



Why

Often the edges of some graph are associated with a particular cost, perhaps the cost of traversing that edge.

Definition

Let (V, E) be an undirected graph. An *unordered weight function* $w : E \rightarrow \mathbf{R}$ is a function mapping undirected edges to real numbers. A *weighted undirected graph* is an ordered pair $((V, E), w)$ where (V, E) is an undirected graph and w is an unordered weight function.

Let (V, F) be a directed graph. An *ordered weight function* or just *weight function* $\omega : F \rightarrow \mathbf{R}$ is a function mapping directed edges to real numbers. A *weighted directed graph* is an ordered pair $((V, F), \omega)$ where (V, F) is a directed graph and ω is an ordered weight function.

