BFS (Breadth-First Search) — Illustrated Guide

Definition:
  Breadth-First Search explores all neighbors at the current depth before going deeper.
  It uses a queue and guarantees shortest paths in unweighted graphs.

Variants:
- BFS on Graphs
- BFS on Trees (Level-order traversal)
- BFS on Grids / Matrices
- BFS for Connected Components or Shortest Paths

Examples Included:
1) Graph BFS traversal
2) Binary tree level-order traversal
3) Shortest path in a graph
4) Shortest path in a 2D grid
5) Connected components counting