A graph contains nodes and edges.

Seattle
San Francisco
Dallas
Salt Lake City
Chicago
+ 350 students in no romantic and/or sexual relationship

From: “Chains of Affection: The Structure of Adolescent Romantic and Sexual Networks”, American Journal of Sociology, by Peter Bearman of (Columbia), James Moody (Ohio State), and Katherine Stovel (U. of Washington);
A graph can be thought of as either of:

- a collection of edges
  - Each edge represents some relationship
- for each node, a collection of neighbors
  - The neighbors are those connected by an edge
Operations on a graph

Creation:
• Create an empty graph

Querying:
• Look up a node: Does it exist? What are its neighbors?
• Look up an edge (= a pair of nodes): does it exist? (You know the nodes it connects.)
• Iterate through the nodes or edges

Modification:
• Add/remove a node
• Add/remove an edge