COMP0005 Algorithms

Graphs

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An undirected simple graph G is a two-tuple

$$G = (V, E) \tag{1}$$

Where

1. V is the set of vertices (or nodes, points)
2. E is the set of edges (or links) where each edge connects two vertices.

   ▶ Not allowing *self-loops*:

   $$E \subseteq \{(x, y) \mid (x, y) \in V^2 \land x \neq y\} \tag{2}$$

   ▶ Allowing *self-loops*:

   $$E \subseteq \{(x, y) \mid (x, y) \in V^2\} \tag{3}$$