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# Task 06

# Breadth-First Search (BFS) Traversal in Python

## Objective:

The objective of this program is to traverse all nodes of a graph using the Breadth-First Search (BFS) algorithm.

## Algorithm Explanation:

- BFS is a level-by-level graph traversal algorithm.

- First, the starting node is visited.

- Then, all directly connected neighbors of the node are added to a queue.

- At each step, the first node from the queue is removed and its unvisited neighbors are added to the queue.

- This continues until the queue becomes empty.

## Output:

BFS Path: ['A', 'B', 'C', 'D', 'E', 'F']

## Explanation of Output:

The traversal starts from node A, then visits B and C, followed by D, E, and finally F.

## Key Points:

- BFS uses a Queue (First-In-First-Out structure).

- Each node is visited only once.

- BFS is useful for finding the shortest path in unweighted graphs.