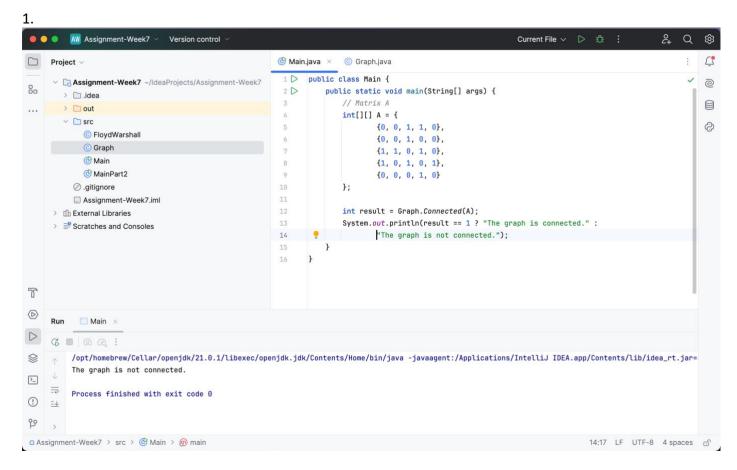
Connected Component



- 2. No, this algorithm doesn't work correctly for every undirected graph with n > 0 vertices. There are two problems with the algorithm:
 - a. Subgraph Connectivity check: The algorithm checks if subgraph of first n-1 vertices is connected. However, this does not ensure that the entire graph is connected, because it doesn't consider whether the last vertex n-1 is connected to any of the vertices in the remaining subgraph.
 - b. Incorrect Termination Condition: After the recursive check, the algorithm only verifies if there is a connection from the last vertex n-1 to one of the other vertices in the subgraph. If no such connection exists, the graph is incorrectly considered disconnected. However, the graph could still be connected if there is a connection between vertices in the subgraph and the last vertex.

In summary, it only checks if each vertex is connected to a previous vertex in a recursive manner, but it doesn't account for all possible connections within the graph. The algorithm may fail for disconnected graphs because it only verifies edges between the current vertex and those in the subgraph, rather than ensuring that all vertices are reachable from any starting vertex.

Warshall's Algorithm

