

## WRITE A PYTHON PROGRAM TO IMPLEMENT BFS

### **AIM:**

To write a python program to implement BFS(Breath First Search)

### **PROGRAM:**

```
from collections import deque
```

```
def bfs(graph, start):  
    print(start)  
    queue = deque([start])  
    visited = set()  
    while queue:  
        node = queue.popleft()  
        visited.add(node)  
        for neighbor in graph[node]:  
            if neighbor not in visited:  
                print(neighbor)  
                queue.append(neighbor)
```

# Example usage:

```
graph = {  
    'A': ['B', 'C'],  
    'B': ['D', 'E'],  
    'C': ['F'],  
    'D': [],  
    'E': ['F'],  
    'F': [],  
}
```

```
bfs(graph,'A')
```

**OUTPUT:**

```
>>> = RESTART: C:/Users/Welcome/Downloads/bfs.py
A
B
C
D
E
F
F
```

**RESULT:**

The program was successfully executed and results were obtained.