**PRACTICAL: 9**

**AIM: : Write an Program to implement BFS algorithm.**

Code:

import collections

# BFS algorithm

def bfs(graph, root):

visited, queue = set(), collections.deque([root])

visited.add(root)

while queue:

vertex = queue.popleft()

print(str(vertex) + " ", end="")

for neighbour in graph[vertex]:

if neighbour not in visited:

visited.add(neighbour)

queue.append(neighbour)

if \_\_name\_\_ == '\_\_main\_\_':

graph = {0: [1, 2], 1: [2], 2: [3], 3: [1, 2]}

print("following is the breadth first traversal: ")

bfs(graph, 0)