M.UMAIR NAZAR
SU92-BSSEM-S24-037
SE-3A

LAB – 13

OUTPUT

```
=== DFS in Tree ===
1 2 4 5 3

=== BFS in Tree ===
1 2 3 4 5

=== DFS in Graph ===
0 1 3 4 2

=== BFS in Graph ===
0 1 2 3 4
--------------------------------
Process exited after 0.2142 seconds with return value 0
Press any key to continue . . .
```

Explanation

This code demonstrates **DFS (Depth-First Search)** and **BFS (Breadth-First Search)** traversals in both **trees** and **graphs**:

1. **DFS in Tree**: The function dfsTree explores each node starting from the root, visiting the left subtree before the right subtree (pre-order traversal).
2. **BFS in Tree**: The function bfsTree uses a queue to visit nodes level by level from the root.
3. **DFS in Graph**: The function dfsGraph explores nodes in depth, recursively visiting each connected node.
4. **BFS in Graph**: The function bfsGraph uses a queue to visit nodes level by level in a graph, starting from a given node.

In the **main** function, it constructs both a tree and a graph, then applies DFS and BFS to traverse both structures.