Directed and undirected graphs. Graph connectivity.

- An undirected graph is said to be connected if every pair of vertices in the graph is connected by some path.
- A directed graph is either:
  - weakly connected if we ignore directions of arcs and its connected
  - semiconnected if it contains a path from u to v or from v to u for every pair of vertices u,v.
  - strongly connected is it contains a path from u to v and from v to u for every pair of vertices u,v.
- To check if an undirected graph is connected or disconnected:

  Begin at any arbitrary node of the graph G. Proceed from that node using either depth-first or breadth-first search, counting all nodes reached. Once the graph has been entirely traversed, **if the number of nodes counted is equal to the number of nodes of G, the graph is connected**; otherwise it is disconnected.