code : ACSD06 Course Name : PPS Lab

Name of the Course Faculty : Dr. M. Madhusudhan Reddy

Exercise Number : 9

Week Number : 10

Faculty ID : \_\_\_\_\_

Date : \_\_\_\_\_

Roll Number									
2	3	9	5	1	A	0	5	5	H

### DAY TO DAY EVALUATION:

Marks	Aim / Preparation	Algorithm / Procedure	Source Code	Program Execution	Viva - Voce	Total
		Performance in the Lab	Calculations and Graphs	Results and Error Analysis		
Max. Marks	4	4	4	4	4	20
Obtained	4	4	4	4	4	20

Signature of Faculty  
3/7/24

### START WRITING FROM HERE :

9.1 Breadth First search:-

```
nv, ne = list(map(int, input().split()))
```

```
edges = []
```

```
for i in range(ne):
```

```
    edge = list(map(int, input().split()))
```

```
    edges.append(edge)
```

```
adj_list = {} for v in range(nv):
```

```
    for v1, v2 in edges:
```

```
        adj_list[v1].append(v2)
```

```
start = int(input())
```

```
bfs = []
```

```
s = [start]
```

u'

```

while (len(s) > 0):
    ele = s.pop()
    if ele is not bfs:
        bfs.append(ele)
    for j in range(adj_list[ele]):
        if j not in bfs:
            s.append(j)
print(*bfs)

```

Input:

4 6

0 1

0 2

1 2

2 0

2 3

3 3

1

Output:

1 2 0 3

## 9.2 Depth first search :-

```
nv, ne = list(map(int, input().split(" ")))
```

```
edges = []
```

```
for i in range(ne):
```

```
    edge = list(map(int, input().split()))
```

```
    edges.append(edge)
```

```
adj_list = {v: [] for v in range(nv)}
```

```
for v1, v2 in edges:
```

```
    adj_list[v1].append(v2)
```

```
start = int(input())
```

```
dfs = []
```

```
s = [start]
```

```
while (len(s) > 0):
```

```
    ele = s.pop()
```

```
    if ele not in dfs:
```

```
        dfs.append(ele)
```

```
        for j in adj_list[ele][::-1]:
```

```
            if j not in dfs:
```

```
                s.append(j)
```

```
print(*dfs)
```

Input:

4 6

0 1

0 2

1 2

2 0

2 3

3 3

output:

1 2 0 3

*Handwritten signature*